NORTH CAROLINA GUIDE FOR THE

EARLY YEARS

SECOND EDITION

North Carolina Department
of Public Instruction

NORTH CAROLINA GUIDE FOR THE

Early Years

Second Edition

It is our responsibility to cultivate children's delight in exploring and understanding their world. Early childhood is and should be a time of laughter, love, play, and great fun.

Copple & Bredekamp, 2009

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September 29, 2009

Dear Educators of Young Children,

A child's early years are critically important to his/her future success in school. We also know that it is during these years that children learn to value and love learning. If we are to make the most of these years, and it is imperative that we do so, then schools must be READY to engage and serve our children and their families. This is a big order, for children come to us in all shapes and sizes, from all kinds of backgrounds, and with varying degrees of abilities and interests.

We must create classrooms that encourage learning, lead children to cooperate with others, and promote children to develop the social skills that assure success in life.

It is imperative that learning environments meet the needs of all students in inclusive settings. We must link standards, assessments and accountability and use them as tools to guide curriculum development, instructional design and teaching practice – all focused on the learner.

Schools and communities are already working together to develop primary school programs that serve the needs of all children. As we pursue high quality programs to ensure that children reach their potential, *The North Carolina Guide for the Early Years* is an excellent resource and model for local schools.

Our promise to the children and teachers of North Carolina is to advocate for policies, laws and regulations to enhance the quality of their life and work. We pledge our best efforts to the rights of children, so they may learn in safe environments – ones that are responsive to their development and needs. By doing so we can best appreciate and respect each child's uniqueness, contributions and potential.

Given our opportunities and challenges, it is with pleasure that we dedicate this *The North Carolina Guide for the Early Years* to the children of North Carolina and the very special group of professional educators who are entrusted with their learning and care. We wish you every success as you pursue the great adventure of learning and growing together.

June St. Clair Atkinson
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A Framework for Teaching and Learning

The North Carolina Guide for the Early Years reflects more than a decade of dramatic change in early education theory and practice. Since the first edition was published in 1997, preschool and kindergarten classrooms have moved toward becoming more inclusive, more technological, and more attuned to how children learn and what they need to succeed.

In times past, educating young children was generally seen as relatively straightforward – a matter of bringing together teachers and children with materials, books, and ideas. Today, educators and the public have come to view quality early learning as a complex enterprise requiring an integrated approach. And that is what you will find in this new edition.

Introduction

Chapter Highlights

The *N.C. Guide for the Early Years* is designed to be a major resource for early learning professionals, combining the latest research about how preschool and kindergarten children learn with time-tested strategies and essential teaching tools. The contents of these pages:

- represent the belief that all children benefit from participating in inclusive programs and services that value their diversity of backgrounds, languages, and abilities,
- emphasize the interconnectedness of content areas, and
- connect expectations for children's development and learning to validated best practice.

While a central tenet of this document is the importance of using learning centers as the major vehicle to organize a classroom, it also acknowledges the importance of these eight elements:

- a strong, evidence-based curriculum
- purposeful teaching
- effective schedules, routines, and transitions
- a positive interpersonal environment (how children interact with one another and how adults interact and intervene to support their learning)
- partnerships with families
- positive professional relationships
- a broad repertoire of instructional practices that strike a delicate balance across a continuum of child-initiated experiences and teacher-directed instruction
- child-initiated and teacher-supported play

What's New

In addition to updating material from the 1997 edition, the *Guide* brings together several resources in a more accessible format. It includes supplementary content from:

- *Foundations: Early Learning Standards for North Carolina Preschoolers and Strategies for Guiding Their Success*
- The North Carolina Standard Course of Study for Kindergarten (SCOS)
- *Learning Through the Eyes of a Child: A Guide to Best Teaching Practices in Early Education*

In each relevant chapter, you will find examples of linking the *Foundations* Preschool Widely Held Expectations and the Kindergarten SCOS Objectives. They are presented together so that teachers across this age range can easily see matching areas and use them to help plan their curriculum and learning environment.

This *Guide* is for You – the Teacher

While its larger audience includes individuals across the early childhood landscape, this document is designed primarily for teachers – to assist you in establishing and maintaining a high-quality program and in developing as a professional.

"Early childhood" is defined as birth to age eight. Early childhood teachers include those who work with children in preschool, kindergarten, and first, second, and third grades.

While this document focuses on preschool and kindergarten, it has implications for teachers working with older children as well. Included are many examples of teaching strategies and ways to create a classroom environment that will nurture children's natural curiosity and zest for learning.

The *Guide* can be used to:

Evaluate Your Work and Learn More

- Confirm, validate, and communicate why you use certain practices in your daily work with children.
- Expand your understanding of the early childhood knowledge base.
- Identify resources for early education.
- Continuously improve daily teaching practices.

Gain New Perspectives

- Identify challenging but achievable learning goals for children across the development and content domains and across age-level groups.
- Appreciate learning goals that cross content areas and mutually reinforce learning.
- Provide a common knowledge base and language for improving the program or school.

Better Define Early Childhood Education

- Focus on the uniqueness of young children.
- Recognize the expectations of development and learning for preschool and kindergarten children.

- Strengthen the important connection between preschool and kindergarten programs.
- Maximize your understanding of the interrelationships of learning for young children.
- Convey the value of children's ownership of their own learning and motivation.

Interpret and Apply Research

- Understand the relevance of research to the teaching and learning process.
- Apply research findings in meaningful and relevant ways.
- Use the principles of child development.
- Clarify the relationships among curriculum, assessment, and instruction.
- Study and learn with colleagues.

Empathize

- Understand and celebrate the energy and wonder of young children.
- Understand the process of inquiry.
- Create safe and respectful indoor and outdoor learning environments.
- Respect the families, culture, language, and development of each child.

Key Terms

You will find a glossary in the appendix, where it typically resides, but there are several terms we want to spotlight here because they are important to understanding and using this document effectively.

Integrated – refers to a program purposely planned to present content and skills through activities and experiences that incorporate aspects of several content areas. A daily or weekly schedule in a classroom using an integrated curriculum model is rarely characterized by segments of time for specific "subjects" (such as math, science, etc.).

Indoor and Outdoor Learning Center Focus

Information for focused play and learning opportunities, both indoors and outdoors, is placed within its respective domain section. Here is a quick reference to their locations.

Inclusive – refers to an organizational pattern that serves children in a grouping of age peers. Age peers may be a single-, mixed-, or multi-age group spanning more than one year. Inclusive classrooms do not segregate children because of any characteristic related to physical or mental ability or language spoken.

Learning Expectations – applies to learning standards in the broad sense and as they are referenced in *Foundations* as Widely Held Expectations and in the Standard Course of Study as Kindergarten Objectives.

Terms used in the field of assessment take on different meanings in different contexts. Words related to assessment have been examined for their appropriateness for evaluating young children. A referenced glossary of such terms as they apply to early childhood may be found on the Web at www.ccsso.org (search: The Words We Use).

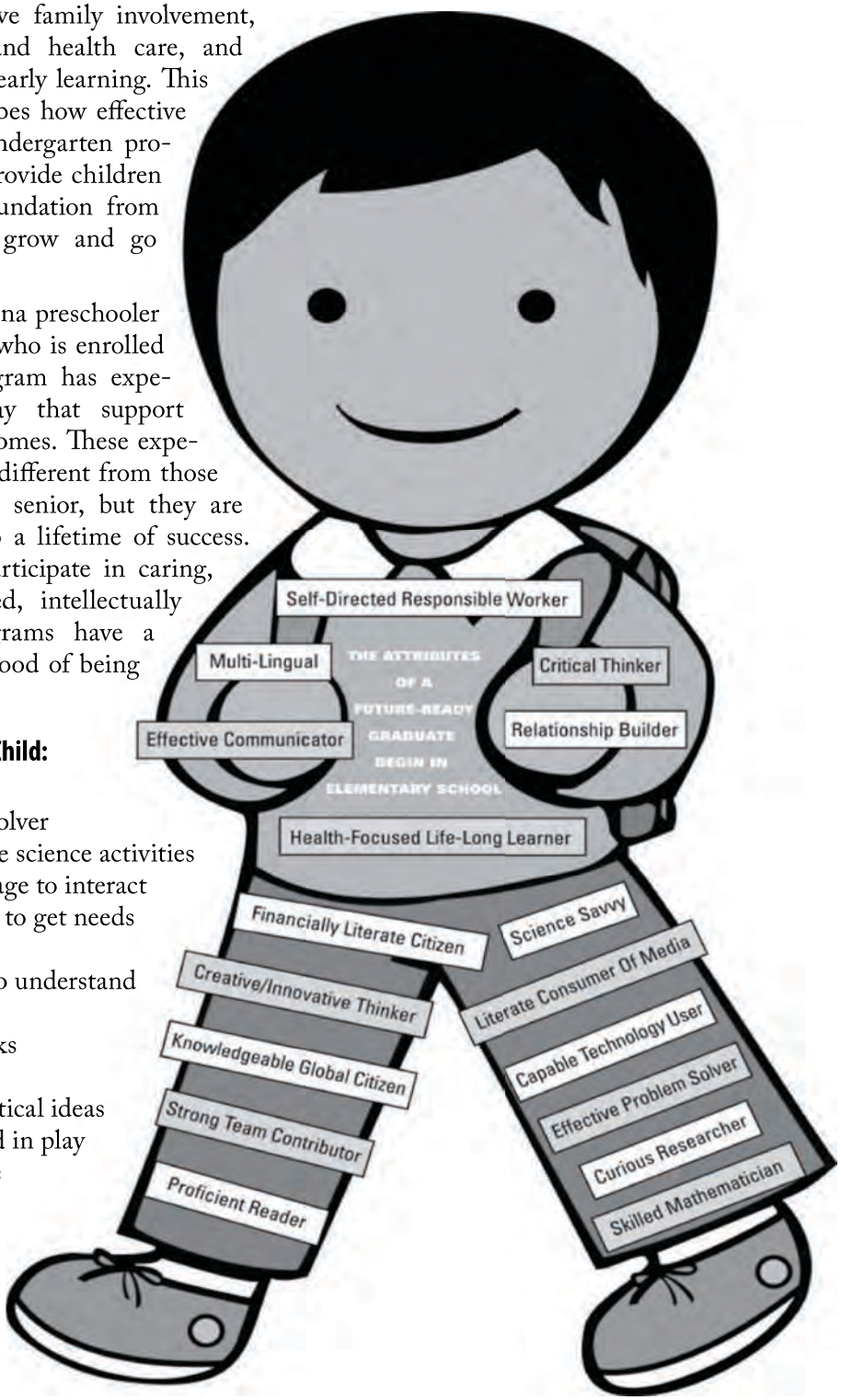
Childhood is a time of wonder and magic, where dreams and imagination get fueled, and issues of power are explored.

Deb Curtis & Margie Carter, 2003

Future-Ready

We now know just how crucial it is for children to have a strong beginning if they are to succeed in school and in life. They need positive family involvement, good nutrition and health care, and access to quality early learning. This new *Guide* describes how effective preschool and kindergarten programs can help provide children with a sturdy foundation from which they can grow and go forward.

A North Carolina preschooler or kindergartner who is enrolled in a quality program has experiences every day that support future-ready outcomes. These experiences look very different from those of a high school senior, but they are no less critical to a lifetime of success. Children who participate in caring, safe, play-centered, intellectually challenging programs have a far greater likelihood of being future-ready.



The Future-Ready Child:

- is curious
- is a problem-solver
- likes to explore science activities
- can use language to interact positively and to get needs met
- is beginning to understand print
- plays and works intentionally
- uses mathematical ideas while engaged in play
- can use simple technology
- knows and practices healthy behaviors

Uniquely North Carolina

North Carolina is home to a substantial array of resources that exist to benef t teachers and students and to contribute to the body of knowledge about early childhood education. Many of these resources are nationally and internationally recognized, such as the Smart Start initiative, the Frank Porter Graham Child Development Center, research such as the Abecedarian study, and tools like the Early Childhood Environment Rating Scale. Here's a closer look at some of our state's notable contributions to the f eld and how educators like you might use them:

Institutes, Agencies, and Programs

FirstSchool – University of North Carolina, Chapel Hill

FirstSchool is a new vision for early schooling of 3 to 8 year-olds that is being developed through a partnership among families, schools, the community, the FPG Child Development Institute, and the University of North Carolina at Chapel Hill. The fundamental aim is to ensure that all children's and families' early school experiences are positive and successful. On the Web: www.f rstschool.us

Frank Porter Graham Child Development Institute – University of North Carolina, Chapel Hill

Founded in 1966, the FPG institute is one of the nation's oldest multidisciplinary institutes for the study of young children and their families. Researchers focus on parent and family support; early care and education; child health and development; early identif cation and intervention; equity, access and inclusion; and early childhood policy. On the Web: www.fpg.unc.edu

Generations-Tadpole: Assistive Technology Lending Library – Butner

This private rehabilitation agency lends and ships books, tapes, toys, and other low-tech assistive technology devices to families and professionals across the state. Anyone who is working with a child with a disability – including parents and other family members, therapists and other professionals – is eligible to borrow items. The services are free, including shipping. On the Web: www.tadpole.org

Motheread – Raleigh

Founded in Raleigh in 1987, Motheread has grown into a national training and curriculum development model with a multi-state af liate network. This private, nonprof t organization combines

the teaching of literacy skills with child development and family empowerment issues. It offers classes for both adults and children. In adult classes, participants learn to be story readers, writers, and tellers. For children, story exploring provides a structured environment for learning reading, critical thinking, and problem-solving skills. On the Web: www.motheread.org

National Center for Early Development and Learning – FPG Child Development Center, Chapel Hill

The center is an early childhood research project that focuses on enhancing the cognitive, social, and emotional development of children from birth through age eight. On the Web: www.fpg.unc.edu

National Early Childhood Technical Assistance Center – Chapel Hill

The center works with administrators in all states to help ensure that children with disabilities, ages birth through five, and their families receive high-quality, culturally appropriate, and family-centered supports and services. On the Web: www.nectac.org

Natural Learning Initiative – College of Design, N.C. State University, Raleigh

This research design and assistance program promotes the importance of the natural environment in the daily experience of children through environmental design, action research, education, and dissemination of information. Its mission is to help communities create stimulating places for play, learning, and environmental education. On the Web: www.naturalearning.org

New Voices/Nuevas Voces – FPG Child Development Institute, Chapel Hill

New Voices/Nuevas Voces is a professional development program for early childhood providers working with young children from culturally, linguistically, and ability-diverse backgrounds, with a special focus on Latino children and their families. On the Web: www.fpg.unc.edu

Partnerships for Inclusion – FPG Child Development Institute, Chapel Hill

With offices in Chapel Hill, Asheville, Wilmington, and Greenville, this statewide technical-assistance project provides training and consultation to support the inclusion of young children with disabilities, ages birth through five years, in all aspects of community life. The group works with child care providers, early interventionists, public school preschool coordinators, parents, teachers, developmental day programs, local interagency councils, regional interagency coordinating councils, child care resource and referral agencies, and Smart Start programs. On the Web: www.fpg.unc.edu

Smart Start: The North Carolina Partnership for Children – Raleigh

North Carolina's nationally recognized and award-winning early childhood initiative was created to ensure that young children enter school healthy and ready to succeed. Smart Start is a public-private initiative that provides early education funding to all of the state's 100 counties. On the Web: www.smartstart-nc.org

T.E.A.C.H. Early Childhood Project – Child Care Services Association, Chapel Hill

T.E.A.C.H. gives scholarships to child care workers to complete coursework in early childhood education and to increase their compensation. The project was created in response to a 1989 North Carolina workforce study that examined the wages and retention of child care workers. Child Care Services Association, a nonprofit service, research, and advocacy group, now serves as an umbrella agency for what has become a multi-state program involving institutions of higher learning, community colleges, child care providers, state agencies, Head Start programs, resource and referral agencies,

state licensing agencies, and cooperative extension representatives. On the Web: www.childcareservices.org

Tools, Publications, and Other Resources

Assessment of Practices in Early Elementary Classrooms (APEEC)

Developed in conjunction with researchers at the FPG Child Development Institute and using the same basic format as the ECERS-R, APEEC is the first measurement scale designed to evaluate the use of developmentally appropriate practices in the early elementary classroom, K-3. (Mary Louise Hemmeter, Kelly L. Maxwell, Melinda Jones Ault, and John W. Schuster; 2001, Teachers College Press)

Crosswalks Toolbox – FPG Child Development Institute, Chapel Hill

The Crosswalks Toolbox is an interactive database of instructional resources that address key areas of early-childhood or early-intervention content and diversity. Its search function can help teachers find videos, articles, syllabi, and other resources for increasing the emphasis on cultural and linguistic diversity. The Crosswalks project conducts research on ways to support faculty and programs in making diversity-related changes, working directly with colleges and universities in North Carolina. On the Web: www.fpg.unc.edu

Early Childhood Environment Rating Scale (ECERS)

Created by FPG researchers, the ECERS consists of 43 items that assess the quality of center-based programs in kindergarten, preschool, and child care classrooms, including use of space, materials, and experiences to enhance children's development, daily schedule, and supervision. It is the most widely used scale of this type in the nation. (Thelma Harms, Richard M. Clifford, and Debby Cryer; revised edition, 1998, Teachers College Press)

Early Learning, Later Success: The Abecedarian Study

The Abecedarian project was a carefully controlled scientific study of the potential benefits of early childhood education for poor children. This report highlights the Age 21 Follow-up Study. (Craig T.

Ramey, Frances A. Campbell, Margaret R. Burchinal, Donna M. Bryant, Barbara H. Wasik, M.L. Skinner, and D.M. Gardner; 2000, University of North Carolina)

PreK-K Teachers Performance Appraisal Instrument (PKKTPAI)

Developed over the years by both the private and public sectors and validated by beginning and experienced teachers, PKKTPAI was created to reflect the standards appropriate for the pre-k and kindergarten classrooms. The instrument is used by OSR/Teacher Licensure Unit mentors and evaluators to assess early childhood teachers in North Carolina. (Lisa Doyle Howley, Richard Lambert, and Bobbie Rowland; 2005, UNC-Charlotte) On the Web: www.education.uncc.edu/pkktpai

Preschool Outdoor Environment Measurement Scale (POEMS)

POEMS is an assessment tool developed by a multidisciplinary team from N.C. State and UNC-Greensboro for evaluating and improving the quality of outdoor environments in childcare centers for children 3-5 years old. It includes a technical assistance manual for program improvement and planning. (Karen DeBord, Linda L. Hestenes, Robin C. Moore, Nilda G. Cosco, and Janet R. McGinnis; 2005, Kaplan) On the Web: www.poemsnc.org

QuickNotes: Inclusion Resources for Early Childhood Professionals

Quicknotes is a research notebook covering a broad range of topics relating to high-quality care of young children. (Patricia Wesley, Brenda Dennis, and Sabrina Tyndall; second edition, 2007, University of North Carolina)

The Carolina Curriculum for Preschoolers with Special Needs

The Carolina Curriculum is an assessment and intervention program designed for use with young children from birth to five years who have mild to severe disabilities. (Nancy M. Johnson-Martin, Susan M. Attermeier, and Bonnie Hacker; second edition, 2004; Paul H. Brookes Publishing Co.)

Building a Foundation for Learning

Chapter Highlights

Each weekday, nearly half a million children walk into early childhood programs and classrooms across North Carolina. Bustling with energy, talking and laughing, these children reflect the rich diversity of our state. From the mountainous western regions to the flat coastal plains, these young learners bring with them a variety of experiences, interests, and needs.

The backgrounds and knowledge children bring to school, combined with their natural curiosity and sense of wonder, are the foundation for learning in the preschool and kindergarten years. Our task, as early childhood professionals, is to make the most of each day they spend in our care.

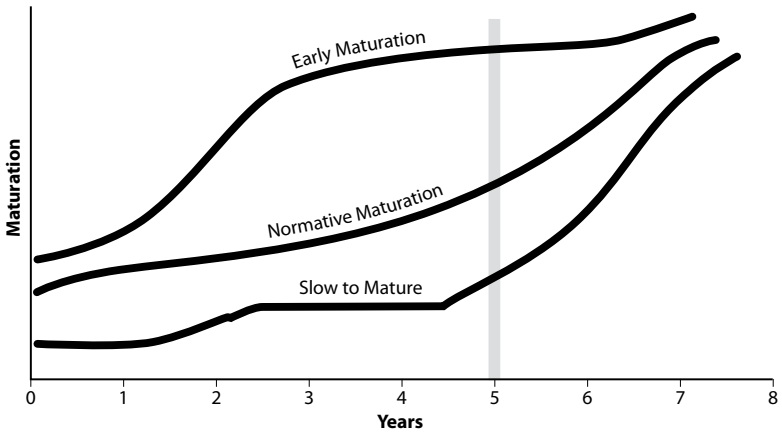
To do that, we need to come to know each child as a unique individual. We must create meaningful opportunities that help all of them grow and develop to their full potential, building on individual differences rather than stressing conformity.

Key Understandings

Children's experiences and the skills and characteristics they develop during the preschool and kindergarten years are critically important to their success today and for years to come – both in school and in life.[1] *Eager to Learn,* the National Research Council's comprehensive review of child development and early

1 Bryant & Maxwell, "The Effectiveness of Early Intervention for Disadvantaged Children," 1997.

Maturation Differences



The Kindergarten year represents the time in public school education in which the largest maturation differences occur.

Source: Dominic F. Gullo, professor of elementary and early childhood education at Queens College, City University of New York, 2007.

Most children are motivated to learn by an intense desire to make sense out of their world and achieve the competencies desired by the culture.

Sue Bredekamp and Carol Copple, 1997

Bandura

Albert Bandura, social learning theorist, stated (1994) that a sense of personal competence is essential to children's willingness to undertake learning. Children, according to Bandura, have the capacity to condemn or congratulate themselves when they feel competent. The children, when confronted with a task, expect to be successful.

education, suggests that we have previously underestimated children's abilities and the concepts they can understand if they are exposed to age-appropriate and stimulating learning opportunities.[2]

The *NC Guide for the Early Years* rests on seven key understandings about children's development and learning and provides support for complementary teaching practices.

Every child is different.

The rate of development and learning is not the same for every individual of the same age. The way each child develops will vary greatly depending on a combination of factors, such as the characteristics they are born with, the culture they live in, and their experiences within their family and in other settings.

Learning occurs in predictable patterns.

Though each child is unique, development typically unfolds in progressive steps or stages. What varies tremendously from one child to another is when and how children achieve various developmental milestones. These differences are associated with individual temperament, learning characteristics, gender, race, ethnicity, socio-economic status, family culture, and genetic make-up. Gifted children or children with disabilities may exhibit even greater variation in the achievement of developmental milestones. Children with special needs progress through the same developmental patterns at a different rate. Children's understanding grows from simple to complex (or from concrete to abstract). New knowledge builds on previous experience and understanding.

Learning is most meaningful when integrated across all domains.

Children construct knowledge and integrate new ideas and concepts into their existing understandings. Their achievements in language and learning are influenced by the emotional and social aspects of their development. Communication influences learning in all areas of the curriculum. There are no clear lines among the domains or areas of learning.

Young children are active learners.

Children learn by doing, and they need time to practice what they are learning, to ask questions, to investigate, and to use what they are experiencing in their everyday activities. Their ideas about themselves impact their interactions with adults and other children, and with how they view themselves as learners. The development of the whole child is honored when preschool and kindergarten programs focus on active learning. Such an approach reflects an understanding that children learn through active involvement and play and demonstrate their knowledge in a variety of ways.

Experience, knowledge, curiosity, and a sense of wonder are foundations for learning.

Every child enters the world ready to learn, wanting to learn and, in fact, needing to learn. The need for food and shelter is matched by a vital need to make sense of their surroundings – a complex world of sights, sounds, smells, tastes, and

2 Bowman, Donovan, & Burns, *Eager to Learn: Educating our Preschoolers*, 2001.

textures. In a real sense, knowledge about this world is constructed by the child and with very little direct help from others.

Assessment and evaluation form the basis for educational decisions.

Evidence of what each child can do is collected frequently and used to make decisions about instruction and activities to meet particular learning needs. Importantly, the assessment and evaluation of a child's growth in learning are based on the goals of the program, not by comparison with other children. In this way, children are encouraged to improve their performance and realize their individual potential rather than compete with others.

Development and learning are rooted in culture and supported by family.

Language, knowledge, traditions, and family expectations are the primary influences on children's development. Their growth and learning are greatly impacted by the physical environment, relationships with family members and others, and the community and culture in which they live. These factors differ from child to child and shape their view of the world and how they develop. Learning is enriched and strengthened by stable, nurturing relationships within the family and community.

Informed Teaching Practices

Each of these key understandings has enormous implications for planning and carrying out an effective program for preschool and kindergarten children. They form the basis of large and small decisions about choosing materials for the classroom, organizing them, and planning experiences to help children develop and learn. The material in this publication is organized to support informed practices.

- **Since each child is unique and learns in unique ways,** teaching practices must be designed to respond to the wide range of characteristics and abilities found among children in any classroom, including those learning English, those with disabilities, and those who may be gifted.
- **Because learning is continuous**, largely sequential and occurs in predictable patterns, teachers select materials and offer experiences that are continuously responsive to the range of learning needs of children in their class.
- **Since learning is most meaningful when integrated across all domains of development and content areas,** teachers plan experiences around topics of interest to children and embed skill development into worthwhile, meaningful, and playful activities.
- **Since children are naturally curious,** teachers assure that the indoor and outdoor physical environment and the learning experiences are largely play-based and designed to capitalize on children's natural curiosity and interest in learning by doing.
- **If experience, knowledge, curiosity, and a sense of wonder are foundations for learning,** intellectually challenging, interesting, and enjoyable indoor and outdoor materials and learning experiences must be designed to capitalize on children's ever-expanding and changing interests.
- **Since assessment and evaluation form the basis for decisions that support each child's learning,** teachers use continuous authentic assessment to plan for learning, to identify children who may need additional assistance, and to evaluate the program's effectiveness.
- **Because development and learning are rooted in culture and supported by the family,** teachers celebrate the strengths, knowledge, and values each child and his or her family bring to the classroom and design learning opportunities to capitalize on this resource.

The Brain: Making New Connections

Effective teaching practice in preschool and kindergarten is based on our knowledge of child growth and development and increasingly also on discoveries about brain development that have emerged in recent years.

Since the 1970s, and especially in the last decade, scientists have used DNA research and imaging techniques to study how the brain develops. What they have found agrees with what early childhood professionals have long believed – that the early years are important for establishing learning patterns across the domains.[3] While neurologists are just beginning to understand what experiences influence neural development, they do know that by adulthood, the brain is crisscrossed with over 100 billion neurons.[4]

The human brain grows most rapidly during early childhood. Because the quality of a young child's day-to-day experiences

3 Dana Alliance for Brain Initiatives, 2006.

4 Begley, "Your Child's Brain," 1996; Talaris Institute, *Five Ways a Child Grows: A Timeline for Typical Development*, 2006.

affects neural growth and brain development, it is crucial that educators understand that what they do each and every day has an impact on the children in their care. This is the most important message preschool and kindergarten teachers can take from brain development research.

Brainy Nuggets to Ponder

Connections in the brain develop rapidly during the first three years of life and continue at a fast pace until a child is eight to ten years old. Emerging research tells us that:

- human development hinges on the interplay between nature and nurture.
- early care has a decisive and long-lasting impact on how we develop, our ability to learn, and our capacity to regulate our emotions.
- the brain has a remarkable capacity to change, but timing is crucial.
- there are times when negative experiences or the absence of appropriate stimulation are more likely to have serious and sustained effects.
- Evidence amassed over the last decade points to the wisdom and value of prevention and early intervention.[5]

As their brains develop, children begin to show new understandings and skills in cognitive, social, and emotional areas. Concurrently, their physical development enables them to act on this expanding knowledge of the world about them.

Twentieth-century theorists focused on the development of children across the domains. Today, these theories are the basis for understanding child growth and development. The work of Piaget, Vygotsky, Erikson, and Kohlberg, along with Brazelton, Bandura, and Gardner and emerging research on brain development, guide early childhood educators in creating environments that help children realize their potential.

Patterns of Growth and Implications for Teaching

Children's cognitive, social, emotional, language, and physical development follows predictable patterns. Progress in one area, however, can affect patterns of growth in other areas. As a result, individual children may develop at different rates in each domain.

A child's development is also influenced by a set of inclinations and dispositions commonly referred to as approaches to learning. Increasingly, these are viewed as critical to overall development.

The following segments provide an overview of typical patterns of growth and development across the domains and the implications for educating young children.

Cognitive Development and General Knowledge

Life experiences, maturing neural systems, and expanding brain capacity enable children to think in increasingly

5 Shore, *Rethinking the Brain: New Insights into Early Development*, 1997.

complex ways as they move from infancy through early childhood. They begin to use abstract and symbolic cues to process information and learn about their world. As they mature, they master elaborate strategies for organizing and processing information.

Implications for Teaching

A foundation for learning is built when children have opportunities to interact with other people and with materials and, as a result, are encouraged to learn from their surroundings. The transition to later schooling is made easier when they have been provided a variety of play-oriented, exploratory activities and when their early school experiences continue these activities. From these experiences children construct knowledge of patterns and relations, cause and effect, and methods of solving problems in everyday life. [6]

Emotional and Social Development

Infants and very young children perceive and interpret their experiences from a self-centered perspective. As they mature, they become more aware of others. A child's emotional and social development progresses from bonding with a signif cant adult to establishing additional relationships. They learn that they can modify their own behavior to take into account others' feelings, needs, and points of view, and they learn how to relate to and inf uence other people.

Implications for Teaching

This dimension serves as the foundation for relationships that give meaning to children's experiences in school and beyond. It involves a sense of personal well-being that comes from stable interactions in their early lives and interactions that enable them to participate in positive classroom activities with classmates and teachers. Intentional teaching includes providing emotional support and secure relationships as critically important conditions for emotional and social development.[7]

Language Development and Early Literacy

Children acquire language skills as they listen to and interact with others. Language development occurs along several dimensions that move from simple to complex – making purposeful sounds or words, attaching meanings to them, and combining words into phrases and sentences. They f rst use language in concrete or literal ways and then learn to express and understand abstract ideas. As their language ability grows, children use more precise language and more intricate language patterns.

Implications for Teaching

Experience with language, both written and spoken, gives children the tools to interact with others and represent their thoughts, feelings, and experiences. Communicating effectively with other children and with adults and having emergent literacy experiences with diverse forms of language are fundamental elements of this dimension.[8] In the decade since the publication of the first edition of this guide, early literacy has received considerable attention from researchers. This has translated into heightened attention to the steps preschool and kindergarten teachers must take to improve literacy outcomes.[9]

Health and Physical Development

As children mature, their muscles, bones, neurological systems, digestive tracts and endocrine systems develop. Loco-motor and manipulative skills move through stages from crawling and walking, to reaching and grasping, to running and jumping. Motor abilities are ref ned through physical growth and opportunities to practice. With maturity, opportunity and practice, children learn to move easily and ef ciently. They become more coordinated, more able to control voluntary muscles, and more able to attend to and control their responses to stimulation.

Piaget

Jean Piaget (1952) believed that people develop intellectual capacity as they master events in their environments. He further believed that although each person comes to his own understanding of the world, human development follows a universal progression through distinct stages and trends. Also according to his theory, exposing children to concepts or problems too advanced for their experiences will not promote cognitive development.

6 Kagan, Moore, & Bredekamp, *Reconsidering Children's Early Development and Learning: Toward Common Views and Vocabulary*, 1995.

7 Kagan, Moore, & Bredekamp, 1995.

8 Ibid.

9 Snow, Burns, & Griffin, *Preventing Reading Difficulties in Young Children*, 1998.

Child-centered curriculum is too often interpreted as "child indulgent," and a more descriptive term would be "child-sensitive." The goal of child-centered curriculum is to base curriculum decisions first and foremost on the needs of children and the ways in which they learn.

Sue Bredekamp and Teresa Rosegrant in *Reaching Potentials: Appropriate Curriculum and Assessment for Young Children*

Implications for Teaching

A strong body of research links maternal and child health to performance in school. Conditions such as very low birth weight and poor nutrition may have long-term effects on a child's preparedness. Obtaining basic health history information is vital for understanding the condition in which they come to school. In addition, teachers provide many opportunities throughout the day, both indoors and outdoors, for optimal motor development, including large motor movements and small motor skills needed for holding a crayon or putting together puzzles. [10]

Developing a Sense of Responsibility

Social, emotional, and cognitive development are all components of the development of responsibility in a young child. Initially, their understanding of cause and effect is concrete and literal. Their perspective is egocentric. Between the ages of five and seven, however, children begin to be able to see things from other points of view and sympathize with others. With this increasing understanding, they learn to value and respect the feelings and rights of others. They develop the ability to change their behavior and deliberately act in ways that result in predictable responses. Role models are an important part of this process.

Implications for Teaching

To develop responsibility in young children, teachers ensure that classroom materials are readily available to children without needing the assistance of adults. Labeling shelves and baskets to show where materials belong is another easy way that early childhood teachers can help children to build a sense of responsibility. Providing opportunities to participate in the care of their environment, such as watering the plants, feeding the classroom pet and recycling materials, are other important ways to build responsibility in young children.

Approaches to Learning

Approaches to learning is a term that refers to inclinations, dispositions, and styles – rather than skills – that reflect the myriad ways children become involved in learning and develop their inclinations to pursue it. Approaches to learning vary within and between cultures and this is something that needs to be respected. A cookie-cutter approach to early childhood education (with the goal of all children coming out the same) is undesirable. A child can be successful in school in many ways.

Implications for Teaching

Families and teachers should understand the ways children become engaged in learning in order to know how to enhance and not discourage their engagement. Curiosity, creativity, independence, cooperativeness, and persistence are some of the approaches that enhance early learning and development.[11] Teachers provide children time to plan what they are going to do and provide time later for them to think and talk about what they did. Allowing ample amounts of time for activities is another way for children to develop their own approaches to learning.[12]

Developmentally Appropriate Practice

Based on years of research and theories related to child growth, learning, and development and as a response to new knowledge and the changing context of early education, the National Association for the Education of Young Children has revised its position statement on developmentally appropriate practice. This new statement emphasizes "excellence and equality, intentionality and effectiveness, continuity and change, and joy and learning" (Copple & Bredekamp, 2009). The NAEYC defines Developmentally Appropriate Practice as:

- Meeting children where they are – which means that teachers must get to know them well – and enabling them to reach goals that are both challenging and achievable.
- Teaching practices that are appropriate to children's age and developmental status, attuned to

10 Snow, Burns, & Griffin, 1998.

11 Ibid.

12 From *Foundations: Early Learning Standards for North Carolina Preschoolers and Strategies for Guiding Their Success*, 2004.

them as unique individuals, and responsive to the social and cultural contexts in which they live.
- Ensuring that goals and experiences are suited to children's learning and development and challenging enough to promote their progress and interest.
- Best practice is based on knowledge – not on assumptions – of how children learn and develop.

Five Key Aspects of Developmentally Appropriate Teaching

1. Creating a caring community of learners
2. Teaching to enhance development and learning
3. Planning curriculum to achieve important goals
4. Assessing children's development and learning
5. Establishing reciprocal relationships with families[13]

Responding to How Young Children Learn

With rare exceptions, the developmental process unfolds in a similar fashion for children regardless of their ability, gender, race, social or economic background, and culture. Yet within this process, children learn at their own pace and in their own way.

Safe and Worthwhile Environments

The challenge for teachers is to use what we know about child development and observation to create safe, nurturing, meaningful, and productive learning environments and experiences, both indoors and outdoors. Effective teachers:

- Stimulate development across all domains and avoid emphasizing one area (e.g., early literacy) to the exclusion of others.
- Provide integrated learning opportunities connecting content areas and avoid cutting up the daily schedule into small segments focused on individual content areas.
- Prepare children for future academic learning expectations and avoid trivial activities having little current or future usefulness.
- Recognize the learning opportunities available in the outdoor environment and plan for them.
- Use family and community experiences to provide learning opportunities that are relevant to their lives. They do not view parents as obstacles to their children's learning.

The Importance of Active Learning

Discovery learning, activities involving concrete objects or manipulatives, and multi-sensory experiences enhance learning in young children by helping them understand the world and how things work. Piaget's work and literature on constructivist learning indicate that learners must respond actively to experiences in order to learn from them. Although observing models and listening to instructions may be preliminary steps for some activities, children learn by doing. They need to plan their own actions and responses, practice, and do things themselves.

Children are more likely to learn when activities are based on their interests. Even so, teachers should not fall into the trap of thinking that all learning must be fun. A more worthwhile goal is to aim for learning experiences that are enjoyable. When children's interests form the basis of decisions about important content, this is more likely to happen and experiences based on trivial content will be avoided.

Froebel

Friedrich Froebel in 1840 established the first kindergarten. His vision was to stimulate an appreciation and love for children, to provide a new but small world for children to play with their age group and experience their first gentle taste of independence. The name kindergarten signifies both a garden for children, a location where they can observe and interact with nature, and also a garden of children, where they themselves can grow and develop in freedom from arbitrary political and social imperatives. To Froebel belongs the credit for finding the true nature of play and regulating it to lead naturally into work.

13 Copple & Bredekamp, *Developmentally Appropriate Practice*, 3rd ed., 2009.

The Role of Reasonable Expectations

A well-designed curriculum provides guidelines for expected learning outcomes, while teachers use children's interests and experiences to plan meaningful activities. By linking new activities and concepts to previous ones, you facilitate learning by helping children build on what they already know. Advocates of constructivism believe that this linking of new concepts to what is already known is an important part of learning. Constructivists also believe children are motivated to learn when tasks are interesting and that they should have opportunities to apply the things they learn to real-life situations. It's important to give children opportunities to ask questions, solve problems, have good role models, and make decisions, along with time to reflect on what they have done.

Children who are successful in school develop a sense of what Bandura calls self-efficacy – a belief in their capability to complete academic tasks. When children see their peers being successful, they

The Cycle of Learning and Teaching

The cycle of learning and teaching defines four levels of learning and offers strategies for supporting children at each one. In this model, children progress from awareness to exploring concepts. They then ask questions about a concept and, finally, are able to use what they have learned in new situations. The following table shows what children and teachers do at each step of the learning cycle.

What Children Do	What Teachers Do	Cycle of Learning and Teaching
Awareness Experience Acquire an interest Recognize broad parameters Attend, perceive	Create the environment Provide opportunities by introducing new objects, events and people Invite interest by posing problems or questions Respond to children's interests or shared experiences Show interest and enthusiasm	
Exploration Observe Explore materials Collect information Discover Create Figure out components Construct own understanding Apply own rules Create personal meaning	Facilitate Support and enhance exploration Provide opportunities for active exploration Extend play Describe children's activities Ask open-ended questions (e.g., "What else could you do?") Respect children's thinking and rule systems Allow for constructive error Modify curriculum or activities to meet individual children's needs and perhaps modify methods for student response	
Inquiry Experience Investigate Propose explanations Focus Compare own thinking with others Generalize Relate to prior learning Adjust to conventional rule systems	Help children refine understanding Guide children, focus attention Ask more focused questions (e.g., "What else works like this?") "What happens if...." Provide information when requested: "How do you spell...?" Help children make connections	
Utilization Use learning in many ways: learning becomes functional Represent learning in various ways Apply learning to new situations Formulate new hypotheses and repeat cycle	Create vehicles for application in real world Help children apply learning to new situations Provide meaningful situations to use learning	

Source: Bredekamp & Rosegrant, *Reaching Potentials: Appropriate Curriculum and Assessment for Young Children, Vol. 1*, 1992.

believe they can do likewise. Self-talk and messages from others, including teachers, family members and peers, contribute to feelings of efficacy. Teachers can help children set reasonable goals that are specific, moderately challenging, and attainable in the not-too-distant future. Reaching goals stimulates effort, persistence, feelings of efficacy and motivation.

Getting to Know the Child as an Individual

Even before the school year begins, teachers are amassing information from families, child care providers, early interventionists, screening procedures, and developmental checklists. You use this information to begin learning about a child's interests, attitudes, and dispositions as well as their backgrounds and experiences. Teachers need time to gather all available records and carefully review them before school starts. Then you can plan an appropriate program by combining what you know in general about the developmental needs of young children with the specific characteristics of those in your class.

Screening Tools

Many school systems use screening and readiness tools to learn about children who are entering preschool and kindergarten. Originally designed to identify individuals who might benefit from special education services, screening tests look at developmental milestones. Results of screening tests may lead to referrals for further assessment. Readiness tests are intended to do just what the name suggests – help you know what children are ready to learn. Screening and readiness tests provide information for planning appropriate programs.

"Readiness tests, by definition and statistical design, do not predict outcomes and therefore cannot be substituted for such purposes. These tests assist teachers in making instructional decisions about individual children. Children who do poorly on readiness tests are likely to benefit the most from kindergarten. The paradox is that if readiness tests are substituted for developmental screening measures, certain children are being channeled away from the regular classroom. Screening and assessment does not substitute for an observant, competent, caring teacher and a responsive curriculum."[14]

Health Assessments

All children entering preschool and kindergarten must have health assessment reports.[15] All children with special needs must have an individualized education plan developed prior to receiving special education and related services. Such information must only be used with professional safeguards for confidentiality and never be allowed to create self-fulfilling negative expectations of children.

Observation and Documentation

Young children change from day to day as learning occurs, development progresses, and skills emerge. Teachers, therefore, need current information about all domains. Continuous observation provides information to build on emerging abilities and understandings. It's necessary to structure experiences that encourage development in all areas for all children.

Teachers must connect what children know and are able to do with learning expectations established at local, state, and national levels. Families, teachers, and the children themselves need to know how things are progressing in terms of established expectations. The challenge is to document progress in ways that are fair, consistent, and purposeful.

Dewey

John Dewey became famous in the 1920s and '30s for pointing out that the authoritarian, preordained approach of traditional education was too concerned with delivering knowledge and not enough with understanding students' actual experiences. Any situation, he said, can be experienced in profoundly different ways because of unique individual differences. The teacher with good insight into the effects of past experiences that students bring with them is better able to provide quality education that is relevant and meaningful.

14 From "STILL Unacceptable Trends in Kindergarten Entry and Placement," a position statement developed by the National Association of Early Childhood Specialists in State Departments of Education.

15 See appendix for a copy of the Kindergarten Health Assessment Report, which provides important information about development, illnesses, and vaccinations.

What the best and wisest parent wants for his own child – that must the community want for all its children.

John Dewey

Individual children grow and change at different rates even though the developmental process follows predictable patterns. Just as children get their first teeth at different times, other changes vary from child to child. As you get to know the children in your class as individuals, consider the developmental process in planning activities.

Individual Characteristics

Energy and activity level. Because children combine high energy levels with the need to rest, plan for quiet as well as active times during the day. Offer choices of indoor and outdoor activities.

Rates of physical growth. Children typically gain three to five pounds a year and grow about three inches in height. Make sure classroom furnishings and arrangements cover the range of physical sizes and characteristics.

Levels of coordination. Children are developing preferences for right or left handedness. Provide a variety of large and small muscle activities that allow them to develop lateral awareness and coordination. Allow for activities to be performed in a variety of ways – on the floor, in the wheelchair, etc. Add lots of time for practice.

Vision. Children between the ages of four and five typically still have not fully established visual tracking (left to right). Therefore, they tend to focus on one word at a time and have difficulty copying from the blackboard or chart stand. Provide large print, different colors of background, and designated workspace for students with visual impairments. Close visual activities should be kept to a minimum.[16]

Health and hygiene habits. Children form basic health care habits early in life. Plan activities to encourage good health and hygiene, including hand washing, dental care, a balanced diet and good eating habits.

Sleep and rest needs. Children require about ten hours of sleep a night. Daytime rest needs vary from child to child but must be available to all preschool and kindergarten children. Adjust the length of nap time and other options for quiet activities during the rest period depending on individual needs and as the year progresses. Therefore, a typical rest time in a preschool setting may last 60 minutes in a typical day of 6 to 6 1/2 hours, while kindergarten may begin with a 45-minute quiet time and shortened to 20 minutes by the end of the kindergarten year.

Preferences for group and solitary activities. Some young children are interested in playing with others while some prefer to play alone. Structure your classroom so children can choose.

Levels of cooperation and sharing. Preschool and kindergarten children are just learning to respect others. Offer day-

16 From *Yardsticks: Children in the Classroom Ages 4-14: A Resource for Parents and Teachers*, by Wood, 1997.

to-day activities that give them varied opportunities to practice getting along with other children and adults. Use peer helpers to assist the special needs children in center activities.

Developing self-concepts. Early perceptions and experiences can have powerful lifelong effects. Allow children to explore and to experience success in a variety of activities. Feelings of trust and attachment must be developed to support positive self-concepts.

Interests in writing and drawing. Children express themselves and represent feelings, thoughts, experiences and emotions through drawing, scribbling and writing. Early markings and drawings move through stages that indicate levels of development. Provide opportunities to use markers, paints, crayons and a variety of paper and instruments throughout the day. Provide modif ed writing tools and modif ed materials so all students can access the center.

Developing language. Children develop concepts as they talk and think about their experiences. An early childhood classroom is full of things to do, see, and talk about. Children who are provided with an environment full of experiences and rich in language and print extend their concepts of language skills.

Developing understanding of mathematical concepts. Young children develop math concepts in different ways. They begin by understanding like and different, sorting, patterning, series, measurement, spatial relationships, and the concepts of number and time. Help children develop these concepts by providing an environment rich in manipulative materials. Centers should have modif cations that allow activities for children with physical limitations by including adaptive materials/devices.

Differing attention spans. Young children typically focus on one thing at a time. Activities hold some children's attention for long periods of time. Others move from one thing to another very quickly. Provide many different situations to engage children in learning activities. Provide a quiet place for children to remove themselves and refocus.

Indicators from the Child

During the school year, children show us what they know and can do. They draw, scribble, and write. They build and talk. They climb, run, jump, and dance. They tell and retell stories. Their work products and performances during activities provide authentic evidence of growth and development. Their behaviors and reactions give us clues to successes as well as larger problems. Teachers and others use careful, systematic observation and documentation to know how children perform in routine classroom situations. This information serves as the basis for assessing changes in learning and development.

Visual problems may be present if a child...

- bumps into furniture, walls, and people.
- squints, closes one eye, or tilts his head to try to see better.
- if one eye turns in or out while the other one remains focused and straight.
- complains that her eyes hurt.
- rubs red, watery eyes or encrusted eyelids.
- holds objects very close to her eyes.
- does not seem to focus on people, things, or activities.

Hearing problems should be considered if a child...

- uses motions and gestures rather than talking.
- uses noticeably fewer words than peers.
- turns one ear, usually the same one, toward sounds or voices.
- does not turn when her name is called.

Kohlberg

Lawrence Kohlberg (1971) was interested in the reasoning people use as they make moral judgments. He believed that children, adolescents, and adults all actively construct their concepts of justice and fairness as they encounter and resolve dilemmas. Kohlberg proposed six age-related stages of moral development that begin with simple obedience and culminate with a sense of universal conscience.

- does not react to sudden noises.
- does not seem to understand speech.
- speaks in non-speech sounds or uses speech that cannot be understood.
- always talks in either a very loud or a very soft voice.
- frequently has ear discharges or earaches.

Emotional and social development may be a problem if a child...

- seems to withdraw from others.
- has problems making transitions.
- has problems making friends.
- does not interact with other children.
- is difficult to comfort.
- regularly interferes with other children's activities and play groups.
- finds it difficult to control her behavior.
- has exaggerated responses to sudden noises or surprises.
- is unusually quiet.
- has toileting problems (not related to physical condition or developmental stage).
- displays repetitive or self-stimulatory behaviors.

One of the most important steps to successful transitions (for children) is a positive working relationship with families.

Patricia A. Wesley, 2001

Motor development may be delayed if a child...

- has difficulties balancing and walking.
- shows greater coordination on one side of the body than on the other.
- does not seem to keep pace with other children either in growth or in the ability to walk.
- has poor muscle tone (either very stiff or flabby).
- has a difficult time getting up from a squatting or ground-seated position.

General health may be a concern if a child...

- lacks energy to participate in activity play.
- appears to be significantly overweight, underweight, or markedly shorter than other children his/her age.
- is often short of breath.
- frequently falls asleep or seems overly fatigued.

Language delays and difficulties may be present if a child...

- has problems understanding speech and following simple directions.
- has a much smaller vocabulary than peers.
- speaks in non-speech sounds or uses speech that is not understandable.
- just does not communicate.

Cognitive difficulties should be considered if a child...

- does not remember simple events, names, or routines.
- repeats words and questions, but usually in an unconnected manner.
- has little interest in caring for himself and being independent.
- seems uninterested in surroundings and is withdrawn.
- is not easily consoled.
- cannot respond to problems peers handle with ease.
- does not understand concepts peers comprehend.

A child may be gifted if he or she...

- is eager to tell the ending of a story before it is read.
- remembers and retells stories in great detail.
- is easily bored with activities that engage other children in the group.
- has a vocabulary more advanced than peers.
- recognizes written words or reads before peers do.
- recognizes complex patterns, including visual and number patterns.
- solves mathematical problems with ease.
- has a vast array of information about his or her world.[17]

17 Adapted from *Training Guide: Development and Implementation of the Individual Service Plan in Head Start*, by Wolfe, Griffin, Zeger, & Herring, 1982.

Partnering with Families

One of the best places to learn more about the children in our classrooms is from their families. After all, they know their children best and have had the most inf uence on them. Trying to develop a relationship with a child without getting to know the family is like seeing only half the picture!

Often the f rst experience a young child has away from home is in the preschool or kindergarten classroom. By working closely with families, you can help children feel comfortable and develop their conf dence and skills in this new environment.

Because all families are different, they will participate in their child's program in varying ways. For families with younger children at home, a language barrier, or personal health issues, simply maintaining the child's enrollment in your class is involvement itself. For others, advocacy and leadership roles are unlimited. For all of them, your commitment to keeping channels of communication open is critical to the success of partnerships between parents and teachers and to children's bright outlook toward learning.

To develop an understanding of a family's particular priorities, concerns and resources, you must also consider the child in the context of his or her community. You can make your classroom relevant to many communities by inviting families to be part of your program. Through artwork, toys and materials, activities and interactions in the classroom, you can show that all cultures are valued and important in the day-to-day experiences at school. By helping the children learn about community events and relationships and by showing them the connections between school, home and community, you can have a lasting, positive effect on a child's life.

How can you facilitate a positive partnership with families and other caregivers in your program? Consider these strategies:

Take time to get to know families. Building rapport and trust as the basis for mutual respect takes time. Strong foundations for lasting relationships cannot be rushed. They emerge from a balance of becoming close without prying into people's lives.

Respect and accept diversity. Show concern for all the people in a child's home who are regarded as members of the family. Developing an understanding of the cultural, social, and economic factors affecting the family will contribute to your understanding of the children and to your ability to help them learn.

Show sensitivity toward a family's emotional needs, including that of privacy. Develop your ability to listen carefully without interrupting or judging. Accept that a family's interest in and ability to participate in their child's program may change over time. A family whose child has special needs, for example, may feel especially overwhelmed from time to time. A family's previous experiences and personal preferences may affect their willingness to share some types of information. Schools should only request information that is directly related to the child's learning. Always respect a family's right to conf dentiality.

Erikson

Erik Erikson (1963) theorized that healthy personalities emerge as people master their social environment and perceive themselves and others realistically. Conversely, he said, when children or adolescents do not resolve a particular crisis in a healthy manner, they cannot advance through that stage and may develop psychological ill-health. Coiner of the term "identity crisis," Erikson advanced the theory that there are eight developmental crises that must be resolved and that the content and sequence of these stages is fixed.

Design flexible schedules. Consider family schedules when inviting participation in school events. Schedule conferences to accommodate a variety of family circumstances and transportation arrangements, even if this means some late afternoon or evening work. Respond to family concerns in a timely manner, adjusting your schedule as needed.

Frame your concerns positively. Let families know in advance when you want to meet with them and be prepared to emphasize solutions that meet their interests and needs. Recognize that any meeting about a child can be stressful for parents and be as positive as possible. Parents of children with special needs may want to bring someone else to the meeting. Extend this option to all parents. Collect data to share with parents to support concerns about the student.

Help families find resources in the community. Families may need help identifying and accessing community services for themselves and their children. No single program will meet all the needs of all families. This means that in addition to traditional roles, teachers and administrators are becoming knowledgeable links to resources. In some cases, schools can provide resources themselves to help families participate in their child's program. Sometimes simply arranging rides to school meetings and providing child care at meetings can boost family participation.

Vygotsky

Lev Vygotsky (1978) believed that children acquire knowledge and skills when they are challenged by problems just beyond their current ability and then link their new experiences with what they already know and can do. His observations of children talking to themselves as they solved problems led him to propose that language development is an important component of thought and cognitive development.

Guiding Principles for Family/ School Partnerships

1. Value families as children's first teachers and as important sources of information.
2. Recognize and respect various family structures.
3. Encourage and value active family participation in decisions about children's education.
4. Solicit family members in shaping school-wide policies.
5. Include learning for all family members in the child's educational experience.

Ideas for Communicating with Families

- Home visits
- Classroom visits and open houses
- Newsletters and other print materials
- Group meetings
- Individual conferences
- Samples of the child's work
- Bulletin boards
- Advisory committees
- Community outings
- Phone calls
- Email
- Daily diaries
- Cassette or VCR recordings
- Discussion groups
- Suggestion box
- Questionnaires
- Web site

Gathering Information

Early on, consult families about their hopes for their children and their ideas for the program. Consider these questions:

- What are your hopes and expectations for your child in school?
- What are your child's special interests and talents?
- How would you like to see us help your child?
- What do you enjoy doing with your child?
- How do you expect your child to react to school?
- How is your child adjusting to school?
- What questions and concerns do you have about the program?
- What would you want from your child's teacher?
- What kinds of information and support would you like from the school (e.g., ways to meet other parents, information about the curriculum, information about community services and resources)?
- How would you like to help in the school or in your child's group?
- How can school be a greater part of your community?

Shaping Your Program through Feedback

- Develop a questionnaire asking parents to rate the quality of the program.
- Use a suggestion box, informal conversation, or evaluation form to capture parents' ideas about improving classroom activities.
- Establish a monthly discussion group where parents can offer suggestions for making program policies and practices more family-friendly.

How Families Can Participate

At Home

- Telephone or email other parents about upcoming events.
- Cut out and color simple materials for the program.
- Wash sheets and towels used in the classroom.
- Send program snacks.
- Read to their child.
- Do learning games with their child.
- Help write, edit, illustrate, or circulate program newsletters.
- Send in recyclable materials.
- Repair equipment or materials.
- Share information, via phone or notebook, with the teacher about their child.
- Donate used clothing for the dramatic play area.
- Make props for center time.
- Display their child's work.
- Assemble a scrapbook about their child to share with teachers.

In the Community

- Locate door prizes for parent meetings.
- Serve as an interpreter for families who are not fluent in English.
- Participate in fund-raising activities for the program or school.
- Take classes that enhance knowledge and skills.
- Join in health and consumer information forums about children.
- Take their child to the library, museum, park, or community center.

- Join local, state and national parent and early childhood organizations.
- Educate employers about the need for family-friendly work policies such as flex time.
- Help organize a special event, field trip, or visit by a community member to the program or school.
- Develop an "Adopt-a-Family" or "Welcome Wagon" program for new families.

In the Classroom

- Write a story as a child tells it.
- Read to a child.
- Share a special interest, ability, or experience.
- Help a child accomplish a special goal.
- Serve as a substitute or volunteer.
- Help with lunch, nap time, or special event.
- Share information about cultural traditions through storytelling or demonstration.
- Bring a favorite food to share.
- Lead a small group of children in an activity.
- Supervise a special activity center.
- Assist in efforts to evaluate global classroom quality.

Creating effective partnerships between schools, parents and communities isn't just a nice idea. It's a necessity.

Don Davies, 2000

At the Center or School

- Attend individual conferences.
- Attend a family meeting, family night, or pot-luck supper.
- Act as a greeter at a family meeting.
- Organize a family support group.
- Establish a buddy system, cluster group, or car pool for attending meetings.
- Lead activities for children during parent meetings.
- Become a member of an advisory or policy board.
- Build or repair furniture or equipment.
- Assist with updating a list of toys available through the program's lending library or staff the library on occasion.
- Answer the telephone to provide the school secretary a break.
- Conduct training sessions for staff or parents.
- Participate in evaluating the effectiveness of the overall program.

In the Outdoor Learning Environment

- Help children play games or teach them a new one.
- Help conduct a safety check of equipment and grounds.
- Share special knowledge about the outdoors.
- Conduct an outdoor experiment.
- Set up and supervise an outdoor art activity.
- Help a child with special needs participate in an activity or use equipment.
- Plant a garden with children.
- Develop a nature trail for children and their families.
- Build bird houses or a bird blind.[18]

Quality Indicators for Family Involvement

- Family members make decisions in forming individual education plans for their child.
- They are always welcomed in the classroom and encouraged to participate.
- They receive many opportunities to participate and exchange information with staff.
- They serve as representatives on committees and advisory boards that have direct input in planning activities and policies in the classroom and school.
- They are included in the planning of family activities.
- Partnership activities and special events are scheduled at times and locations convenient to families.
- Frequent, ongoing, and varied types of communication inform families about their child's progress, classroom activities, and school events.
- Teachers actively solicit family involvement and listen to concerns as well as compliments.
- Teachers share and solicit information and work together with families in the best interest of children.
- Staff development activities are planned based on needs assessments that solicit suggestions from families.
- The school has a common vision and a plan for family participation.
- Family members and other volunteers are in the school and in classrooms daily.
- Materials and games are provided for family members and children to use together at home.
- Family involvement and home/school partnerships are assessed regularly and the results are used to improve effectiveness.

18 All lists taken from *Planning for Success: A Teacher's Guide to a New Planning Guide to the Preschool Curriculum*, by Hardin, Lohr, & Wesley, 1997.

Creating a Learning Environment for ALL Children

Chapter Highlights

One of many important things we know about young children is that they learn best when allowed to actively explore their environment. They try to make sense of common objects by prying into them, taking them apart, and manipulating them in a variety of ways. As they build with blocks, they are considering their size, proportion, and concepts about numbers that will later help make higher-level mathematics seem more sensible. As they draw, cut patterns, glue and paint, they develop the arm and hand muscles needed later for handwriting.

Indeed, in their years in preschool and kindergarten, children absorb an amazing depth of learning across all the content areas – language, mathematics, science, social studies, and the arts. Children are weaving their experiences into knowledge and skills they can use now and will need in future schooling and life.

Children in any group represent a wide array of developmental accomplishments, temperaments, interests, and needs. More and more, they may be learning English as a second language. This chapter addresses how preschool and kindergarten teachers can plan and organize programs and their classrooms to meet the diverse needs of all the children who come to them.

Engaging All Children

A central tenet of the *Guide for the Early Years* is the importance of using learning centers as the major vehicle to organize a classroom. A program organized around well-designed centers for interactive play activities helps children develop self-regulation skills, language skills, and mathematics concepts, as well as knowledge in all other discipline areas.

Every individual matters. Every individual has a role to play. Every individual makes a difference.

Jane Goodall

As greater focus is placed on academic performance in kindergarten and even preschool, such activity-based programs still raise some eyebrows. *Are children learning what they need to get ready for the next level of schooling?* The evidence continues to support that they are. Young children are learning the concepts underlying the "three Rs" at their individual level of development and so very much more. Such an approach is the most likely way to address the learning needs of the widely diverse groups of children in today's classrooms.

Experts continue to urge schools, teachers, and parents to resist the temptation to teach preschool and kindergarten in the same way as the upper grades. They argue that formal instruction in reading or other academic subjects is largely inappropriate for children in these programs because they are not yet mature enough to grasp what is being taught. Worse, such an approach steals time that children in this age range need to accomplish other important developmental and learning goals.

The **intentional** teaching, exploration, and discovery that take place in activity-centered classrooms mean much more than many may realize. By focusing on developing the whole child – socially, emotionally, physically, and intellectually – teachers provide a nurturing, safe environment that helps children move forward with a love of learning, an ability to socialize well with others, and a desire to master all content and skills in all subjects.

Such an approach is also the most effective learning environment for young people who face challenges to success in school:

- Children from economically disadvantaged families
- Children with a wide range of disabilities
- Children learning English
- Children who may later benef t from programs for children who are gifted

The key to enabling each child to achieve his or her potential is thoughtful planning of the indoor and outdoor environment and active, intentional teaching by specially trained teachers who receive ongoing support.[1] Subsequent sections of this chapter offer additional information on setting up and managing an effective learning environment for all children, including:

Children with disabilities. It is now widely accepted that most young children with disabilities learn best in inclusive settings. They will make progress on the skills and characteristics described in *Foundations* and the NC Standard Course of Study for Kindergarten, though with great variation. They will make the most

1 Pianta, et al, "Features of Pre-Kindergarten Programs, Classrooms, and Teachers: Do They Predict Observed Classroom Quality and Child-Teacher Interactions?", 2005.

Keeping it Real

Every learning environment communicates to children what is important and valuable in the eyes of those who provide it. The décor of many early childhood and elementary classrooms emphasizes what is cute, frivolous and trivial and also misrepresents children's interests. This emphasis is not only questionable on aesthetic and pedagogical grounds, but it also may distract children from achieving self-esteem derived from appreciating and interacting with the real world and their real capacities to understand and contribute to it.

Lilian Katz

progress developmentally, socially, and academically when appropriate special education and other support services are provided within typical classroom settings. Just as the expectations/objectives are inclusive of all young learners, so should early childhood programs be. Children with and without disabilities learn from one another in natural environments. A curriculum and classroom tailored to meet the needs of individual children meet the needs of all.

- Children with disabilities are valuable to the inclusive preschool and kindergarten classroom.
- Children with disabilities are affected by their ability to communicate and access the environment.
- Preschool and kindergarten classrooms should promote a respect and understanding of the differences in children.
- Children with disabilities learn best when their skills are integrated with their peers in a typical classroom setting.
- Families should be encouraged and supported as they learn techniques for communication and movement for their children with disabilities and should be encouraged to be a part of the classroom.
- Educators should expect children with disabilities to grow and achieve to their abilities.

Children who bring diversity in language and culture. This diversity is something to celebrate. Families from different backgrounds bring a wealth of strengths, knowledge, and values to preschool and kindergarten classrooms. Teachers in classrooms that include children from diverse cultures and with different home languages should be guided by these six principles:

- Children from families with diverse cultural and language backgrounds are valuable assets to preschool and kindergarten programs.
- Children's learning is affected by their language and cultural background.
- Preschool and kindergarten classrooms should strive to promote understanding and respect for different cultures and languages.
- Children whose home language is not English learn best when early educators encourage them to continue to speak and read their home language while learning English.
- Families who speak a language other than English should be encouraged to continue to speak and read to their child in their home language, even while the child is learning English.
- Educators should expect wide variation in how children make progress on learning English and on the skills and characteristics described in *Foundations* and the Kindergarten Standard Course of Study.

Children who may be gifted. Occasionally teachers will see children whose developmental trajectories greatly exceed that of typical preschool and kindergarten children. How these children experience school in these early years will have a profound impact on their adjustment

No matter what routine you establish to care for the classroom environment, the first step must be to control clutter.

Rebecca Isbel, Betty & Gary Exelby, 2001

in future schooling. A richly provisioned program and teachers who encourage exploration and learning will help these children advance their knowledge and skills and support habits and attitudes they will need in the future. Such children can serve as models to others and benef t from learning that they have a responsibility to help others.

The Well-Designed Classroom

Active learning through play in a well-planned and well-equipped environment is characteristic of effective preschool and kindergarten programs. More than at any other level of education, the design of early childhood classrooms is a physical representation of the curriculum. The particular learning centers described in this publication mirror those found in *Learning through the Eyes of a Child: A Guide to Best Teaching Practices in Early Education*.

Detailed information about provisioning and using specif c learning centers is located within chapters that most closely address that domain or discipline. This somewhat unconventional route was taken in order to emphasize the centers' importance as the primary learning/organizational mode for the various domains and disciplines. It should not be interpreted as diminishing the important ways all of the centers weave together children's opportunities to acquire content and skills.

All of the centers are integrated and interdisciplinary. They all promote social development. Science and Discovery offers opportunities to develop literacy. Dramatic Play supports language development and problem-solving. A classroom with high-quality learning centers supports a child's overall understanding about order and classif cation, generally viewed as a math and/or general cognitive skill. A well-designed classroom provides a variety of areas for exploration. They include (though certainly are not limited to):

- a **blocks** area for building
- a **science** area for observing and investigating
- a **dramatic play** area for role-playing
- an **art** area offering a variety of open-ended materials for trying creative ideas
- a **book** area, comfortable and quiet, with good books, music, and stories
- a **writing area** with paper, pencils, crayons, markers, and possibly a computer
- a table games and **manipulative** area for developing eye-hand coordination as well as sharing, problem-solving, and thinking skills
- a **sand and water** area for beginning to explore basic mathematical and scientif c concepts
- an **outdoor area** for exercise, sharing, and exploration
- a **carpentry** area for exercising small muscles and developing eye-hand coordination

- a **large open space** for group meetings, story time, music, and movement

Learning Center Possibilities

- Art
- Blocks
- Books and Listening
- Carpentry
- Computer
- Cooking
- Dramatic Play
- Mathematics and Manipulatives
- Music
- Outdoor Activities
- Sand and Water
- Science and Discovery
- Stitchery and Weaving
- Writing and Printing

The ABCs of Organizing the Space

Children need a comfortable, safe, stimulating environment in order to learn. A well-organized classroom not only positively affects attitudes toward learning but also fosters a sense of belonging and contributes to appropriate behavior. Setting up your space to accomplish these goals requires a bit of thought and planning, but it assuredly pays off. Don't be afraid to make changes as you go through the year. Here are some key considerations:

- Plan learning centers that address all developmental areas (cognitive, language, creative, physical, self-help, social/emotional).
- Incorporate a variety of materials and adaptations to allow children to access and use the materials. Make sure each center addresses all children's needs.
- If the size of your classroom limits all centers at the same time, plan a rotation pattern. However, Blocks, Table Games and Manipulatives, Books and Listening, Dramatic Play, Writing and Printing, and Art should be available all the time.

From a Child's Perspective

- Is this a comfortable place to be? Do I want to stay?
- Are there adults here? What do they do?
- How many choices do I get to make here?
- Are these same kids going to be here tomorrow?
- Is there a space for me to put something of my own?
- Do I know where to find and return toys and materials? How do I know?
- Are there enough toys and materials I might find interesting? Can I do more than one thing with them? Do I even have to use them?
- Where will I eat? Where will I take my nap?
- Where can I run, climb, jump, and be noisy?
- Can I move about in this space if I use a walker, wheelchair, or other assistive equipment?
- Is there a quiet area where I can flop down and relax?
- If I want to play alone, is that OK? Where can I go to be alone?
- Do I know what parts of the center and classroom I can explore and what parts are off-limits?
- Is the same thing going to happen every day? How will I know what to do next?
- Can I get my special needs met here (e.g., medicine/therapy/help during toileting)?

Source: Wesley, Mainstreaming Young Children: A Training Series for Child Care Providers, 1992.

- Locate centers based on needs for storage and water, the size of the group using them, and the space needed for the materials (e.g., the Block Center requires about 25% to 35% of the total classroom floor space. Because this center incorporates so many learning concepts, it should be established first.)
- To the extent possible, keep quiet areas separate from active or noisy areas (e.g., Books should be distant from Blocks, Carpentry, and Dramatic Play).
- Consider floor coverings in placing centers (e.g., Sand and Water, Cooking, and Art work best on materials that can be easily cleaned).
- Ensure that the room arrangement allows for children to be visually supervised at all times.
- Provide space where children can go to be alone but still remain in full view of the teacher.

If we embrace the idea of the environment as a significant educator in our early childhood programs, we must expand our thinking beyond the notion of room arrangements. We must ask ourselves what values we want to communicate through learning environments and how we want children to experience their time in our programs.

Deb Curtis & Margie Carter, 2003

- Def ne boundaries with furniture and f oor coverings so children can tell where learning centers start and end. Post pictures to designate centers for children needing a visual input.
- Provide each child with a place to store personal belongings (e.g., a cubby, a plastic bin).
- Avoid leaving large open spaces in the room that encourage running and aimless wandering.
- For safety, separate the Carpentry workbench from other activity areas and limit the number of children who can work there at one time. Be sure to include safety devices such as goggles.
- Make activity centers organized with materials easily accessible for children's use. View each one from knee-level to gauge how it appears to them. Take into consideration children with walkers or wheelchairs.
- Select storage to display materials to their best advantage — shelving at the children's eye level, open shelves instead of closed cupboards, books on shelving that lets them lay f at with covers visible.
- Provide storage shelves labeled with shapes of blocks. Shelves with labels require children to use math skills (sorting and classifying) as they replace blocks during cleanup.
- Choose materials that are appropriate for all children in the group – simple enough for those who are developing more slowly, complex enough for those who are rapidly developing – challenging for all. Materials should be respectful of all cultures, and print materials should represent the language groups represented in the classroom. Provide duplicates of favorite toys and materials.
- Integrate tables into the various centers rather than keeping them separate or grouped in one area of the room.
- Make sure there is enough space around the tables for all children involved in and around the activity.
- Allow ample space and time for the completion of projects. Designate a "holding area" for work that is still in progress.
- Provide materials that are adapted to meet individual children's needs.
- Remember that, with planning, anything you do inside the classroom can be done outside. Incorporating spaces in the outdoor area to include blocks, dramatic play, science, manipulatives, art, sand and water, carpentry, open spaces for large motor movement, and quiet spaces for alone time is essential to a well-designed environment for young children.

The Seven Dimensions: Achieving Balance in the Classroom

Think about how to make small, but continuous, changes to improve your classroom environment so that it enhances learning opportunities for all children. Elizabeth Prescott (1984) identif ed these seven dimensions to consider in achieving balance and providing for individual needs. Prescott describes each dimension as a continuum.

1 *Softness/Hardness*

Softness is expressed through the use of pillows, rugs, carpets, stuffed animals, beanbags, sofas, cushions, draped fabrics, lamps, and tablecloths. These help to make the classroom feel cozy and responsive to children. (Be sure they meet f re codes and are kept clean.) Bolsters, mats, and pillows may aid in positioning a child with physical disabilities. Sand, water, play dough, and f nger paints also provide a sense of softness as children feel, touch, and mold them. Animals – guinea pigs, rabbits, hamsters, gerbils – provide soft, sensory experiences. However, care should be given to those with allergic sensitivities. Hardness is expressed with hard surfaces and materials: hard plastic,

wood blocks, metal or wooden furniture, and tiled floors. Hard surfaces are more appropriate for some activities.

2 *Open/Closed*

Open materials can be used in different ways and offer children choices. Examples include unit blocks, water, sand and drama props, and art centers. Closed materials, such as puzzles, often have one correct way of being used. Limiting how children use materials – e.g., requiring them to build a barn only with blocks or paint apples only red at the easel – restricts options and makes materials closed.

3 *Simple/Complex*

As children work with simple materials, add props to sustain interest. Once a material has been explored in its simplest form, make other tools or elements available. The material or activity becomes more complex and more interesting as they discover new uses for materials and props. All children need opportunities to show competence and to be challenged.

4 *Intrusion/Seclusion*

Define and label boundaries so that children understand where certain activities take place. Plan traffic patterns so that activities are not interrupted to let others pass by. Plan for a child's special mobility needs and designate areas where children can spend a few moments by themselves if they wish.

5 *High Mobility/Low Mobility*

Room arrangement encourages or discourages movement. Provide high-mobility areas in the classroom as well as outdoors to encourage children to practice gross motor skills. Also set aside areas for activities requiring low mobility, such as meetings, story and rest times, and art and book centers. The outdoor environment lends itself to the variety of mobility needs of children all the time. It's important that children with disabilities have access to all areas, with adaptations as needed to provide that access.

6 *Safety/Risk*

Emphasize good health and safety practices. Encourage and support children as they take informed risks. Young children learn through taking risks while supported by the adults in their world. Knowing how to proceed carefully and safely is especially important for children with disabilities.

7 *Large Group/Individual*

Allow for a variety of group activities, both large and smaller groups, as well as times for individual experiences. Provide opportunities for children to choose large group, small group, or individual activities at different times during the day.

Large Group Meetings

Group times are a vital part of early childhood classrooms. They encourage a sense of belonging and can contribute to creating mutual respect. Young children need chances to work within a group in order to learn social skills, enhance their ability to speak in front of others, and share ideas and experiences. Group meetings also serve as a vehicle for presenting materials that will help further cognitive development.

The number of group meetings during any given day depends on class schedules. In general, it is wise to have an early morning gathering in order to greet children and begin the day as a community. A meeting before departure allows everyone to get together and reflect on the day's work.

Other meetings can be scheduled in and around daily activities. These meetings, held in the indoor and outdoor environments, enhance knowledge and teach skills in all the cognitive domains. At times, calling the children together

> Children deserve to be surrounded with beauty, softness and comfort, as well as order and attention to health and safety.
>
> Deb Curtis and Margie Carter, 2003

serves to help shift gears or redirect play and activities in the room. While many group meetings are teacher initiated and directed, there should always be room for child-initiated questions and choices during meeting times. Children may decide which songs to sing, which finger plays to do, or stories to read. A key to successful group meetings is children's participation. Children may also bring a group concern to a meeting so the group can help resolve the problem – for example, deciding on rules to use the tire swing on the playground.

Guidelines for Structuring Large Group Meetings

Establish a meeting place. A specially designated carpeted spot should serve as the meeting center. It should be large enough to accommodate all children comfortably. If possible, it should be near a space where a child who is having difficulty being part of the group at that moment might sit and attend until he/she is ready to join. Make sure all children are afforded opportunities to participate by using assistive technology, pictures, or other means as needed. The gathering space should provide easy access to:

- a chart stand
- a big book easel
- a tape/CD player and CDs/tapes
- a chair or stool
- a wipe-off board/magnetic board and a flannel board

A special place to gather together as a large group is also a wonderful space to include in the outdoor environment as well.

Organize the seating. There are a number of ways for children to sit in a meeting time. Some teachers like to assign places with tape on the area rug. Others like to use a small rug to help individual children remain in their own special spot. Some teachers feel comfortable allowing children to sit wherever they wish. As long as a system is devised that works for each teacher, it doesn't matter what the system is. The important thing is that the children are seated in a way that maximizes your ability to manage the group and maintain attention. (Of course, the best way to keep children's attention is for the activity to be of interest to them!) Theater-style seating works for some things (reading stories, brainstorming ideas) while sitting around the edges of a circle area works better for demonstrations of new activities or materials. Children with visual, hearing, or motor needs may need a designated space to sit to allow them to participate fully in the group activities.

Gather the children. Depending on what children are doing at the time, there is usually a need to transition them to a group meeting. It is important from the very beginning of the school year to institute a signal that will alert the children to the start of a gathering time. If the children are in learning centers, give a five-minute warning prior to the signal for cleanup. This gives them a chance to reach a satisfying "stopping place" with the activity. Use a familiar signal to let

children know when it is time to stop and clean up (a song, music, or dimming the lights). As children finish cleanup, they can avoid wait time by helping others.

Teachers use whatever signals work best with their particular group of children. What is important is that children know how to respond. Correct behavior is modeled and expectations are clear. Many young children need time to change gears – particularly if they will not be going back to the activity they were involved in. A plastic pop bottle timer filled with sand is a perfect way to do this.

As children gather at the meeting place, a teacher should be in place to fill wait time by singing songs or doing finger plays that are familiar, so the children can easily join in as they arrive. Songs also serve as an "invitation" to any child who has not arrived, as they send the message "here is where the action will be next!" As the teacher ends the last song, with all gathered, she has the children's attention and is ready for the meeting to begin.

Manage the meeting. Just as a gathering signal is used, children need a signal to know when they should begin listening. Again, whatever is done is not as important as modeling and practicing expectations early in the school year. A simple raised hand or two fingers raised in the peace sign (for quiet) usually works well. Always wait for everyone's attention before beginning. It will avoid having to stop and start again. With young children, singing a simple song or doing a finger play works particularly well. Children usually attend to a change in voice and react positively as their friends begin to participate.

Work with an assistant. Assistants are an integral part of the classroom community and as such should be part of large group meetings. They should be knowledgeable about the meeting agenda and part of the management that assures a smooth flow in the meeting. In general, it helps for the teacher and any assistants to be as low and close to the group as possible. It is hard to ignore a teacher who is right in front of you! Depending on the activity for group time, sitting on the floor or on a chair close to the group works well. If the activity is book-reading, the reader needs to be visible to everyone. If the activity is a demonstration, everyone needs to be able to see what is being shown.

Keep everyone focused. There are a variety of supports (tools) that are sometimes helpful for children who have trouble focusing in groups. For example, squishy pillows, fidget bracelets, a stuffed toy. This gives children an opportunity to keep their hands to themselves and manage their personal space. Some children also can remain focused during a group meeting by sitting on a low chair or stool. Some children with disabilities may need to respond by pictures, signs, symbols, or voice output equipment to participate in the group.

Commonly Asked Questions About Managing Group Time

What should I do about challenging behaviors during group time?

If you have children in the classroom who are developmentally unready to fully participate in group experiences or have a short attention span (i.e., 1-2 minutes), make provisions for them to come and go as needed – but in a manner that is not disruptive to the group. It is imperative to have a plan in place with your teaching partner/assistant so that everyone is on the same page and can handle the situation while you are working with the group. It might be that the child needs to be away from the group for a few minutes to gain better control. It might also work to have that child be in a chair near the group and able to hear and see what is happening. In a few minutes, he or she might be ready to rejoin in a more responsible fashion.

[Children] learn best when offered interesting materials, ample time, and opportunity to investigate, transform, and invent – without the interruptions of a teacher's schedule.

Curtis & Carter, 2003

Much of this will depend on the issues at hand, but these two alternatives usually can provide some assistance. Some children get over-stimulated in a group and need their own space in order to attend better. Children who typically have trouble in group meetings may respond best being seated close enough to be a member of the group but far enough away to remain attentive and focused. If a teacher resorts to that mode, the child should be made to feel welcome and also be made aware that the seating is to help him or her attend, not as a punishment. These children may also do well placed near the teacher leading the group or the teaching partner/assistant. Then a simple touch might be given to help the child stay calm, focused, and attentive.

What about children who interrupt and call out?

Part of being in a group is learning how to get needs met while waiting one's turn. Children develop these attributes at different times, but there are ways to help them understand the "rules" of working together. This is another place where discussing expectations and modeling behaviors certainly help children develop the skills. For example, it would be a good idea to model how one raises a hand to answer or ask a question. Role-playing a variety of situations would be an ideal way to make these concepts accessible to young children. Don't expect miracles! The younger the children, the harder it is for them to control their impulses. Preschool and kindergarten are the years for laying the groundwork for these skills to develop, not for expecting perfection.

Activities for Large Groups

Large group experiences should be hands-on and allow active participation by all children. It is not only a time for demonstration. Large group activities can include:

- Stories and poems
- Music (singing songs, playing instruments)
- Movement activities
- Introduction of new materials (e.g., new listening tapes, new building set)
- Introduction of new activities (e.g., a math game, cooking, art)
- Sharing finished work/experiences
- Brainstorming sessions (e.g., questions for projects, discussing field experiences, exchanging ideas, making predictions, problem-solving discussions)
- Introduction of new ideas to spark curiosity
- Morning meeting message/greeting time/planning time (Keep it short!)
- Reflection and wrap-up afternoon time
- Solving classroom social problems
- Discussing and defining rules
- Revisiting project experiences (e.g., computer slide shows of photos taken during field experiences)

Small Group Meetings

Small group work is a time to refine and extend skills and concepts. Working with children in small groups affords teachers time to observe and assess individual growth and development for further attention. Small groups are flexible in nature. Over the course of the school year, they should be organized to reflect the changing needs of children.

Small group work can take place on a rug area (the large meeting rug could work) or at a table. It is often helpful to have some way to define the work space if a rug area is being used. A carpet scrap or a tray would work well depending on the activity. Some preparation should occur with the whole group prior to beginning small group meetings. The children will need to know how to seek assistance if a

teacher is working with a small group of children. Strategies could include asking classmates, writing their name on a waiting list, or moving on until someone can help. Since one teacher will be primarily occupied with a small group, it may be necessary to close centers that are very teacher intensive. In that way, the f oating teacher can meet the other children's needs adequately.

Activities for Small Groups

- Teaching a new skill before it becomes part of center activities (e.g., working with pattern blocks, learning about patterning, learning about tools before woodworking opens)
- Practicing skills (e.g., rhyming words game, voice print match activity, observational drawing)
- Writing a story about an experience (e.g., releasing baby praying mantises)
- Working in a project interest group (e.g., drawing and observing a newly hatched butterf y)
- Reading big books
- Writing poems
- Playing games
- Reading good f ction/non-f ction (It is often more effective to read to a small group of children and involve them in book discussion.)
- Collaborative story writing
- Experimenting (e.g., mixing colors in liquids)

Nature and Benefits of Small Group Experiences

- Can be homogeneous and/or heterogeneous
- Highly f exible
- Short or based on attention spans of participants
- Provides opportunity to delve deeper into a new concept
- Teacher participates as facilitator
- Offers time to work effectively with prof cient children and those less prof cient
- Opportunity to engage in riskier activities (e.g., woodworking, scissors)
- Provides time for in-depth examination
- Can focus on, honor, and explore children's interests
- Offers a context for various aspects of project work
- Promotes independent exploration
- Offers time for community and volunteers to participate
- Allows children to use materials in a different way than in a center
- Can be an appropriate context for using direct instruction
- Provides opportunities to allow more practice on current skills

Making the Most of Each Day

Chapter Highlights

Having interesting materials and organizing them into attractive and orderly learning centers is only part of what is needed to create an effective learning environment. How, when, and by whom those materials are used are also critical aspects. The way preschool and kindergarten teachers structure and use time in the classroom, establish routines, manage transitions, and work with children within that framework is a direct reflection of the philosophy and orientation of the program.

Children should have opportunities to experience a broad array of activities during group times and also extended blocks of time when they self-select activities individually or with small groups of classmates. The day should be organized with sufficient predictability to support children's need for stability and with sufficient flexibility to allow the group to respond to unplanned learning opportunities. No matter how the overall schedule is organized in a particular program (half day or full day), the day is the basic unit of time. The most important variable in the planning of preschool and kindergarten programs is not the length of the day but the quality, variety, and suitability of the learning experiences children encounter there.

The Art of Scheduling

Children's time is a precious commodity. While the daily schedule should not make them feel hurried or pressured, it is important to organize the day to make the most of the time. Recent national

research on pre-kindergarten found that routines (e.g., standing in line, cleaning up, washing hands) and eating meals or snacks accounted for about one-third of the observed time.[1] Effective scheduling avoids this loss of opportunity for children to learn.

Design schedules to give children time to accomplish tasks and finish successfully what they start. Planning time, work and play time, cleanup, and recall follow one after the other; work and play time should be the longest single time period. Encourage them to move at their own pace by planning for individual direction and timing.

The schedule should be organized to allow for the majority of the learning experiences to be integrated across subject areas. It is not desirable to plan a schedule characterized by short time slots and specific subject designations. This type of schedule generally characterizes a program where most of the activities are directed to the whole group by the teacher and where there is considerable dependence on commercial workbooks or worksheets. These approaches are not thought to represent best practice for the preschool or kindergarten.[2]

The same schedule should be followed each day, though allowing for flexibility and differing activities. Following the same schedule allows children to feel secure in knowing what to expect and supports their independence as they move through the day without the need for constant adult direction.

Post a daily schedule in a picture or picture-and-text format in a location where children can often refer to it (such as in the meeting area). Review the day's schedule each morning, pointing out new and/or different parts of the day's events. When transitioning from one part of the schedule to the next, point to the corresponding picture on the schedule and invite children to look for what is "next."

At the end of the day, use the schedule to scaffold group discussion about the day or when writing the daily class news. Using a schedule helps children develop a sense of time, sequence of events, directional and positional vocabulary (before, after, next), as well as to develop a sense of safety and comfort in knowing what the day brings, particularly so when there is consistency between each day's schedule.

Effective scheduling is key to the success of preschool and kindergarten programs. Bredekamp and Rosegrant (1995) suggest five principles for developing schedules:

- Include daily rituals and routines.
- Balance open-ended and structured time.
- Allow sufficient time for activities and routines.
- Use the schedule to help children develop awareness of time.
- Some children need a personal daily schedule in order to transition smoothly to and from the many activities during the day. This may include icons that are moved on and off a schedule "board" or a checklist formation with parts that can be marked off as completed.

Developing Schedules for Inclusive Classrooms

- Fully integrate children with special needs with their non-handicapped peers in small group activities.
- Include time for routine care of special equipment – hearing aids or orthopedic braces – and for any special procedures, such as positioning the child.
- Incorporate special services – speech, language, occupational and physical therapies – into the classroom. Find ways these activities can include

1 Bryant, Clifford, Early, & Little, *NCEDL Pre-Kindergarten Study*, 2005.

2 Nebraska Department of Education, *Planning the Use of Time in the Kindergarten, n.d.*

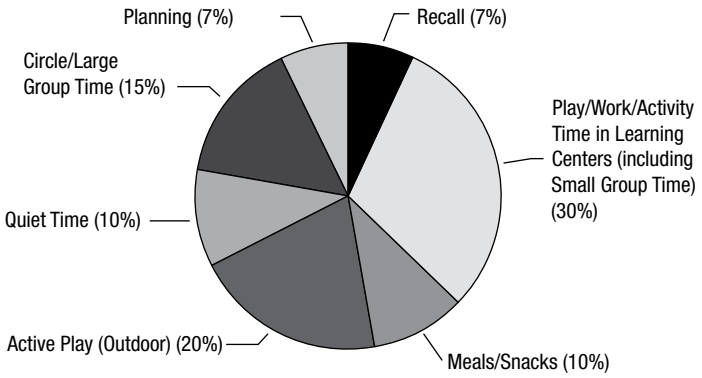
children without disabilities so that children with special needs do not feel singled out.
- Plan transitions with the special needs of all children in mind. It may take longer, for example, for a child using a walker to get to the playground.
- Like many children (and adults), children who have disabilities often have more energy in the morning. Try to schedule therapies and activities requiring concentrated attention before lunch. Allow children who are fatigued to rest as needed.
- As with all children, encourage arrival and departure times that allow relaxed conversations with parents.[3]

Schedules will vary based on the needs of the children, the preferences of the teacher, and the need to adapt to schedules of specialists and the broader program/school. The following section offers a guide to proportioning time on a daily/weekly basis to create a balanced schedule. Since programs and schools vary widely in length of the school day, this guide can be more useful than proposing sample schedules. It simply suggests proportion, not a fixed order. Not that some components cannot be broken into smaller segments across the day, but children benefit from schedules that provide longer rather than shorter time segments.

Establishing Routines

Activities that occur at the same time and in similar ways form the rituals and routines of the classroom; they fit into the framework of the schedule. Consistent routines provide a framework for sequencing and processing activities while providing opportunities for children and adults to interact with each other. Teachers need to freely share information about routines with families and be sensitive to family circumstances.

3 Wesley, 1992.



Daily activities are varied to provide different kinds of experiences for children, while still retaining a sense of consistency so needed by the children.

Routines help children:

- learn how to share.
- have an understanding of the daily schedule.
- respond to clearly defined expectations.
- know what happens next.
- know how expectations differ for different times of the day/activities.
- adapt to change.
- build flexibility.

What Kindergarten and Preschool Routines Include

Planning Time. Children decide for themselves what they are going to do during work time. They indicate their plans to adults, who help them think through and elaborate on their ideas, record these plans, and assist them in getting started.

Play/Work Time. Children carry out projects and activities they have planned. Adults observe, support, and help them extend their ideas. Children who complete their initial plans make and work on others.

Clean-Up Time. Children store unfinished projects. They work together to sort, order, and put away materials used during work time.

Snack Time. Children build a sense of family and community by making snack time a class activity. Try setting up snack

Food – and more!

When children join together to share lunch and snacks in the classroom, they are doing much more than feeding their appetites. These rituals offer many opportunities to practice social skills, learn about staying healthy, and increase math, science and literacy skills to boot. Children can:

- Create and follow recipes.
- Sequence activities to be done to follow recipes or set tables.
- Count utensils as they help set the table.
- Count their animal crackers or whatever else they have for a snack.
- Help clean up after a cooking activity.
- Sort, pattern, or even make graphs about what they are eating.
- Practice one-to-one correspondence by setting the table or handing out napkins (always after hand washing).
- Learn nutritional information.
- Make food choices when snack time is set up as a center and meals are served family style.
- Share and listen to others, thus learning many things about one another and the world around them.
- Practice predicting (e.g., what happens to my animal cracker when I dip it in juice?), experimenting (sticking it in the juice) and observing (what happened – why?).

time as a center to accommodate individual needs. Remember to monitor safe food handling practices and to be aware of any allergies.

Small Group Time. Children learn to refine and extend skills and concepts in small group activities. Teachers observe and assess children's work during small group times, which are chosen to provide both closed and open-ended experiences.

Outside Time. Children and adults engage in vigorous physical activity (e.g., riding, pushing or pulling, running, throwing, swinging, climbing, rolling). Children may extend play from indoors to outdoors and make real the concepts they explored in the classroom. Just about everything that is done inside the classroom can be done outdoors as well.Children can also enjoy and appreciate the beauty of nature. As in all activities, adults encourage children to talk about what they are doing. Adaptations and modifications should be included in the outside environment. All children need access to outside activities. Children can use outdoor time to explore and observe nature.

Rest Time. In preschool and kindergarten, some children will need time to sleep, while others will just need time to relax, unwind, and recharge after a busy morning of activity. Make provisions for both. Use a quiet transition (e.g., reading a story) between active time and rest time.

This is a good time for teachers and assistants to nurture and connect with individual children. Children who do not require sleep should have other quiet options. Provide quiet music, books, drawings, soft seating, and mats for resting. Be aware that children with special needs may need rest periods throughout the day. Also be aware that as children grow and mature over time, rest periods also grow and change. The amount of rest time a child needs at the beginning of a year may look different at the end of the year.

Meal Time. Try to arrange for young children to eat classroom meals and snacks in a family-like atmosphere. Arrange seating so that children with special needs can sit at the table whenever possible. This may involve taking a child out of a wheelchair to a position at the table. Meal times in kindergarten may be held in a cafeteria setting. Children will need to practice the procedures required for this type of setting. Be patient. They will learn how to open their own milk carton!

Meal time allows children to practice small motor skills and social skills and learn acceptable behaviors and manners. Whenever possible, teachers should eat meals with their children in order to build positive relationships and to model appropriate behaviors. It also provides the teacher with opportunities to introduce children to a variety of healthy foods and establish eating habits that can positively

inf uence their health later in life (e.g., for weight control, avoidance of diabetes, control of high blood pressure).

Meals and snack time can also build a bond between home and school. Children can take recipes home. They can be encouraged to share and talk about what they ate at school. *Did they like it?* They can form opinions and express them to their parents.

Circle/Large Group Time. Children and adults meet as a large group to sing and make up action songs, play musical instruments, move to music, play games, and discuss upcoming special events. This gathering encourages a sense of belonging to a group. Sometimes children with special needs may require additional attention. Some may need props such as carpet squares to def ne a space or assistance from an adult. Circle Time should not exceed 15 minutes for preschool and 20 minutes for kindergarten. Attempting to hold groups of four- and f ve-year-olds longer than that will result in diminished attention and increased incidents of inappropriate behavior. Children with disabilities may need pictures, symbols, assistive technology devices, or voice output in order to participate in group time.

Recall/Reflection. Children need to process thoughts, encounters, and endeavors of the day. Ref ection allows children to learn from one other's experiences. It enables children to think about all the things they did during the day. Varied methods for children to use for ref ection should be available, such as a tape recorder or assistance in dictating.

Adult Planning. Specify a time during the day to revise, plan, and prepare for the next day. Review anecdotal notes, IEP goals, and children's work regularly. Set planning time when it is convenient within the schedule. Work around meals, naps, and playground schedules. Include children in planning by starting the day with circle time or planning with children as they f nish breakfast.

Smoothing Transitions in Daily Routines

How teachers plan and handle transitions is a key indictor of effective schedules. Do children seem to know what is going to happen next? Are they consistently engaged throughout the day, or are there periods without purpose or direction? The following practices work for everyone, and are particularly effective for special-needs children.

Follow consistent routines. When children know what to expect from day to day, they can better prepare themselves for transitions. Routines help them feel conf dent and secure.

- "Construct" each day's schedule in Circle Time using pictures of activities and ordering them in sequence. (Some children may benef t from individual schedules.)
- Always talk to children about what you are doing with them and what you are going to do next.
- Designate spots in the room or on the playground for transition meeting places (e.g., as the class leaves the playground, they know to

I've come to the frightening conclusion that I am the decisive element in the classroom. It's my personal approach that creates the climate. It's my daily mood that makes the weather. As a teacher, I possess tremendous power to make a student's life miserable or joyous. I can be a tool of torture or an instrument of inspiration. I can humiliate or humor, hurt or heal. In all situations it is my response that decides whether a crisis will be escalated or de-escalated and a student humanized or de-humanized.

Haim G. Ginott, *Teacher and Child*, 1972

meet by the sidewalk; as they finish clean-up, they know to meet on the circle).
- Alternate active times with quieter times (e.g., following outside time with story time).
- Assign staff to areas of the room – not to children – when possible. When the same person routinely supervises an area or activity, he or she becomes an expert on the abilities and interests of all children.
- Rethink the daily routine to see if some transitions can be eliminated by creating larger blocks of time (e.g., for learning centers, outdoor play).

Use familiar cues, signals, and activities to capture and keep children's attention.
- Ten minutes before the end of an activity, walk around and say quietly, "Start finishing what you are doing. Clean-up time will be in a few minutes."
- Encourage them to get ready for the next activity by cleaning up or setting up. Giving children responsibility for routine tasks stimulates their interest about activities and keeps them engaged.
- Use environmental cues as a prelude to certain activities. As naptime approaches, close the blinds, turn off the lights, and play soft music. Before lunch, talk about the aromas coming from the kitchen.
- Establish eye contact or gently touch children to get their attention. Call a child's name and give personal engaging directions for moving to the next activity (e.g., "Sam, clap your hands twice, turn around, and then join your friends at the Art Center."). Vary the directions you give each child.
- Always tell children ahead of time if you plan to pick them up or touch them to help them change activities. Make this standard practice if helping a child with physical disabilities.
- Use special playful procedures (e.g., touching their noses or arms, signing, reciting poems, doing finger plays) as they move along. Develop a repertoire of transition songs or games such as "This is the way we ..."
- While in line, washing hands, walking to the playground, etc., have children count and play games about colors or letter sounds. This helps with both discipline and learning.
- Prepare centers and activities ahead of time so children can start without waiting – perhaps before the entire group has arrived. If the next experience is exciting – such as a chance to hold the guinea pig while food is placed in its cage – children won't tarry.

The* Early Childhood Environment Rating Scale *provides a framework for evaluating schedules.

Early Childhood Environment Rating Scale			
Inadequate schedules take up most of the day with routine care and have little planning for interesting activities either indoors or outdoors.	**Minimal** schedules are either too rigid, with no time for individual interest, or too flexible (chaotic), with activities disrupting routines.	**Good** schedules balance structure and flexibility. Several activity periods, some indoors and some outdoors, are planned each day in addition to routine care.	**Excellent** schedules balance structure and flexibility and provide smooth transitions between activities. Plans are included to meet individual needs.

Source: Harms, Clifford, & Cryer, *Early Childhood Environment Rating Scale*, 1998.

Teaching with Purpose

Chapter Highlights

Along with a spirit of inquiry and dedication to children's well-being, intentional teachers engage in reflection and evaluation.

Ann S. Epstein, 2007

The classroom teacher has the primary responsibility for shaping the interpersonal environment. This environment is complex, dynamic, and ever-changing. It includes the routines established to manage activities in learning centers, teacher-directed experiences, and the interactions among children and with adults in the classroom. It also includes interactions with family members and with other professionals who work with the children and families. This section addresses each of these aspects of the teacher's role in the interpersonal environment.

While each teacher has very def nite goals and objectives for the children in his or her programs, these are best achieved when there is f exibility to design programs that are responsive to the range of learning needs of the particular group. Flexibility and responsiveness require careful planning based on thorough knowledge of:

- the children in the class
- developmental expectations and the special needs of each child
- the children's interests
- content of the discipline areas
- def ned expectations/objectives for this age range
- ways to organize for instruction
- the context of family, school, and community

Questions for the Teacher
How can you...

Acknowledge? – Give attention and positive encouragement to keep a child engaged in an activity.

Model? – Display a skill or desirable way of behaving in the classroom, through actions or with cues, prompts, or other coaching.

Facilitate? – Offer short-term assistance to help a child achieve the next level of functioning (as an adult does when holding onto the back of a bicycle as a child pedals).

Support? – Provide a fixed form of assistance (e.g., bicycle training wheels) to help achieve the next level of functioning.

Scaf old? – Set up challenges or assist children to work on the edge of their current competence.

Co-construct? – Learn or work collaboratively with children on a problem or task (e.g., building a block structure with peers).

Demonstrate? – Actively display a behavior or engage in an activity while children observe the outcome.

Direct? – Provide specific directions for children's behavior within narrowly defined dimensions of error.

Adapted from *Reaching Potentials ... Vol. 2*, by Bredekamp & Rosegrant, 1995.

Including assessment in the planning process allows teachers to demonstrate that both the children's and the program's goals have been met.[1] In the classroom, teachers observe regularly and thoughtfully so that making adjustments for individualized curriculum becomes second nature. The same toys – for example, blocks – work as well for a three-year-old who drags them around as for a f ve-year-old who makes castles with moats. As the program is planned to f exibly respond to children's needs, Cassidy & Myers (1987) say that the following questions should be considered:

- What is the developmental level of an individual child or group of children?
- What is the next step for each child or group of children?
- Why is this step important?
- How do we help a child or group take that step?

These questions are important as children learn new skills and acquire new knowledge. While children can do many things independently, there are also many tasks or ideas they cannot yet handle or learn alone. Teachers must know how much guidance each child needs to move to the next level of independence.[2]

For many children with special needs, adaptations are an important form of assistance to foster independence. Make adjustments in learning centers to extend activities or enhance them to support learning, to match learning styles, and to enhance achievement. Teachers should know how to vary activities so they can initiate them in different areas – both indoors and out. For instance, children learn math concepts at the sand table and when riding big wheels. They read, write, or draw with many chosen activities.

Being an Intentional Teacher

The term intentional teaching refers to teachers acting with specif c goals in mind for children's development and learning. Academic domains as well as traditional early learning domains all have important knowledge and skills that young children need to master. Intentional teachers, therefore, integrate and promote meaningful learning in all domains.[3]

It is the classroom teacher's responsibility to create a varied and balanced program where every child can be successful. Both child-guided and teacher-guided experiences are found in intentional and effective early childhood classrooms. "It is not the case that one is good and the other bad, or that one is developmentally appropriate and the other not," says Epstein. Intentional teachers create a balance of both, depending on what works best for a particular situation or child and based on child development principles and educational content.

1 Bredekamp & Rosegrant, *Reaching Potentials: Transforming Early Childhood Curriculum and Assessment, Vol. 2*, 1995.

2 Vygotsky refers to this as the "Zone of Proximal Development."

3 Epstein, *The Intentional Teacher: Choosing the Best Strategies for Young Children's Learning*, 2007.

The types of learning experiences you plan will determine the behaviors and roles the children assume. Intentional teaching is not a synonym for direct instruction. In preschool and kindergarten, intentional teachers base their practice on:

- expanding their understanding of young children and their needs
- careful preparation of the physical learning environment
- continuous observation of children to ascertain their learning needs
- thoughtful "just in time" interaction with children
- continuous planning and improvement

Pianta defines intentionality as "directed, designed interactions between children and teachers in which teachers purposefully challenge, scaffold, and extend children's skills."[4]

Elements of Good Intentional Teaching

- High expectations
- Planning and management
- Learning-oriented classroom
- Engaging activities
- Thoughtful questioning
- Feedback[5]

Putting out the Welcome Mat

Here are fifteen simple, everyday experiences that can make children and their families feel welcome in the classroom:

1. Hearing and expressing informal good mornings and other personal greetings
2. Engaging in conversations
3. Sharing room tasks (e.g., watering plants, caring for pets, mixing paints, cleaning the sink)
4. Questioning and having the teacher answer
5. Planning an activity with the teacher
6. Discussing challenges of group membership (e.g., sharing equipment, taking turns, being considerate, sharing responsibilities, being courteous)
7. Participating in friendly games, discussions, songs, and conversations
8. Meeting all school personnel – the principal, custodians, nurse, librarian, cooks

The art of teaching is the art of assisting discovery.

Mark Van Doren

4 Pianta, "Standardized Classroom Observations from Pre-K to Third Grade," Foundation for Child Development Working Papers Series, 2003.

5 Epstein, 2007.

[A teacher's] job is not just to help children learn but to show them what learning means and how it happens ... to make learning visible.

Susan L. Kempton, 2007

9. Receiving help, encouragement, and constructive suggestions in work/play activities
10. Participating in a three-way friendly interchange (e.g., among a parent, teacher, and child)
11. Enjoying humorous situations with the teacher or children
12. Feeling safe to explore and try new things
13. Receiving positive guidance instead of harsh punishment
14. Hearing their names pronounced correctly
15. Hearing some everyday phrases in their home language

Many factors work together to create the interpersonal setting: the roles of adults in the classroom, the interactions among them and with the children, and the everyday language and tone. The classroom must combine child-initiated and teacher-selected/initiated activities. By arranging and stocking the classroom with children's individual needs in mind, teachers can maintain a more facilitative, less directive approach. A facilitative approach is not hands-off. It requires constant observation of the activities of all the children and intentional intervention at the times most likely to inf uence children's further development and learning.

Classroom Interactions

As an adult, you know that many factors – the physical environment, the temperature, how much sleep you have had, your diet, the behavior of others, your schedule – affect how you interact with people. As a teacher, you are responsible for creating an environment that facilitates positive interactions with children and among adults. To foster positive interactions in your classroom:

- Identify clear roles for adults.
- Plan activities and arrange materials ahead of time.
- Create easily accessible storage areas.
- Provide soft areas where children and adults can sit together.
- Provide materials for everyone. The materials should be able to be adapted for children with special needs.
- Separate noisy from quiet areas.
- Provide nutritious meals and snacks.
- Provide ample rest time.
- Take breaks as needed.
- Pursue professional development to improve your skills.

Just as teachers plan physical space, daily schedules, and division of labor, they also plan ways to ensure positive interactions. The answers to these questions will help determine the quality of classroom interactions:

- When do teachers interact most with children (e.g., primarily when there are problems; primarily to large groups; primarily when children are individually engaged with materials)?
- How are problems prevented and handled?

- Do adults give a fair amount of attention to each child?
- How many children are assigned to teachers or assistants?
- How much physical affection do adults show? What kind (holding, patting, rocking)?
- When do adults have physical contact with children? Is it only during routines such as helping with coats?
- How do adults respond to children who are hurt or upset?
- Are there times when teachers get down to the children's level and make eye contact when they talk with them?
- How are children and families greeted? How are departures arranged? How do adults handle separation anxiety?
- Are children and adults relaxed throughout the day?
- Do teachers vary interactive styles to meet a child's particular needs (e.g., calmer with a timid child, more outgoing with an outgoing child)?
- How are transitions handled?
- How do adults show warmth?
- What is the quality of children's interactions with each other?
- How well are children with disabilities included?[6]

Language and Tone

Tone refers to the feeling or atmosphere of the classroom, and language is a key indicator. Many early childhood professionals can quickly assess the tone of a room by visiting for just a few minutes on a typical day. You should periodically discuss classroom tone with other adults working in the classroom. Here are a few questions to serve as springboards for these discussions:

- What does the room sound like? Do adults and children seem relaxed and happy or are voices strained, irritable, or angry?
- Do children and adults mutually respect each other? How can you tell?
- How does the curriculum address social skills development?
- Is language used primarily to control children's behavior?
- Do teachers and other adults provide ample time for children to respond to directions and questions?
- Do teachers use and respond to alternative forms of communication used by children with disabilities – such as signs, pictures, or communication boards?
- Do teachers make a conscious effort to have an informal conversation with each child every day?
- Do teachers and others verbally expand on ideas presented by the child?
- What kinds of questions do teachers ask children? Are most questions open-ended or are they predominantly yes/no?
- How much adult-to-adult talking occurs throughout the day? What is it about?[7]

Watching and Learning

As you observe children in centers and other learning activities, you gain much information about their stages of development. Use this knowledge to plan, implement, assess, and adjust your program:

- Play *(See also Chapter 12.)*
- Symbolic representation *(See also Chapter 13.)*
- Artistic representation *(See also Chapter 14.)*
- Block building *(See also Chapter 14.)*
- Dramatic play *(See also Chapter 14.)*

Children's play is about what is familiar to them, so play typically provides a meaningful context for children to construct new knowledge and for teachers to facilitate this construction.

Gretchen Owocki, 1999

6 Adapted from *QuickNotes: Inclusion Resources for Early Childhood Professionals*, by Wesley, Dennis, Tyndall, & Fenson, 1998.

7 Harms & Clifford, *Early Childhood Environment Rating Scale*, 1980, pp 19-20, 32.

- Sand and water play *(See also Chapter 14.)*

This summary of the stages of play is included here to illustrate the importance of using this kind of information in observation and planning.

Stages of Play

Play is the major vehicle children use to learn about the world and the people and things in the world. Its importance in planning a quality learning environment cannot be overestimated. You can observe children's insights in the developmental stages of play. Children of preschool and kindergarten age will exhibit play behaviors both well below and beyond their chronological age range.

Exploratory or sensory-motor play (birth to 24 months)

Children engage in activities simply for enjoyment. Examples include repetitive motor movements, such as pouring water into and out of containers, making noises with mouth or objects and repeatedly climbing up and down steps.

Relational play (9 to 24 months)

Children use objects the ways they were intended to be used. They use simple objects correctly, such as a brush for the hair; they combine related objects, such as a truck and driver; and they make objects do what they are made to do, such as pumping the handle on a top.

Constructive play (24 months and up)

Children have a goal in mind that requires transforming objects into a new conf guration (e.g., building a fence with blocks, making a face from clay).

Dramatic play (21 to 72 months)

Children pretend to do something or be someone. They pretend with objects (e.g., drink from a cup), pretend without objects (e.g., brush their teeth with a f nger), or pretend through other inanimate objects (e.g., have dolls pretend to feed the animals).

Games-with-rules play (36 months and up)

Games with rules (Rubin, 1984; Smilansky, 1968) involve the child in an activity with accepted rules or limits. The game implies shared expectations and a willingness to conform to agreed-upon procedures (Garvey, 1977). An element of competition may also be suggested, either with another child or alone (Rubin, 1984). The game can be a preset standard game, such as the card game Go Fish, or it can be a game with rules the child makes up.

Rough-and-tumble play (60 months and up)

Boisterous and physical are two ways to describe rough-and-tumble play, which Garvey (1977) def nes as "action patterns that are performed at a high pitch of activity, usually by a group," although two children can also engage in rough-and-tumble play. It can include such things as running, hopping, tickling, playful punching, or rolling around on the f oor. Aggressive behavior, in contrast to rough-and-tumble, is not done in a playful manner.

Fostering the Development of Appropriate Behavior and Social Skills

Chapter Highlights

When the physical environment and classroom schedules, routines, and transitions are well established, most of the work in helping children develop self-regulation is already accomplished. This chapter presents information teachers can use to promote appropriate behavior, positive self concept, social interaction, self regulation, and independence and enable them to provide effective supervision.

While much of this material is similar to that found in other places in the *Guide* about setting up learning centers, keep your goals for children's behavior in mind as you consider these ideas. Learning centers are obviously designed to help children learn, but they are also vehicles for helping children learn how to act. They reflect attitudes, strategies, and practices that are effective with all children.

Supporting Appropriate Behavior

- Divide the classroom into attractive learning centers so that the amount of open space does not invite running.
- Determine that children can tell where learning centers start and end. Clearly define boundaries for different types of activities (e.g., art activities on the linoleum, soft pillow and dim lighting for quiet time).

- Provide materials for everyone, including duplicates of favorite toys.
- Organize similar things logically.
- Make sure there is enough space around the table for all children involved in the activity.
- Encourage creativity in the block center, not simply building and knocking down structures, by including accessories (e.g., bridges, chimneys, ramps, different types of blocks, people, animals, vehicles).
- Have a space in the room where children can go to be alone.
- Make sure each child has a cubby or space to store personal belongings.
- Establish simple, common-sense rules and remind the children occasionally of what they are.[1]

Promoting a Positive Self-Concept

- Welcome families and children by providing a comfortable greeting and gathering area. Include photographs of families in the classroom.
- Provide ramps, elevators, wide aisles, handrails, or other architectural modif cations to support mobility for everyone.
- Promote exploration and discovery within the environment. Once mobility is assured, arrange materials in learning centers that invite independent use. Incorporate numerous and varied opportunities throughout the day for children to handle materials
- Foster participation and success for everyone. Find opportunities for children to demonstrate competence. Provide a variety of materials, toys, and equipment that children with varying abilities can enjoy and master. Offer concrete, open-ended materials that relate to life experiences.
- Provide ample opportunities for successful personal interactions. Are play areas large enough for more than one or two children to play? Do materials and space invite pairing of children and cooperative play?
- Model positive reinforcement based on individual rather than group standards of achievement. Encourage peers to identify, promote, and celebrate each other's strengths.
- Allow ample time and space for completion of projects.
- Encourage children to display their own work at eye level.[2]

1 Wesley, 1992.

2 Ibid

Encouraging Social Interaction

- Schedule time for both small and large group as well as one-on-one activities.
- Make sure the environment includes materials and activities that promote interaction: dolls, tea sets, dramatic play props, blocks and accessories, and group games.
- Structure interactive play by encouraging children to play games such as lotto matching or bingo and work together on projects, such as setting the table or cleaning up an interest area.
- Make play areas large enough for two or more children to play together.
- Suggest ways that children with disabilities can be included in play with their peers.
- Include a child who uses a wheelchair in pretend play in the housekeeping area by saying, "Perhaps Jason can pretend to go to the store to buy food for the dinner."
- Ask children directly to include someone by saying, "Why don't you let Allison ride beside you in the car?"
- Give a child with special needs a favorite classroom toy and encourage others to ask permission to play together with the child and the toy.
- Comment on the strengths and unique abilities of all children as a way to help others want to interact with them.
- Let your curriculum include ample opportunities to celebrate individual differences.[3]

Fostering Self-Regulation

- Match behavioral expectations to a child's developmental level while remembering that all children are different and some are farther along than others in developing self-control.
- Evaluate and revise curriculum and environment to provide activities that engage children.
- Show children respect, even when disapproving of their behavior. Say "It's OK to be angry, but it's not OK to throw things." Never say or imply "I don't like you" or "You are not being good."
- Recognize messages conveyed by words, tone, and language.
- Use the physical environment to guide behavior. Arrange classroom space to reduce risks of problem behavior.
- Give children manageable, specif c, simple tasks. Say "Who would like to be in charge of putting away the cars?" rather than "Please clean up the Block Center."
- Redirect children into positive behaviors. If a child is pouring water from the sink onto the f oor, say "If you want to measure water, let's go over to the water table and you can practice" rather than "Don't spill."
- Help children recognize how their behavior makes other children feel. Say "Gary appreciates your helping him pick up the blocks" or "Megan is angry because you won't let her play with you."
- Involve the entire class in problem solving. Say "We have a problem. The Book Center is messy and we can't f nd the books we want. What can we do?"[4]
- Help children see the consequences of their actions. Say "Books don't last long when they're torn. Let's get some tape and f x them."

3 Wesley, 1992

4 Ibid.

When a child with challenging behaviors enters the world of your classroom, even if you are the most experienced and confident of teachers, you can find yourself filled with self-doubt.

Kaiser & Rasminsky, 2007

- Remind children of rules in positive language. Say "Before you go to the water table remember that water sometimes spills. What do we do when water spills on the f oor?"
- Whole-class behavior management systems, such as a "stoplight," are rarely effective strategies for all children.
- Some children may need individual behavior management systems as opposed to class-wide or school-wide systems.
- Use alternatives to time-out: pounding play dough, one-on-one reading or singing with a favorite adult, doing a favorite quiet activity for a short period.
- The idea of time-out is that sitting apart can give children time to settle down. They should not sit in time-out for long periods or for many times during the day.
- Acknowledge children's positive behaviors. Smile, nod, or make a brief comment of encouragement.
- Guide children in solving their own problems. Let them discuss alternatives when several children want a favorite toy, book, or rocking chair.
- Encourage them to choose a way to take turns that they think works best.
- Encourage children to talk about their feelings and frustrations. Provide words for their feelings, when needed, such as "You seem frustrated that the paint keeps dripping."
- Listen to children's words and watch their actions to understand what they are feeling. Acknowledge feelings and name them for children. Say "I know you are feeling _____ because Joann _____. Why don't you tell her _____ so she will know how you feel?"[5]
- Help children realize that they have control over their choices by saying "You can choose to build in the Block Center without knocking down your friends' buildings or you can choose to work in a different center – what is your choice?" rather than "You may not play in the Block Center."

Building Independence

- Arrange the classroom to encourage exploration and provide a clear view of what is available.
- Use pictures/words to label storage areas so that children know where to f nd and keep materials.
- Help vision-impaired children identify locations by touch, sound, or large visual cues.
- Use pictures/words to def ne learning centers so that children can anticipate activities. Help children with visual impairments identify auditory cues.
- Arrange materials on open, low shelves so children can help themselves.
- Use child-sized furnishings (sinks, toilets, tables, chairs, water fountains).
- Incorporate special equipment in a routine, functional way so children with physical challenges can do as much for themselves as possible.
- When children with disabilities use a specif c communication mode (head switch, big mack, sign language, pictures, etc.), make sure it is implemented and available in the classroom.
- Follow a predictable schedule so children learn to anticipate and prepare for the next activity.
- When hearing-impaired children are included, use sign language throughout the day or develop and follow communication programs that work for them.

5 Mitchell & David, *A Curriculum Guide from the Bank Street College of Education*, 1992.

- Make sure each child has access to a personal cubby to store and retrieve belongings.
- Spend time at the beginning of the year and as new materials are introduced to model and practice use and cleanup.
- Support choice and freedom of expression.
- Encourage some degree of risk taking for all children.[6]

Making and Keeping Rules

- Involve children in the making of rules and consequences. They need to know the rules and help make them. When a rule is broken, a logical and predictable consequence needs to follow.
- Always state rules in the positive.
- There should be few rules. Children can't remember too many.
- A rule must be enforceable. Otherwise drop it.
- Be willing to change a rule if it doesn't work.

Promoting Effective Supervision

- Write clear job descriptions and define staff roles to include specific responsibilities for interacting with children.
- Make sure all areas of the room can be seen by an adult.
- Separate adult materials from child materials so that staff knows where materials are stored and can retrieve them easily. Convenient storage allows staff to set up activities easily so they have more time to spend with the children.
- Prepare activity plans for each day and organize materials ahead of time.
- Place a comfortable, adult-sized chair near the book or cozy area. Arrange meal and snack areas so adults can sit comfortably with the children.
- Follow children's lead and add to play ideas that they initiate.
- Follow established adult/child ratios.[7]

6 Wesley, 1992.

7 ibid.

Working with Challenging Behaviors

All children can present challenging behaviors some of the time. Whether mildly annoying or harmful to others, children's actions reflect their feelings. Helping them learn to express their feelings in appropriate ways requires patience, consistency, and collaboration with others.

Children with challenging behaviors are different from one another. Techniques that are successful with one child may not work with another. In order for intervention to be effective, teachers must get to know the child and the family and become a careful observer of the child in the classroom.

- Work together with the family to make sure the home and school environments are as positive and consistent as possible.
- Observe the child over time and in different settings to find out as much as you can about his or her actions.
  - *What exactly is the challenging behavior you want to address?*
  - *Is the child hostile and aggressive?*
  - *Does the child seem impulsive and unable to control his or her movements?*
  - *Is the child disruptive or destructive?*
  - *Does the child follow directions given by adults?*
  - *Does the child seem anxious or angry?*
- Maintain frequent contact with the family and others involved in helping the child in order to share experiences and effective intervention techniques.
- Keep data on the occurrence of inappropriate behavior and factors leading up to it.
- Try to understand any feelings that could be at the root of the behaviors.[8]
- Use in-school support resources to help determine issues and plans.

Arranging Space and Materials

Consider each child's needs when arranging the environment. For some children, it is helpful to screen out excessive noises or other distractions. For others, it is important to provide a continuous array of stimulating activities to keep them engaged.

- Set up well-defined and attractive activity areas with pictures that show children using materials appropriately.
- Provide adequate space that can be used throughout the day for active movement, especially on days when bad weather prevents outdoor play.
- Supply plenty of duplicate toys to reduce problems with sharing and taking turns.
- Give each child a space for personal belongings.
- Include a quiet place where the child can concentrate on activities free from distraction.
- Provide an area away from others where the child can go to calm down.

8 Wesley, Dennis, & Tyndall, 1998.

- Label storage shelves and bins clearly and help the children understand the organization of classroom materials and toys. Assist them in cleaning up one activity before beginning the next.
- Use visual aids such as carpet squares or tape to show the child a def nite place to be during group f oor activities or hallway transitions.
- In new situations, stay near a child or try a gentle physical touch to help the child stay in control of his or her behavior. With some children, holding hands has a calming effect. With others, it may have the opposite effect.
- Provide a predictable environment. Stick to routines that work.[9]
- Establish a community-of-caring atmosphere in the classroom.

Teaching Strategies

The most effective way for teachers to support young children as they develop appropriate behavior and social skills is through guidance and modeling. Guiding young children's behavior is an ongoing part of every day, not something adults do only when there are problems.

All children are in the process of learning pro-social behavior. Teachers always model – acknowledging appropriate behavior by describing it, redirecting it, offering choices, and helping children to state their feelings.

Ensure appropriate expectations for a child's age and development. Avoid overemphasizing academics during the preschool and kindergarten years and concentrate on promoting healthy emotional and social development, physical development, cognitive and language development. Ensure ample opportunity for the child to feel successful and competent.

- Show the child she is a worthwhile person capable of developing self-control. You can demonstrate your conf dence by creating systems for turn-taking or participation in activity centers. Such systems give children a chance to regulate their own behavior. Use such tools as a timer, waiting list, or clothespin nametags indicating what center the child is engaged in.
- Keep rules simple and few.
- Provide clear, one-step directions that state the behavior you are requesting from the child.
- Develop procedures ahead of time for planned transitions between activities. Consider placing staff strategically in critical areas to assist an impulsive child.
- Provide numerous opportunities throughout the day for all children to make choices about what they want to do. Do not phrase questions to seem like choices the children really don't have. For example, do not ask "Would you like to put away the trikes and come in?" if there is no choice about coming inside.
- Walk through the routines of the day with the child. Show her how to use the listening station (e.g., how to put on the headphones and operate the tape player). Sometimes children are disruptive because they do not understand classroom routines and expectations.
- Observe a child with a short attention span in various activities over many days. Find out how long his typical attention span is and plan activities for that length of time for that child. Be prepared to help him choose the next activity before he leaves the f rst activity and starts to wander.
- Maintain an awareness of the activities the overly active child sticks with the longest. Start with these activities in order to try to extend her attention span.

> Without time in our day to talk to children and to allow them to talk to each other, there will be no discipline, only disciplining.
>
> Ruth Sidney Charney, 2002

9 Wesley, Dennis, & Tyndall, 1998.

- Increase a child's attention span by calling attention to unexplored aspects of an object or activity. Ask questions to continue his engagement with the activity before losing interest.
- Offer to help the impulsive child plan the next move. Watch for signs that she is ready to quit an activity and then offer choices of what to do next.[10]
- Allow children to have specif c jobs that teach them responsibility and a sense of accomplishment.

Interacting

Give attention to children when they are behaving appropriately. Build their self-esteem through meaningful rewards and thoughtful comments that link performance with their own efforts or abilities. Be aware that providing reinforcers such as stickers or candy may cause some children to depend on external reinforcement and fail to recognize their own responsibility for their actions.

- Avoid discipline that is derogatory or demeaning. Use discipline that is logical, has natural consequences, and provides children with positive guidance.
- Speak at the child's eye level and look into her face.
- Encourage the child to talk about his feelings and express them in various constructive ways. Consider rehearsing alternate acceptable responses to feelings at a time when the child is not being disruptive or aggressive.
- Get to know the child's unique signals of frustration, overstimulation, or anger. If possible, help the child identify her own behaviors building up to a lack of control. Work with the child to develop a special signal showing that you are aware she needs assistance or a change in activity.
- Redirect or provide simple, new directions that name the desired behavior and help the child refocus. For example, say to a child who is painting on the wall: "Here is some paper to paint on if you would like to paint." Use a calm but f rm voice.
- Provide ample warning when an activity is about to end. Allow for transition activities.
- Meet with staff to discuss specif c procedures to manage some children's behavior. Such a system is developed and documented after observing the child over time and noting the circumstances leading to and following the challenging behavior. Keep records and review the procedure frequently to ensure consistency across staff, revising as needed.
- Use a time-out, removing a child temporarily from the group, only as a last resort. Make any decision about using time-outs jointly with the family, other teachers, and the program administrator. Write down the time-out procedure and document every incident. Explain the time-out procedure to the child before using it.
- Communicate regularly with family members and other adults working with the child to establish consistency and to share ideas.[11]

10 Wesley, Dennis, & Tyndall, 1998.

11 Ibid.

Preparing Children for School and Schools for Children

Chapter Highlights

Helping children enter kindergarten ready to succeed is a high priority in North Carolina. Every parent, early childhood teacher, and educational leader in our state recognizes the value of early childhood education.

"School readiness" is a broad concept that encompasses schools, communities, children, and children's early experiences. Instead of placing the burden of readiness on children, educators are now being challenged to reconsider traditional beliefs about our roles in helping young children to continue learning and reach their potential.[1]

School readiness as described here should not be confused with eligibility for school. All children who meet the legal age requirement are eligible – indeed, they are legally entitled – to enter kindergarten.

What is a Ready School?

A ready elementary school provides an inviting atmosphere, values and respects all children and their families, and is a place where children succeed. It is committed to high quality in all domains of learning and teaching and has deep connections with parents

1 Southern Regional Education Board, *Getting Schools Ready for Children: The Other Side of the Readiness Goal*, 1994; Lamberty & Crnic, *School Readiness Conference: Recommendations*, 1994; Katz, Readiness: Children and Schools, 1991.

and its community. It prepares children for success in work and life in the 21st century.

Why are Ready Schools Important?

At least half of the educational achievement gaps between poor and more-affluent children already exist when they enter kindergarten. The larger the gap at school entry, the harder it is to close.[2] Economic analyses show that preventing poor educational performance costs less than remediation.[3]

The lack of ready schools costs all of us. In 2005-06, 17,964 K-3 students were retained in North Carolina. Adding this extra year of education cost the state more than $170 million.[4]

Not only is holding back young children costly, it does not always help. A review of 63 controlled studies revealed that retained students showed lower achievement than low-performing students who were not retained. Retention in the early primary grades, especially in K-2, does not have consistent value and in some cases could be harmful.[5] "Retention can increase the likelihood that a student will drop out of school. Students who drop out are five times more likely to have been retained than those who graduate."[6] Children who experience successful transitions to school are more likely to be emotionally prepared for school, more confident in the classroom, and more likely to succeed. Without early diagnosis and targeted intervention, struggling students are unlikely to catch up whether they are promoted or retained.[7]

Even with quality preschool interventions, at-risk children can experience a "fade-out" of learning gains without continued appropriate instruction in primary grades. This "fade-out" is less likely in schools that connect Pre-K to kindergarten and primary grades through a PK-3 education program.[8]

Pathways to a Ready School

1. Leaders and Leadership

- The principal advocates for and leads the ready school.
- School leaders believe that *all* children can learn, and they provide support and strategies for teachers and staff to acquire the requisite skills within the context of a learning community.
- Additionally, leaders of ready schools understand early childhood education and support teachers in the implementation of best practices for young children.
- The school garners support from the superintendent, central office, and school board.

2. Transitions

- Effective transition plans are initiated by the school and community to address the needs of the school, family, child, and community.
- There is ongoing communication and collaboration among elementary schools, early care and education (ECE), and families to ensure smooth transitions from the Infant-Toddler Program to preschool, from preschool and home to school, and across grade levels within and between schools.
- The school participates in a variety of transition experiences for children entering pre-k or kindergarten and across grade levels (PreK-3).

2 Getting Ready: National School Readiness Indicators Initiative, 2005.

3 Graves, "PK-3: What is it and How Do We Know It Works?", 2006.

4 "North Carolina Early Grade Retention in the Age of Accountability," Partners in Research Forum, 2003.

5 "North Carolina Early Grade Retention," 2003.

6 National Center for Education Statistics, 2006.

7 Association for Supervision and Curriculum Development, March 2008.

8 Graves, 2006.

3. Engaging Environments

- The school projects an open, child-focused, welcoming atmosphere characterized by friendliness, respect, high teacher and staff morale, and the use of appropriate practices that support emotional and social development.
- The building and grounds are safe, inviting, and developmentally appropriate.
- The school's learning environments actively engage children in a variety of learning activities.

4. Ef ective Curricula, Instruction, and Child Assessment

- The school diligently employs educational methods and materials shown to be effective in helping a diverse population of children achieve appropriate academic growth to reach essential standards.
- Children with disabilities and other special needs are accommodated and included in the regular instructional programs to the maximum extent possible.
- Standards, curriculum, instruction, and assessment are aligned between Early Childhood Education and the school, within a classroom, within a grade level, and across grade levels.
- Research and data help to drive instructional practice, and teachers plan within and across grade levels to ensure alignment and multi-level intervention strategies.

5. Respecting Diversity

- The school seeks to help children from all circumstances and backgrounds succeed; it interacts with children and their families in ways that are compatible with individual needs and family backgrounds.
- The school uses culturally appropriate curricula and instructional materials to enhance learning.
- Children with disabilities and from diverse backgrounds and circumstances are represented in curriculum, class materials, and activities.
- All of these children participate in a wide range of learning activities appropriate for their individual needs as full members of the school community.

6. Family, School, and Community Partnerships

- Schools and communities actively work together to address academic, social and cultural needs of their students and families.
- The school implements practices and policies that encourage a variety of opportunities for community and family participation in all aspects of school life.
- The school enhances families' capacities to foster their children's readiness and to support children's learning and development in and outside of schools.
- The school functions as a community and partners with the community to provide opportunities and services to children and families.

7. Teacher Supports and Adult Learning Communities

- The school organizes classrooms, schedules, teams, and staff activities to maximize the support necessary for all adults to work effectively with children during the school day.
- Teachers are encouraged to participate in professional organizations.
- The school leads in establishing and effectively operating professional learning communities within and across grade levels.

8. Assessing Progress and Assuring Quality

- The school systematically uses both formal/informal, traditional/alternative, and formative/summative assessments to plan and tailor instruction to address individual student needs, to improve classroom practices and instruction, and to improve outcomes for all children.
- The school develops a data-driven, written improvement plan that includes strategies for maintaining its mission and goals over time and monitors progress toward them.

Ready Schools and Transition Planning

Ready schools view transitions from one grade level to the next as critical times in the lives of children and their families. Planning and facilitating successful transitions is a large part of what a ready school is about. In their lifetimes, children entering school today will be required to adapt to many changes in work and society. Students whose experiences are positive and whose social and emotional needs are met will have a better chance of academic success at every level of their journey through the educational system and in life.

Managing Effective Transitions

Transitions are a natural part of life, but moving from home, preschool, or other early childhood environment to kindergarten can be hard for young children. They're asked to adapt to new people and different surroundings and learn a whole new set of rules. Because learning is a continuous process, having a successful transition from home or from one level to another is important. There is a great deal of information indicating that a child's success in school can be linked, at least in part, to effective transition practices and activities. Children's early experiences lay the foundation for enjoying school and performing well.[9]

Old and New

Moving into the local elementary school usually means entering an unfamiliar setting. However, if both the old and new are developmentally, culturally, and individually appropriate, children will be more likely to find similar experiences that will allow them to begin in their new setting with confidence that they have the ability to accomplish certain tasks. Knowing what is expected adds to children's self-confidence, encourages their attempts to try new experiences, and facilitates continuity in development.

Appropriate curricula facilitate the transition between programs because they provide for a wider range of developmental interests and abilities than the chronological age range of the group suggests. Since each child is unique with an individual personality, learning style, and family background, teachers at all levels need to be responsive to these differences.[10]

Developmentally appropriate practices are important throughout the primary years. In early childhood classes that promote such practices, children participate in active learning experiences and learn through hands-on activities. The teacher ensures a balance between teacher-directed and child-directed activities using a variety of instructional techniques. Children spend time learning through curricular units, learning centers, an integrated curriculum, and the project approach in addition to class activities.

9 *Transition Planning for 21st Century Schools*, N.C. Public Schools., 2007.

10 Bredekamp & Copple, *Developmentally Appropriate Practice in Early Childhood Programs*, 1996.

Continuity is Fundamental

Schools can adopt practices that support continuity in order to make transitions less traumatic and more beneficial to everyone. Such practices emphasize the importance of making connections between the school and the children's families and building on the development that has occurred in the home. "The influence of the family upon the child remains fundamental throughout these early years. It is important to link subsequent steps in children's education to their earlier experiences and to involve the parents in these activities," notes the U.S. Department of Health and Human Services (1987).

Preschools can help in preparing children for transitions by arranging visits to the new school and discussing upcoming changes. Elementary schools also can focus on ways that families can help children make the transition comfortably. Activities such as home visits, helping parents or caregivers get involved in family literacy programs, and inviting children and families to the school before the start of the school year help connect the families to the schools and ease the transition.

Involving families in the transition of their children from preschool to kindergarten is an important step in keeping them involved as their children grow older. Keeping them informed of class activities and explaining the curriculum will help them understand what their children are learning in school and give them clearer ideas of how to support the effort at home. When parents are treated as partners in this transition process, are able to participate in school activities, and can communicate openly with teachers, the transition is more likely to be a positive experience for the children. In addition, primary teachers who acknowledge and respect students' home cultures are more successful in encouraging parents to participate in their child's education.[11]

This emphasis on continuity remains important as the child progresses through school. Every move to the next instructional level is a transition for children. Communication between the child's current teacher and the next-level teacher helps to identify each child's strengths and needs as well as the best way to work with him or her.[12] This continuity also allows for a flow of knowledge and less of an interruption in the children's learning.

North Carolina's Ready Schools Initiative

In June 2000, the N.C. Ready for School Goal Team issued a report entitled *School Readiness in North Carolina.* In that report "school readiness" was defined as a puzzle with two pieces:

- The condition of children when they enter school
- The capacity of schools to educate all children, whatever each child's condition may be

The report outlined a series of recommendations for what was needed in North Carolina to assure that all children were arriving at school "ready" and that schools were, in turn, "ready" for all children. Since that report was released, there has been growing national attention and research around issues related to ready schools.

In 2006, through a grant from the W.K. Kellogg Foundation, the N.C. Ready Schools Taskforce began reviewing the initial recommendations to determine next steps in moving our state forward. The taskforce worked for more than a year to develop an updated definition and criteria for ready schools and a four-to-five-year action plan with a statewide goal of assuring that every elementary school was working toward the ready schools vision. In June 2007, the N.C. Board of Education adopted the taskforce's recommendations.

The N.C. Ready Schools Initiative (www.ncreadyschools.org) supports efforts by local school systems to begin the ready school planning process with each of their elementary schools. To that end, every community and school system is encouraged to develop a local Ready School Planning Team made up of public school leaders, local Smart Start Partnership representatives, families, higher education representatives, early childhood educators, faith and business leaders, community leaders, and other interested parties.

11 California Alliance for Elementary Education, 1996.

12 Southern Regional Education Board, 1994.

Ongoing communication between preschool and kindergarten staff is another way to promote continuity. Such contact can help in developing programs for individual students and in aligning the curriculum across programs. Opportunities for communication and cooperation should occur throughout the program year.

Ideas for Working Collaboratively

- Administrators and teachers can plan an informal visit to get acquainted with the staff of each other's programs, share information, and discuss the need for specif c activities and other collaborative efforts.
- Consider ways, either informally or through a transition committee, to facilitate the transition process, such as joint registration, workshops, and other activities for parents.
- Hold an open house for primary or preschool staff to explain the program and get acquainted. Use written materials and a multimedia presentation of the children to illustrate the daily program.
- Plan teacher visits to each other's classrooms during the school year to observe. Some programs may be able to exchange staff as substitutes on occasion.
- Overlap participation on policy advisory committees where possible. For example, ask a kindergarten/primary teacher to sit on the preschool program board or invite a preschool teacher to take part in PTA meetings.
- Hold exchange days, such as between preschool and kindergarten/primary staff and between levels of the primary program.
- Develop joint in-service workshops that focus on transitions and other issues facing early childhood educators.
- Preschool program administrators can send letters to the receiving elementary schools in the spring listing the names of incoming children and communicating information about their program.
- Hold elementary school registration in conjunction with preschool programs.
- Have health and social service staff meet to discuss continuity of services for children and families.
- Preschool and kindergarten/primary staff can arrange to provide special information and assistance for parents who do not speak English or have limited literacy skills.
- Preschool staff can discuss transfer of records. The type of records available will vary. Some programs such as Head Start or those serving

children with special needs may already have specif c arrangements for the transfer of records. The most important concern in this area is to provide parents with their full rights to privacy regarding their children's records.

- Hold follow-up discussions in the fall to answer questions and discuss how the children are progressing.

Developing a Community Transition Plan

Since preschool teachers may have to interact with several receiver schools and primary teachers may have to contact several feeder programs, it may be helpful to establish a community-wide transition committee representing the programs, parents, and relevant community organizations. Such a committee can be responsible for developing a step-by-step plan and corresponding materials to be used by all programs involved in the transition process. This process outlines the sequence of community transition planning:

1. All parties responsible for children's education and care participate in developing a written transition plan that includes ongoing communication and collaboration.
2. The transition plan seeks to involve families in decision-making and support them in active participation in their children's education and care. Identify planners: families, teachers, support staff, community representatives.
3. A continuum of comprehensive, integrated, family-focused, and community-based services is made available to young children and families. These include health and social services, nutrition, transportation, and adult basic education. Def ne current transition procedures, activities, and timelines of each participating program.
4. Information to support a child's development is shared (with parent permission) across home, child care, education, and health care settings.
5. Efforts to help children feel secure in all settings are bolstered by practices that are sensitive to individual, language, and cultural differences.
6. A systematic approach to joint staff development is designed and implemented with administrative support, resulting in shared curriculum and instruction planning.
7. Transition procedures are written and followed. Transition outcomes are shared and used to improve, ref ne, and expand approaches.[13]

Preparing Children for Transitions

Helping children prepare to move to the next level of schooling does not mean "getting them ready" by focusing on a narrow range of academic skills, drilling them on new rules, or retaining them another year. School is a place where children and parents expect to f nd opportunities for growth and development from whatever starting point the children bring to the new setting.[14]

Children need to know what is expected of them in the new program and have opportunities to become familiar with their new environment. They should look forward to the new experiences with a sense of excitement and anticipation rather than fear. Transition activities such as discussions, stories, games, dramatic play, and f eld trips can help young children feel more at home.

13 *Transition Planning*, N.C. Public Schools, 2007; Iowa Department of Education, *Taking the Next Steps Together*, 1996.

14 Nebraska Department of Education, *Come as You Are – Kindergarten for Nebraska's Children*, 2001.

Activities for Children

Ideas for the Preschool Staff

- Escort the children on one or more visits to their new program. These visits can include a tour of the building and playground, lunch in the cafeteria, and classroom activities. Take photos or videos of the activities to share later with the children and their parents.
- Create a notebook or portfolio that describes each child (e.g., interests, current level of learning, strategies that work well) that can travel to the next environment.
- Help children feel comfortable and confident about the move by discussing new activities, schedules, and bus routes.
- Read aloud books that discuss changes and moves. Create a puppet show or scrapbook with pictures of the new program or school. Allow children to express their feelings through dramatic play activities and by dictating stories. Encourage them to ask questions.
- If the new program has different rules (such as lining up to go to the bus), you may want to play games to familiarize the children with the new procedures. However, avoid drilling them or creating anxiety about the new environment.
- Invite a child or older sibling from the new program to visit and talk about the school.[15]

Ideas for the Kindergarten Staff

- In August, hold a back-to-school night so parents and children can visit the classroom, take part in sample activities, and meet others in the new group.
- In late summer, send a personal letter or postcard "from your teacher" welcoming all of the new children. See if the school PTA can help with materials and postage.
- Meet with preschool teachers to review assessments and work sample portfolio information of your incoming children. Exchange information and experiences that create as much continuity as possible.
- Meet children and families before the first day of school through staggered entry possibilities, home visits, evening socials, and other events.
- Use the N.C. Kindergarten Health Assessment as a communication tool between families, physicians, and schools. *(See appendix for form.)*
- During the first week of school, phase in groups of children so you can provide more individual attention to each child. Teachers may want to have children and parents come in three separate groups for an hour the first day or spend two or three days orienting five to ten children each day.[16]

Supporting Families

Ideas for the Preschool Staff

- Give parents information about the new school, including the address, principal's name, telephone number, and dates for registration.
- Encourage them to attend orientation sessions at the new school.
- Discuss child care options with working parents. Provide information and referral to after-school programs. Many elementary schools provide on-site child care.
- Invite school personnel, including teachers and the principal, to a meeting with parents to discuss the primary program, the role of parents in the school, and to answer their questions.
- Discuss the transfer of records with parents and provide "release of information" forms for them to sign.

15 *Transition Planning*, N.C. Public Schools, 2007; Kansas University Medical Center, Rap Reach – *Transitioning*, 1986.

16 Copple & Bredekamp, 2006.

- Help arrange for parents and children to visit the new school.
- Create a story about the new school for parents to read to their children. Encourage parents to build their child's confidence about going to school.
- Introduce parents of children who will be in the new class together. Encourage meetings of new classmates prior to school opening.
- Discuss any upcoming changes in services. For example, some preschool programs, especially Head Start, may help parents with health appointments and transportation. This may not be available in the new setting.[17]

Ideas for the Kindergarten Staff

- In the spring, invite new parents to a general orientation about the program and opportunities for participation.
- Provide an orientation package that includes the child's schedule, transportation procedures, required school forms, food service, and other program information.
- Provide families with a description of the classroom environment and a typical day.
- Prior to opening day, send a note to parents encouraging their involvement and offering suggestions for helping children feel at home more quickly during the first few days of school. The letter may include tips on what to say to ease a child's anxiety about the first day, a description of activities planned during the initial weeks, suggestions for comfortable clothing, and bus

17 Kansas University Medical Center, 1986.

schedules. A special note sent directly to the child would also help to ease any anxiety as well as begin the development of a positive relationship between the new teacher and child.

- Introduce new parents to parents of children already in the program. The PTA may be helpful in establishing a "buddy system."[18]

Children need challenging learning experiences that help them move forward. But when classroom experiences are not attuned to children's developmental needs and individual characteristics, they undermine rather than foster children's learning.

Laura E. Berk, 2006

Supporting Children with Special Needs

Transition activities are important to all children and their families, including children with disabilities. It is important for school readiness programs and the early care and education community to work in concert not only with kindergarten personnel but also special education personnel. This will help provide relevant and up-to-date information to public school staff in developing individualized educational programs (IEPs).

The transition process for a child with special needs should be developed with the family and be reflected both verbally and in writing early in the year. It needs to occur in a timely manner. This is best accomplished through a parent meeting.

Parents of children receiving special education need to know their child will be moving to a different level of service. Families have the right to be involved in the whole process and should be made aware of their right to have another individual (friend, relative, advocate) with them at transition meetings.

For some children, successful transition and inclusion may require additional staff development at the new school and involve consultations between special education and general education personnel. It may be beneficial to have staff from the receiving school visit the child in the preschool setting to personally observe his/her strengths and capabilities in a familiar setting, as well as accommodations and modifications made to support the child.

Additional planning is a must. The planning team should consider these questions:

- What educational and/or Individualized Family Service Plan/ Individualized Education Plan (IFSP/IEP) objectives should be written to help prepare the child?
- What additional evaluation, if any, is needed?
- What information from the present program can be used to determine eligibility for special service in the new program?
- How and when will the placement decision be made?
- What new equipment and/or staff development are needed?
- What accommodations and adaptations are needed?
- Is there an Individual IDEA Section 504 plan for this child?
- How will information be shared among team members? Are all required releases of information in writing and current?
- Is a program visit planned and scheduled?
- Is there an annual review or comprehensive evaluation scheduled for the child this year?

Note: Much of the material presented here about transitions was adapted from *Transition Planning for 21st Century Schools* (N.C. Department of Public Schools, 2007) and from *Easing the Transition from Preschool to Kindergarten: A Guide for Early Childhood Teachers and Administrators* (Head Start Bureau, 2001).

18 Glicksman & Hills, *Easing the Child's Transition between Home, Child Care Center and School*, 1981; Copple & Bredekamp, 2006.

Making Informed Decisions about Curriculum

Chapter Highlights

If you want to do something good for a child ... give him an environment where he can touch things as much as he wants.

Buckminster Fuller

What is curriculum, anyway? Ask educators to describe critical components of their curriculum and they talk about theories supporting their instructional decisions as well as descriptions of classroom activities. A more formal def nition of curriculum is this:

> The early childhood curriculum is the planned management of time, materials, experiences, and activities to guide children's learning and development. It is an organized framework that delineates:
>
> - the content children are to learn.
> - the processes through which they achieve the identif ed curricular goals.
> - what teachers do to help children achieve these goals.
> - the context in which teaching and learning occur.[1]

Children learn more in programs where there is a well-planned and implemented curriculum. "Implementing a curriculum always yields outcomes of some kind – but which outcomes those are and how a program achieves them are critical," Copple and Bredekamp point out in *Developmentally Appropriate Practice*

1 Bredekamp & Rosegrant, 1995.

Teachers use the curriculum and their knowledge of children's interests in planning relevant, engaging learning experiences; and they keep the curriculum in mind in their interactions with children throughout the day.

Copple & Bredekamp, 2009

(3rd edition, 2009). "In developmentally appropriate practices, the curriculum helps young children achieve goals that are developmentally and educationally significant. The curriculum does this through learning experiences ... that reflect what is known about young children in general and about these children in particular, as well as about the sequences in which children acquire specific concepts, skills, and abilities, building on prior experiences."

Ideally, the curriculum is shaped by the program or school's communities and families as well as by children and teachers. While gaining content knowledge and skill are goals, curriculum includes everything that happens from the time the children walk into the classroom to the time they leave, including human interactions, teaching strategies, language and tone, and the physical arrangement of the room and the materials in it.

The personalized approach common in American classrooms evolves within individual schools and among teachers. Choices about theoretical premises, administrative policies, and pedagogical components determine the curriculum and define the educational outcome. While the *Foundations* Widely Held Expectations for Preschool and the Standard Course of Study Objectives for Kindergarten define reasonable outcomes for North Carolina children, they do not dictate the nature of early childhood practices in communities across the state.

The best early childhood classrooms are structured to provide a full range of curricula and experiences for all children. In such classrooms, the teacher considers the developmental level of each child when planning instruction. Adults provide methods and materials that allow children with special needs to interact, communicate, and perform tasks that are available for them. A developmentally, culturally, and individually appropriate curriculum provides for physical, emotional, social, linguistic, aesthetic, and cognitive growth; it builds on what children know and fosters the acquisition of new skills.[2]

Creating Child-Centered Environments

Early childhood teachers can ready their classrooms and outdoor environments for young children's learning. "Teachers of young children can create child-centered environments capable of accommodating each child's individual learning level. To do so may involve changes in attitude and behavior for some and a keener awareness of children's different developmental paces for others," notes the Southern Early Childhood Association (1993).

Developmentally appropriate practices are important throughout the primary years. In early childhood classes that promote such practices, children participate in active learning experiences and learn through hands-on activities. The teacher ensures a balance between teacher-directed and child-directed activities using varied instructional techniques. Children spend time learning through curricular units, learning centers, an integrated curriculum, and the project approach in addition to class activities. All the while, the teacher facilitates learning while actively implementing ongoing instructional assessment.

Schools need to be ready to respond to the wide range of cultural and linguistic experiences children bring to school. This readiness can be accomplished through a modified curriculum that includes spontaneous dramatic play, arts and crafts, and small group work.[3] Teaching with a multicultural perspective encourages children to appreciate and understand other cultures as well as their own.[4] By modeling

2 National Association for the Education of Young Children, 1996.

3 Southern Early Childhood Association, *Children are Born Learning*, 1993.

4 Gomez, *Teaching from a Multicultural Perspective*, 1991.

positive behavior and setting the tone for class interaction, early childhood teachers can help children who are in the process of acquiring and strengthening social skills within the school setting.[5]

Indicators of an Ef ective Curriculum

In 1991 the National Association for the Association of Young Children and the National Association of Early Childhood Specialists in State Departments of Education developed guidelines to help educators make informed decisions about curriculum content. The guidelines were reaf rmed in 2003 in *Early Childhood Curriculum, Assessment, and Program Evaluation: Building an Effective, Accountable System in Programs for Children Birth through Age 8*. This document emphasizes the critical relationship of curriculum, assessment, and program evaluation. It discusses eight indicators of an effective curriculum.

Children are active and engaged. Children from babyhood through primary grades and beyond need to be cognitively, physically, socially, and artistically active. In their own ways, children of all ages and abilities can become interested and engaged, develop positive attitudes toward learning, and have their feelings of security, emotional competence, and linkages to family and community supported.

Goals are clear and shared by all. Curriculum goals are clearly def ned, shared, and understood by all stakeholders (e.g., program administrators, teachers, and families). The curriculum and related activities and teaching strategies are designed to help achieve these goals in a unif ed, coherent way.

Curriculum is evidence-based. The curriculum is based on evidence that is developmentally, culturally, and linguistically relevant. It is organized around principles of child development and learning.

Valued content is learned through investigation, play, and focused, intentional teaching. Children learn by exploring, thinking about, and inquiring about all sorts of phenomena. These experiences help children investigate "big ideas," those that are important at any age and are connected to later learning. Teaching strategies are tailored to children's ages, developmental capacities, language and culture, and abilities or disabilities.

Curriculum builds on prior learning and experiences. The content and implementation of the curriculum build on children's prior individual, age-related, and cultural learning. It is inclusive of children with disabilities. It is supportive of background knowledge gained at home and in the community. The curriculum supports children whose home language is not English in building a solid base for later learning.

Curriculum is comprehensive. It encompasses critical areas of development – physical well-being and motor development, emotional and social development, approaches to learning, language development, and cognition and general knowledge – and subject matter areas such as science, mathematics, language, literacy, social studies, and the arts.

An effective curriculum includes:

- a written plan with clearly defined and understood goals.
- a focus on all developmental domains of learning and content areas.
- a logical sequence of concepts and skills.
- meaningful connections for young children to something they already know and care about.
- a variety of integrated learning experiences.
- flexibility for teachers as they adapt the curriculum to allow children more or less learning time for any given concept, topic or skill, as needed.

Developmentally Appropriate Practice in Early Childhood Programs, 2009

A curriculum is much more than a collection of activities. It provides the framework for developing a coherent set of learning experiences that enables children to reach the identified goals.

Copple & Bredekamp, 2009

5 Katz & McClellan, *The Teacher's Role in the Social Development of Young Children*, 1991.

You can have standards for learning without "standardizing" your teaching.

M. Elizabeth Graue, 2006

Professional standards validate the curriculum's subject-matter content. When subject-specif c curricula are adopted, they meet the standards of relevant professional organizations (e.g., the American Alliance for Health, Physical Education, Recreation and Dance; the National Association for Music Education; the National Council of Teachers of English; the National Council of Teachers of Mathematics; the National Dance Education Organization, and the National Science Teachers Association) and they are reviewed and implemented so that they f t together coherently.

The curriculum is likely to benefit children. Research and other evidence indicate that the curriculum, if implemented as intended, will likely have benef cial effects.

Considering Curriculum Models

The early childhood f eld benef ts from the availability of a wide variety of comprehensive curriculum models and more are being developed every year. Each one rests on an underlying set of theories about how children grow, develop, and learn, and they vary widely in the extent to which they have been validated through recognized methods.

Teachers and programs are encouraged to adopt a comprehensive curriculum. Those that are focused on specif c content areas should be used only in addition to a comprehensive curriculum, not as a standalone.

As an alternative to using an established model, programs and schools may elect to develop local curriculum. Locally developed curriculum should be based on widely regarded foundational documents about how children grow and learn and documents that ref ect recognized best practice.

Recent years have seen considerable activity in the development of curriculum packages focused on specif c areas of the curriculum (e.g., literacy or math). Those who make decisions about the selection of curriculum should take particular care to assure that any curriculum selected for a specif c area is theoretically and operationally consistent with the program's statements of purpose and beliefs about learning and development and with the comprehensive curriculum in use.

Organizing Activities around Curriculum

To be effective, curriculum and classroom activities need to engage children. Many teachers use projects and themes to organize learning options. Regardless of the ways teachers choose to do this, there are some questions to ask:

- Is this an intellectually worthwhile project? Is there a satisfactory answer to the question "Why am I doing this?"
- Does this topic, theme, or project originate from a child's interest?
- Is this topic developmentally relevant? (A study of a far-away country is not useful to preschoolers and kindergartners just because the teacher is interested in it.)
- Is the scope broad enough to allow for specif c personal interests?

For example, the topic of "Living Things" lets children choose their focus, while "Ants" may be of interest to a limited number of children. On the other hand, if ants really capture children's interest, it is a worthwhile topic. (*See Chapter 15.)*

- How much time should be allowed for a project? Some topics that excite the children need time for research and active involvement while others can be of a shorter duration.
- Are there resources available to support this study?
- Does this topic facilitate the learning of skills and processes, knowledge, and the development of attitudes that are of immediate use and meaning to the children?
- Does this topic facilitate the learning of skills, concepts, and processes included in the N.C. Preschool Widely Held Expectations and the Kindergarten Standard Course of Study Objectives?
- Over the course of the year, does the theme, topic, or project provide balance and complement other endeavors of the class?

Teaching and learning experiences must reflect the principles of active learning. Some valid strategies for selecting them include:

- Children's news – e.g., a child brings acorns, which sparks other children's interest in collecting and finding more about …
- Teacher's contributions – e.g., the teacher is moving to a new house, which precipitates a need to know more about …
- Local events – e.g., the town centennial celebration motivates learning about and representing past and present community events.
- Media news – e.g., a tornado warning is the starting point for a study of storms and safety procedures.
- Teaching strategies such as storytelling – e.g., stories in science, humanities, and fine arts.

Project Planning

Projects are highly recommended as a way to make sense of information in children's lives. Projects involve the investigation of a topic, but they differ from traditional thematic units because they are fully integrated. In project planning, the disciplines are naturally combined; there is no need to provide distinctions or to weigh the number of "activities" in each discipline. The goal is to fully learn about something, using all available resources, incorporating the skills, knowledge, and dispositions needed to accomplish that goal.

The types of activities involved in a project reflect the principles of active learning. Children are decision-makers and planners throughout the process. The teacher leads and structures the project based on the children's ideas and contributions. "The project approach provides a context in which all aspects of children's minds can be engaged, challenged, and enriched."[6] The skills, knowledge, and dispositions acquired by formal instruction are better learned and remembered when applied in a real context. Using projects with children is an opportunity for application and consolidation of the learning we value.[7]

The project approach provides a context in which all aspects of children's minds can be engaged, challenged, and enriched.

Katz & Chard, 2000

Active Learning Strategies

Play-Debrief-Replay

The use of play as an instructional approach should be happening every day in preschool and kindergarten classrooms. This Play-Debrief-Play model is explained in Selma Wasserman's book *Serious Players in the Primary Classroom: Empowering Children through Active*

6 Katz & Chard, *Engaging Children's Minds: The Project Approach*, 2000.

7 Ibid.

Learning Experiences (2000). The author cites many useful examples. This excerpt describes the criteria for productive play activities that yield signif cant conceptual growth:

- Investigative play tasks are open-ended. They do not lead children to "the answers."
- Play tasks call for the generation of ideas, rather than the recall of specif c pieces of information.
- Play activities challenge children's thinking; indeed, they require thinking. Higher order mental challenges are built into each play task.
- Play activities are "messy." Children are, in fact, playing around.
- Play tasks focus on "big ideas" – the important concepts of the curriculum, rather than on trivial details.
- Each play task provides opportunities for children to grow in their conceptual understanding. When children carry out investigative play, they grow in their ability to understand larger concepts.
- Children are the players. They are actively involved in learning. They are talking to each other, sharing ideas, speculating, laughing, and getting excited about what they have found. They are not sitting quietly, passively, listening to the teacher talking.
- Children are working together in learning groups. Play is enhanced through cooperative investigation. Cooperation rather than competitive individual work is stressed.
- Adults are also "players" in children's play. They provide stimulation, attitudes, and insight, often through role modeling. They also provide materials keyed to children's interests, serve as observers and are, at critical times, interveners.

The most effective kind of education is that a child should play amongst lovely things.

Plato

The strategy looks like this:

- Children are engaged in an activity designed to develop a bigger concept. For example, children may be challenged to observe a variety of seeds and plants. Open-ended questions are posed, such as "What can you f nd out about seeds?" The related "big idea" could be "living things grow and change."
- Children are brought together for a debrief ng. Questions are directed at articulating the children's observations, ideas, and reasoning. Challenges are posed that go beyond the children's observations, such as "Where do seeds come from?" or "What makes seeds grow?"
- Children return to the materials with new focus questions for their investigation.

The strategy can be repeated as time and interest allow. Materials may be used again for a different set of focus questions. The materials are included in an exploration center for further investigations.

Plan-Do-Review

This strategy is a sequence that becomes part of the daily routine in preschool and kindergarten classrooms and is at the heart of the High/Scope model. As children carry out projects or investigations,

they need time to anticipate what they will do, how they will proceed, and what materials they will use. Once the work session is over, they need time to reflect on how they did, what they will do next time, where they will store their project, and what they might want to do differently.[8]

For children to become responsible, independent learners, they must be provided the time and support to plan ahead and follow through. During planning time, children think about what they will do. Children may represent, describe, or otherwise indicate to another child or adult what their plan is. Review incorporates the same strategies, only in reverse, and may involve sharing products with another person.

Specific strategies for planning and reviewing include:

Modeling. Chidren are working, and the teacher describes what they are doing. "I see you have planned to glue scraps of paper to the larger piece of paper. Will you tell us about your work at review time?"

Oral. Adults and children spend a few minutes before the work begins as each explains what they are going to do. By including where the work will be done and which materials will be needed to begin, children are better able to focus and begin independently.

Group. Adults and children plan together using charts, "mystery bags," classroom maps, chalkboard graphs of centers, or other group techniques. Each child has a turn to represent his or her plan within the larger group.

Written. Children represent their plans and reviews on paper. Adults may write dictation, children may draw and/or write, or there may be a planning form the child uses each day. Whatever the medium, a written plan provides a record of the child's work from day to day and is a valuable source of information.

Pantomime. Children act out their plan or review while others participate in pretending as well. Everyone is involved in imagining the action. This often results in motivating children to try some of the imagined work.

Providing Continuity to the Next Level

To promote learning for all children, educators must provide a school environment that acknowledges children's diverse backgrounds, helps children transition comfortably into the next instructional level, and provides community supports when necessary.

The move from level to level is made easier if each program is focused on the individual developmental needs of the children. Programs may be operating in different types of settings with children of different ages. However, the commonalties between the way children learn and the range of developmental levels represented in each program call for similar learning environments and teaching strategies. The transition between programs is facilitated by the degree to which each program is developmentally appropriate.

How does curriculum facilitate the transition between programs?

Developmentally, culturally, and individually appropriate programs provide for a wider range of developmental interests and abilities than the chronological age range of the group suggests. Since each child is unique with an individual personality, learning style, and family background, teachers at all levels need to be responsive to these differences.[9]

Moving into the local elementary school usually means that a child will

I believe that we kindergarten teachers need a clear vision of academic goals, a plan for turning that vision into reality, and a method for balancing the strenuous academic day with song, movement, talk, and stimulating play.

Susan L. Kempton, 2007

8 Hohmann & Weikart, *Educating Young Children*, 1995.

9 Bredekamp & Copple, 1996.

enter a new setting. However, if both settings are developmentally appropriate, children will be more likely to find similar experiences that will allow them to begin in their new setting with confidence that they have the ability to accomplish certain tasks. Knowing what is expected adds to children's self-confidence, encourages their attempts to try new experiences, and facilitates continuity in development.

What do preschool and kindergarten children have in common?

All young children learn best by:

- actively exploring their environment.
- interacting with adults and other children.
- using concrete materials and participating in activities that are relevant to their own experiences and culture.
- building upon their natural curiosity and desire to make sense of the world around them.

All preschool and kindergarten children are continuously learning to:

- use their bodies and express themselves through physical activities.
- solve problems and experiment with change.
- develop an understanding of acceptance and respect in regards to themselves and others as individuals.
- gain more self-control and build cooperative relations with others.
- communicate their thoughts and feelings as effectively and creatively as possible.

What is the significance of these common characteristics for planning developmentally, culturally, and individually appropriate curricula?

During the early childhood years, children have similar learning styles. Furthermore, each program has children with a wide range of developmental levels. For these reasons, both preschool and kindergarten/primary teachers may establish similar environments and approaches to facilitating growth and development. For example, preschool, kindergarten, and primary school teachers can adopt the following developmentally appropriate practices:[10]

- Designing experiences to stimulate learning in all areas: physical, emotional, social, and cognitive
- Planning curriculum and adult interactions that are responsive to individual differences in ability, interests, cultural backgrounds, and linguistic styles
- Providing an environment, with adaptations as needed, in which children can learn through active exploration and interaction with materials, adults, and other children
- Organizing the environment so children select many of their own activities among learning areas, including dramatic play, blocks, science, math, games and puzzles, books, recordings, art, and music, and making sure that the children can use the items after selecting them
- Organizing the day so children work individually or in small groups most of the time
- Providing many opportunities for children to use small and large muscles, listen to stories, and express themselves creatively
- Facilitating the development of self-control in children by using positive guidance techniques such as modeling and encouraging expected behavior, setting clear limits, and redirecting children to more acceptable activity
- Providing many opportunities for children to develop social skills by organizing the classroom environment to be a community of caring

Relationships that are stable and lasting can serve as a bridge between the family and school and provide continuity from preschool to kindergarten.

Pianta & Kraft-Sayre, 2003

10 Bredekamp & Copple, 1996.

How are preschool and kindergarten children different?

Although both preschool and kindergarten programs may have children at various developmental levels, most kindergartners are one year older. Because this extra year has brought new experiences and natural growth, kindergarten children are more likely to:[11]

- expand beyond their immediate experiences of self, home, and family, developing interests in the community and world outside.
- show increased ability to use motor skills, pay attention for longer periods of time, and play and plan cooperatively.
- display a growing interest in symbols, including written language and a written number system.
- show increased capacities to think rationally, persist at tasks, and regulate emotions.[12]

What is the significance of these differences in planning developmentally appropriate curricula?

Although the preschool and kindergarten rooms may appear similar, the kindergarten teacher is able to:[13]

- Provide more elaboration in children's interests and activities.
- Encourage more joint planning and cooperation among children.
- Provide an environment that places more emphasis on stimulating written language and literacy skills appropriate to an individual child's developmental level and ability.
- Focus on the development of more independent work habits and enhanced ability to follow teacher directions.

What other differences exist between preschool and kindergarten programs?

The settings of preschool programs and elementary schools are often different. For example:[14]

- Group size in preschool programs may be relatively small – 15 to 20 children in center-based programs with two or three teaching staff (and even smaller in home-based programs). In elementary schools, there may be 18-22 or more children with one or two teaching staff.
- Preschool program schedules may be flexible; elementary schools may be required to adhere to a time schedule based in part on cooperative uses of playgrounds, cafeterias, gyms, or buses.
- Preschool programs may be community based; primary programs are usually part of a larger institution with older children and different educational expectations.
- Preschool programs may be privately administered or cooperatively administered by parents; elementary schools are part of a public, private, or parochial school system governed by an elected or appointed board.
- Although each program can provide a developmentally appropriate curriculum, the setting and program structure may affect the way each program is carried out.

Watching children enjoy themselves is one of the best parts of teaching kindergarten, but you're never only watching; you're always on the lookout for the next teachable moment.

Susan L. Kempton, 2007

11 Bredekamp & Copple, 1996.

12 Berk, "*Looking at Kindergarten Children,*" *in K Today: Teaching and Learning in the Kindergarten Year*, Gullo, 2006.

13 Bredekamp & Copple, 1996.

14 Glicksman & Hills, 1981.

Assessing Children's Progress Appropriately

Chapter Highlights

A classroom built around activity centers provides an ideal setting for making assessment a natural and ongoing part of learning. Preschool and kindergarten children are more likely to perform at their best when engaged in interesting and meaningful classroom projects they choose themselves – such as real reading and writing activities rather than only skills testing.

Through frequent, systematic, and structured observation of the work children do and how they go about doing it, teachers gain a true picture of their progress relative to established expectations. Using this information, you can select materials and learning experiences that meet each child's needs.

Def ning "Assessment"

Just what is meant by the term "assessment" and does it have special meaning in the context of learning about young children's progress? In 2002, a group of early childhood leaders came together to develop a glossary of assessment terms. The work was needed precisely because assessment was becoming an important, although not wholly understood, topic. This group def ned assessment as "a systematic procedure for obtaining information from observation, interviews, portfolios, projects, tests, and other sources that can be used to make judgments about characteristics of children or programs." They distinguished it from "evaluation," which was def ned as "the measurement, comparison, and judgment of the value, quality, or worth of children's work and/

Sound assessment of young children is challenging because they develop and learn in ways that are characteristically uneven and embedded within the specific cultural and linguistic contexts in which they live.

Copple & Bredekamp, 2009

Assessment information is used to:

- plan for instruction
- provide a baseline for documenting learning
- chart growth using developmental checklists
- measure progress on local or state standards
- match and evaluate the program's goals with a child's needs
- help a child advance in a skill
- provide feedback on teaching methods and curriculum
- learn about the child's family and culture
- share progress with parents

or of their schools, teachers, or a specif c educational program based upon valid evidence gathered through assessment."

There are four generally accepted objectives for assessing children:

- to promote their learning and development
- to identify children for health and special services
- to monitor trends and evaluate programs and services
- to hold individual children, teachers, and schools accountable

Assessment is important both to support the learning of each child and to provide data – at the district, state, and national levels – for improving services and educational programs. Teaching and assessment are closely linked. Finding out, on an ongoing basis, what a child knows and can do helps parents and teachers decide how to pose new challenges and provide help with what the child has not yet mastered. Teachers also use observation and formal assessments to evaluate their own teaching and make improvements. At the policy level, data are needed about the preconditions of learning – such as the adequacy of health care, child care, and preschool services. Direct measures of children's early learning are also needed to make sure that educational programs are on track in helping students reach high standards by the end of third grade.

Risks in Assessing Young Children

The reservations many early childhood professionals express about more formal assessment of young children are legitimate. Standardized tests have become a staple at all levels of education in recent years. Their increasing use in preschool and kindergarten or even earlier is troubling.

Although assessment plays a valuable role in helping to evaluate a child's overall progress, it can be a very dif cult thing to do accurately and fairly. Because of the rapid, uneven development typical in young children, as well as vast differences in backgrounds, experiences, and even primary languages they bring to the classroom, formal assessment can open the possibility of inappropriate conclusions about an individual's capabilities and potential. At worst, this type of testing is judgmental and might erroneously cause adults to lower expectations for some children.

In contrast, when a teacher is working with individual children in a learning environment, assessment almost always occurs in the context of activities and tasks that are already familiar to them. In this context, the teacher may well provide help while assessing, taking advantage of the opportunity to f gure out exactly how a child is thinking and make it possible for him or her to take the next steps.

Assessments make the most sense if they occur on an ongoing basis, as particular skills and content are being learned. Good classroom assessment is disciplined, not haphazard. With training, a teacher's expectations can ref ect common standards.

Ongoing Assessment vs. Accountability Assessment

The technical standards for reliability and validity are much more stringent for high-stakes accountability assessment than for informal assessments used by caregivers and teachers to help children learn. The consequences of accountability assessments are much greater, so the instruments used must be sufficiently accurate to ensure that important decisions about a child are not the result of measurement error.

Accountability assessments are usually one-shot, stand-alone events. In contrast, caregivers and teachers are constantly collecting information over long periods of time and do not make high-stakes decisions. If they are wrong one day about what a child knows or is able to do, the error is easily remedied the next day.

Serious misuses of testing with young children occur when assessments intended for one purpose are used inappropriately for other purposes. For example, the content of IQ measures intended to identify children for special education is not appropriate content to use in planning instruction. At the same time, assessments designed for instructional planning may not have sufficient validity and technical accuracy to support high-stakes decisions.

As schools are called on to be more accountable and demonstrate how effectively they meet their goals, preschools and kindergartens are asked to become part of this accountability system. And so, assessment and evaluation processes take on great significance.

Many components are involved in good assessment, and classroom teachers are being called on to become much more knowledgeable about the subject. In the past, many teacher preparation programs have not included extensive study of assessment. Additional professional development is needed so that teachers can be as effective as possible in assessing children's progress and cooperating with allied professionals to address special needs and language differences.

Assessment of Children's Progress in the School Environment

The assessment process begins before children ever come to school. It starts when teachers review reports from other professionals (child care providers, early interventionists, etc.) who have worked with particular children and their families. It continues as teachers prepare learning environments with established goals and objectives and attention to state standards.

Good choices in assessment and evaluation strategies ensure that information from the children and their work is continuously used in planning and designing learning environments for them.

Preschool programs have the flexibility to choose the model that best helps them meet their goals. The North Carolina General Assembly gives local school systems authority to select or design

Learning about Children from Their Families

Before school starts:

- Home visits
- A brief telephone call to each family
- A get-acquainted meeting for all families
- An initial parent-teacher conference
- Questionnaires and surveys

During the school year:

- Informal conversations as families drop off or pick up children
- Brief telephone calls just to keep in touch
- Regular conferences with invitations for parents to bring specific information, suggestions, or questions
- Conversations during meetings, pot-luck meals, and other school events
- A class album, with contributions of photographs from each family

appropriate and useful early childhood assessment procedures. Standardized testing of children before third grade is prohibited.

Learning Standards Lead the Way

A sound program for young children begins with knowledge of child growth and development, families, the community, and individual children. This interwoven body of knowledge supports decisions related to the def nition of reasonable expectations for preschool and kindergarten children. These expectations set the stage for appropriate and useful assessment.

Within the past 15 years most states have formalized these expectations into sets of early learning guidelines or standards. North Carolina is no exception. *Foundations: Early Learning Standards for North Carolina Preschoolers and Strategies for Guiding their Success* (2004) and the North Carolina Standard Course of Study for Kindergarten represent this establishment of widely held expectations for preschool and objectives for kindergarten children.

These expectations and objectives are based on observations and experiences with children, research, and reports of parents and teachers about children who demonstrate typical and atypical developmental patterns. They provide basic guides for orienting teachers to reasonable expectations for the behavior and learning of preschool and kindergarten children.

Conditions for Ef ective Assessment

Children's skills, interests, and needs are constantly changing, and individuals most likely show themselves as they really are when in familiar settings, among people they trust, and involved in activities they f nd interesting. Teachers, therefore, need to gather information from different sources and viewpoints from other professionals, from families, and from the children themselves. Teachers must also gather information at regular intervals over several months before they can say they know the children in their classroom. The examples on the next pages suggest ways to do this effectively.

Creating an Assessment Plan

Assessment plans help teachers collect information on each developmental domain and each curriculum area or discipline. By developing an assessment plan, teachers will know what information they want to collect, how they will observe, and how information will be recorded. Records must be comprehensive.

Based on the goals and objectives established by the program, a plan can be designed to suit local timelines, policies, and priorities. Programs and schools may adopt or modify one of the published systems if it suits their needs. Examples of available comprehensive assessment tools include:

- High/Scope Child Observation Record
- Work Sampling System
- Creative Curriculum Developmental Continuum for Ages 3-5

Systematic approaches can ensure that information is collected on each child, not only on those who stand out because they exceed or fail to meet expectations. The information on each child must come from several sources to allow a teacher to see that child from a perspective other than his or her own. This is particularly important in classes where teachers and children come from different cultural, ethnic, or language backgrounds.

Assessment Techniques

Every child's activity in the classroom provides information that can help you decide what he or she can do and what should come next. Observing children, collecting samples of their work, and talking with families, children, and other teachers and professionals are recommended techniques for gaining this information.

Observation

One of the best ways to find out what children can do is simply to watch them participating in a variety of everyday activities. Strategies for doing this include using open-ended narrative records or structured observation forms.

Tips for Recording Observations

- Make brief, objective notes that can be transferred easily to files or folders.
- Use sticky pads, address labels, small index cards, class lists, sheets with preprinted boxes that can be cut apart, legal pads, or binders.
- Keep recording materials readily available around the classroom and outdoors. A teacher may observe children's behaviors and accomplishments differently in different settings.
- Let children help by tallying their activities at specified times and places during the day. They can "sign in" to centers, write or draw activities in journals, dictate activities to classroom assistants or into voice recorders, use a date stamp on their work.
- Remember to allow time to view and analyze audio and video tapes.
- Using computers and simple tally sheets can reduce time required for recording and analyzing observations.
- Write name, date, and brief description of the importance of your observation on all notes and samples of children's work.

Getting Started

- Identify why you are doing the assessment – e.g., to plan instruction, to confer with families, to identify and possibly refer for special services, for program accountability.
- Specify individual learning goals you plan to assess.
- Identify potential sources of information.
- Decide where you will observe or what documentation you will collect.
- Consider any local policies that will affect your assessment – e.g., reporting requirements.
- Modify the timeline to suit your situation. Use at least the first two weeks of school to get the classroom routine established before you begin formal observation for assessing growth and development.
- Establish a timeframe for observing children and collecting samples of their work.
- Take two weeks at the end of each cycle to summarize information.
- Schedule time to send information home and have conferences.
- Start the next cycle.

Work Samples

Examples of children's work provide first-hand, descriptive information about progress toward learning goals and objectives. Examining samples of their work over time shows patterns of growth and change. Portfolios are one way to store children's work. (See "Using Portfolios," page 87.)

Conferences

Conferences are the most common way to collect assessment information from parents. In conjunction with these meetings, using questionnaires and developmental check lists will help you learn about

the children's out-of-school activities. The information that families share at the beginning of the school year and periodically thereafter will enrich your understanding of every child in the class and help in the writing of instructional plans and evaluations. Family information is crucial in designing goals and objectives for all children, especially those who have IEPs.

Families know children's interests, strengths, previous experiences, and temperaments in the home setting. In conferences, parents should be encouraged to share their ideas as well as their expectations. During the year, information can also be gathered from conferences with children and with teachers and other professionals.

The Importance of Conversations

Talking with and listening to children is the best way to find out what they are thinking and to gain new insights into what they are learning. This talk is essential for parents and teachers as they plan for the individual needs of each child at home and at school. It needs to be part of everyday activities in both places. Teachers can use what they are hearing in these conversations to:

- help children know that their ideas and opinions are valued
- help clarify thinking
- assist children in thinking about their own learning
- gain new levels of understanding
- facilitate self-evaluation
- help children appreciate progress and set future goals
- build positive teacher-child relationships
- lead children to become self-directed learners
- foster social development and interaction among peers and adults

Anecdotal Records

Teachers obviously cannot write down everything that happens in their classroom, so you need a plan for the types of things that need to be recorded. Anecdotal records are short, written descriptions of what children can do and how they go about doing it. They might focus on literacy goals during one week and on mathematics goals during another. Spontaneous examples can be recorded and teachers can introduce specific materials and experiences to ensure that certain types of behaviors or skills are more likely to occur.

Making notes for anecdotal records is possible only when children are engaged independently with materials and activities. Even then, you will probably be able to jot only brief reminders that can be expanded later when notes are transferred to individual records. Keeping a supply of sticky notes or small index cards close at hand (say, in a pocketed apron or smock) makes it easier to make quick notes.

Examples of Anecdotal Records

These records need to be as objective and free of bias as possible. Teachers should make a careful distinction between what they actually see and hear (Example B) and their opinions or interpretations of those observations (Example A).

Example A

9/15 10:00 a.m. Ben counts well.

Example B

9/15 10:00 a.m. Ben counted the six boys at circle time, pointing to each one and assigning the appropriate number.

Checklists

Grids or checklists are useful for summarizing or capturing information about what children do over time, although they cannot capture the rich detail that anecdotal records provide. A teacher might want a record, for example, of activity in all of the learning centers used by the children

each day. A simple grid with the children's names in the left column and the learning centers across the top works fine for this purpose: When a child is observed using a center, just check the appropriate box. Kept over a period of time, such records can help determine whether particular children are avoiding certain types of activities or whether some of the centers are failing to attract children at all.

Children can assist with this type of recordkeeping. Even preschoolers can check in by signing their names to a list when they have a snack or when they want to use the computer. Some teachers develop symbol systems to record more details about their observations on the checklists, such as the level of skill or length of time children spend in an area.

Checklists are particularly helpful for summarizing information collected in other formats. Teachers can go through anecdotal records or children's work and note what they have done over a period of time. The Work Sampling System provides developmental checklists, with spaces for teachers to record the level at which children demonstrate specific behavioral indicators in seven domains. Each item on the Work Sampling checklists refers to a specific set of goals and performance indicators described in the supporting materials. The High/Scope Child Observation Record looks at developmental milestones for the key developmental indicators identified in the High/ Scope curriculum. If a ready-made developmental checklist is chosen, it is important to study the system behind it.

Using Technology to Gather Information

Technology can help teachers collect a rich variety of information quickly and easily, while providing an opportunity to revisit observations. For example, rather than struggling to describe an elaborate block structure in words, take a photograph with accompanying notes about how the structure extends and duplicates a particular pattern to indicate mathematical thinking.

Some suggestions for using technology are noted here, though with the caveat that rapid advances in technology tools could possibly render some of them obsolete.

Camcorder. Using a camcorder (either on a tripod or in the hands of an assistant) to videotape a group of children as a story is

read to them lets the teacher focus on the story and on managing the group. The recording can be reviewed later to locate detailed evidence of each child's ability to listen and respond. Capture this evidence for the child's record through written notes or printed-out photos from the video. You might invite the children to help select and print images to illustrate specif c achievements. Regular videotaping gives a vivid visual record of children's progress in specif c areas.

Audio. Tape or digital voice recorders are particularly useful tools for documenting language and literacy skills. You can place a recorder in the Dramatic Play center to document the speaking abilities of children while you're busy observing elsewhere in the classroom. (Of course, this assumes that you know the children well enough to recognize who is speaking when you review the tape later.)

To document language and literacy skills of individual children over time, give each child a blank cassette tape at the beginning of the year. Once a month, you can look at a picture book with each child and record the accompanying conversation. (Tip: always state the date at the beginning of each recording session and be careful not to rewind the tape when the session is f nished.) By the end of the year each child will have an audio record of his and her growing literacy skills – commenting on the action in the books, making up creative endings, guessing what will happen next, and so on. With older children the same process can be used to capture their reading progress. This is a wonderful record of growth to share with families.

Computers. Computer software is available to help record and organize observations of children. The three comprehensive systems cited earlier all provide a computer or online version. Programs may choose to design their own systems for recording information, using word processing or database programs. A record-keeping system should be easy to use and a help – not become an extra chore or an end in itself.

Hand-Held Devices. Various brands of hand-held devices are an emerging technology for administering or keeping track of children's progress.

Making Assessment a Routine

The sheer volume of information can seem overwhelming. However, the investment of time and energy is well repaid because records become a rich source of curriculum ideas – as well as proof of effective teaching. It is important to remember that assessment is not about creating the perfect record for all time, but rather really getting to know the children in each classroom and making the best decisions for them.

Even when assessment is a regular part of classroom activities, documenting and analyzing information takes time. Each teacher needs a plan to help divide and conquer. The Work Sampling System suggests fall, winter, and spring cycles of nine weeks for observing children and collecting work samples, followed by two weeks to review and summarize information. Other systems recommend continuous collection of anecdotal records. Data collection should ensure that the cycles are compatible with the program or school's schedule for reporting children's progress. For children who have an IEP, there will be specif ed dates for documented assessment. Allow time to analyze all of the information collected, prepare reports, share information with families, and modify the classroom and curriculum based on what the analysis shows.

Getting It All Done

Once you decide how much time overall is needed for observing and collecting samples each cycle, you can then determine how to divide that time to ensure that all the information needed is collected about each child. One way

Assessment Checklist: A "Test" for Teachers

1. Is the assessment procedure based on the goals and objectives of the specific curriculum used in the program?
2. Are the results of assessment used to benefit children – e.g., to individualize instruction rather than label, track, or fail children?
3. Does the assessment procedure address all domains of learning and development as well as children's feelings and dispositions toward learning?
4. Does it provide information that helps teachers do a better job?
5. Does it rely on teachers' regular and periodic observations and recordkeeping of children's everyday activities and performance so that results reflect behavior over time?
6. Does it occur as part of the ongoing life of the classroom rather than in an artificial, contrived context?
7. Does it evaluate performance rather than only test skills in isolation?
8. Does it rely on multiple sources of information about children – such as collections of their work, results of teacher interviews and dialogues, and observations?
9. Does it reflect individual, cultural, and linguistic diversity? Is it free of cultural, language, and gender bias?
10. Do children appear comfortable and relaxed during assessment rather than tense or anxious?
11. Does the assessment procedure support parents' confidence in their children and their ability as parents or does it threaten or undermine their confidence?
12. Does it examine children's strengths and capabilities rather than just their weaknesses or what they do not know?
13. Is the teacher the primary assessor and are teachers adequately trained for this role?
14. Does the assessment procedure involve collaboration among teachers, children, administrators, and parents? Is information from parents used in planning instruction and evaluating children's learning? Are parents informed about assessment information?
15. Do children have an opportunity to reflect on and evaluate their own learning?
16. Are children assessed in supportive contexts to determine what they are capable of doing with assistance as well as what they can do independently?
17. Is there a systematic procedure for collecting assessment data that facilitates its use in planning instruction and communicating with parents?
18. Is there a regular procedure for communicating the results of assessment to parents in meaningful language (rather than letter or number grades) that reports children's individual progress?

National Association for the Education of Young Children, 1992.

is to spend one week on each domain addressed by the curriculum – language and literacy, for example, followed by mathematics, social skills, and so on. This would mean finding a way to focus on individual children during that week.

If there is classroom help, responsibility for specific children can be assigned to an assistant. The task can be made still more manageable by deciding to observe particular children each day of the week. With this kind of routine, you can sensitize yourself to the types of information you need to collect – even if it can't all be captured on the day planned. It is also a good idea to schedule some down-time during the observation cycle to catch your breath or go back to collecting information on children who were absent when their observation time was planned.

Using Portfolios to Organize Information

Portfolios are purposeful collections of children's work intended to show growth and development over time. They provide a way to organize information about what a child can do as well as what that child tries to do. They are not scrapbooks or simple accumulations of children's products. The goals and objectives for a program should help decide what to include in the portfolio and how to organize the information. One useful method is to provide a section for each domain or

Building a Better Portfolio

If you find it difficult to collect portfolio items that illustrate certain skills, a fresh look at the classroom might be in order to determine whether enough opportunities for this type of work are available and attractive to children.

- Are there enough interesting materials to explore?
- Are they attractively displayed and organized to prompt children to use them in purposeful ways and to sort them as they clean up?
- When several children in a group seem to be having trouble with a particular objective, consider new activities that will help them approach the task with different strategies and new interest.

curriculum area. Use a face sheet or some other method to keep track of the areas documented to date.

Children can help collect and select materials for their portfolios. Their role in selection increases as they move from preschool to kindergarten and the elementary grades. Make it easy for them by providing clearly marked receptacles to store portfolio items – drawers, plastic bins, wall pockets, or large tag board folders stored in milk crates. Preschool and kindergarten children delight in using date stamps on their drawings or writing samples. Older children might be able to dictate or write their reasons for selecting particular items for their portfolios.

For children with an IEP, samples are needed that show progress toward IEP goals and objectives. One technique is to include notations on sticky notes or small index cards with each item explaining why it was selected and how it relates to goals and objectives. The collection process can be simplified by saving examples of a particular type of work from several children and attaching duplicate explanations of your observations with the individual samples. For example, an explanation of all the ways that preschool children's scribbles reveal knowledge of print can be included with each child's writing sample.

Periodically reviewing portfolios alerts teachers to areas where more representative examples of a child's work might be needed. This effort also helps you to prepare for parent conferences by ensuring that specific examples of work, as well as overall patterns of development, are fresh in your mind. If children are involved in deciding what to keep and what to send home, they can begin developing habits of evaluating and reflecting on their own learning. Once materials are reviewed and items in portfolios and other types of documentation are collected, the teacher is ready to begin forming conclusions about what has been learned.

Drawing Conclusions

All of the information collected should be studied before drawing conclusions about any child's progress. This includes

An Activity That Sparks Learning

After a fire occurs in the neighborhood, a kindergarten teacher might see stories and pictures about firefighters cropping up in her children's journals. She could respond to this by providing them with books and planning a field trip to the fire station where the children could interview firefighters. Such a trip would help them acquire social studies knowledge about community roles. The children, however, might be more intrigued by mechanical aspects of the fire truck or the firefighters' breathing apparatus than the broader goals the teacher had in mind. A flexible teacher would pick up on this new direction, encouraging the children to observe these things more closely and later record their observations. Opportunities could be provided back in the classroom for them to represent their discoveries in their art work, in a dramatic play experience, and in their block constructions. A social studies lesson is thus combined with a scientific exploration of the physical world, enhancing the children's curiosity and eagerness to learn. Such systematic observation, documentation, and reflection enable teachers to follow children's interests and offer meaningful learning.

consideration of input from the family and allied professionals as well as the child's portfolio and teacher observation notes. Because young children change and develop in spurts, conclusions should be expressed in terms of current performance and revised when new evidence arises.

If your expectations as a teacher are based soundly in knowledge of child development and learning expectations, you will probably conclude that most children are progressing as expected and are in the process of mastering many of the performance indicators identified for each curriculum area. If many or most of the children in the classroom are performing below or above expectations, those expectations may need adjustment. If, after careful consideration, it is determined that a child's performance does not meet expectations, the teacher is faced with another decision: how to support this particular child's growth and development in different ways.

Connecting Assessment and Planning

One exciting application of assessment information gleaned from documentation happens when teachers listen carefully to children to discover their interests and levels of understanding. You can then make tentative plans for activities that capitalize on those interests – though remaining ready to change those plans if children's interests take them in other directions.

Sharing Assessment Information

Although teachers are the primary users of assessment information, at least four other audiences have an abiding interest in it as well: the children themselves, parents or other family members, other professionals, and community decision-makers. Each audience needs to receive this information in a form that best meets their particular needs.

Documenting a Child's Development

Cognitive – Notes or pictures of the child with books and other print material; teacher's notes (perhaps with photos) about how the child makes choices or uses equipment and materials in their art work, in a dramatic play experience, and in their block constructions.

Emotional-Social – Teacher's notes and photos describing the child at play alone and with other children; notes, photos, or videotapes showing the child giving or receiving help, altering behaviors to be more appropriate or in response to another person, or helping with classroom duties; the child's drawings, paintings, or stories about relationships with others, sharing, taking care of people, pets, toys, or other things.

Language – Audio tapes of the child speaking; teacher's notes on sentence structure, vocabulary, and question-answer skills; lists of favorite books and rhymes.

Physical – Photos and videotapes of the child during physical activities; teacher's notes of involvement in games, developing handedness, and coordination.

Using Portfolios

Children take interest in their work and value their learning when they see the interest it holds for important people in their lives. When children select what goes into their portfolios, it helps them see how their ideas and work have changed over time. And when they can see the progress they have made toward specific goals, they are motivated to learn.

In addition to asking children to review and comment on their work, they should be involved in the evaluation process through individual meetings with teachers and by being included in teacher-parent conferences. Children are more likely to benefit when assessment emphasizes their strengths and clearly states plans for supporting their growth in all areas, including areas of concern.

Children who are involved in evaluating their own work are more likely to be able to tell their families about it, thereby helping their teacher communicate meaningful information. Families want

to know what their children are doing in school and why – and most certainly they want to know how well they are doing.

Using Written Reports

A written report summarizes the evaluation. It provides specif c examples that focus on strengths and provides plans and strategies to address any concerns. Reports should be written in language that ref ects the program's goals and objectives. Consider these examples:

Example 1

Thad's interest in language and reading can be seen by his eagerness to listen to stories read aloud and his willingness to draw pictures in his journal. He is not yet writing words to accompany his pictures and seems reluctant to speak up during class discussions. In the next few months, we will focus attention on and support his growth in these areas.

Example 2

Pat's free exploration of manipulatives reflects her enjoyment of math as well as good readiness skills. She recognizes, extends, and creates patterns; understands the concept of number and quantity (0-10); instantly recognizes the number of dots on a die (1-6); and has a beginning sense of geometry, measurement, graphing, and math vocabulary. A goal is to develop her number operation skill in adding two quantities.

Each of these statements accentuates what the child can do. Neither of them places unrealistic burdens on parents to "do something" about their child's performance. Imagine what would happen if the f rst example included a comment such as: "Thad needs to speak up more in class discussions." A well-intentioned parent might pressure Thad to speak up more, with the possible result that he would feel even more uncomfortable in school. Even without overt pressure from his parents, Thad might begin to feel their silent worry, with further erosion of his conf dence. Just as observation notes need to be as objective as possible, judgmental or opinionated language must be avoided in reports to families.

Face-to-Face Sharing

Conferences are a good way to share information with parents, other teachers, and appropriate support staff. Teachers can make the most of the conference setting by preparing remarks and presenting information objectively, positively, and clearly while avoiding educational jargon. An attitude of openness is critical both for the teacher to address points that need clarif cation as well as for information that the other conferees may want to share. A conference should be a conversation among the people most concerned about a child, rather than a presentation by the teacher.

Positive, respectful language should be emphasized – however, this does not mean the teacher should keep genuine concerns from families or surprise them with negative year-end evaluations. If a child is not developing as expected, families need to know. The key is to give them information in a non-judgmental way, to help them see it within the context of things the child does well, and to show them the ways that school personnel intend to help the child improve. The conference is a good opportunity to form a partnership with parents for the success of the child. For children with identif ed special needs, federal law mandates that schools inform parents or guardians about decisions that affect their children's educational programs.

Communicating with Other Professionals

From time to time, teachers may need to share evaluations of children's performance with other professionals. When a child is referred for evaluation of special conditions or learning needs, for example, the teacher's observations and records can contribute to the evaluation process if they are objective and carefully documented. Well-written summary reports can be passed on to the child's next teacher and help provide a head start for the new teacher's curriculum planning.

Assessing for Special Needs

Sometimes the difference between a child's performance and established expectations is relatively small and the teacher can develop a plan to help him or her improve in specif c areas. At other times, the difference warrants closer examination and the teacher might decide to refer the child for evaluation for special education and related services. Children in kindergarten and beyond may need special services because of advanced abilities as well as because of disabilities.

If the assessment techniques described in this chapter have been used, teachers will make such a referral only after observing a child closely over an extended period of time. At some point a screening tool may be administered to determine whether a child should receive a formal evaluation. Great care must be taken to select a valid and reliable screening instrument and to administer and use the results properly.

Required procedures for identifying children with special needs, def nitions of required screenings and evaluations, and required qualif cations of persons conducting screenings and evaluations are all included in a North Carolina special educational policy manual revised in 2007 and now titled *Policies Governing Services for Children with Disabilities*.

For kindergarten and older children, Section 1501 of this manual states that "children with special needs" include without limitation all children who, because of permanent or temporary mental, physical, or emotional disabilities, need special education; are unable to have all their educational needs met in a regular class without special education or related services; or are unable to be adequately educated in the public schools. It includes those who are academically gifted, autistic, behaviorally or emotionally handicapped, deaf-blind, hearing impaired, mentally handicapped, multi-handicapped, orthopedically impaired, other health impaired, pregnant, specif c learning disabled, speech-language impaired, traumatic brain injured, and visually impaired.

The manual def nes "preschool children with disabilities" as encompassing, without limitation, all three- and four-year-olds, as well as those f ve-year-old children who are ineligible for kindergarten and who because of permanent or temporary cognitive, communication, social/emotional, and/or adaptive disabilities are unable to have all of their developmental needs met in a natural environment without special education

Documenting a Child's Learning

Language Arts – Dictated stories, children's pictures, scribbles, and writing; teacher's notes of activities that show developing skills and understanding of concepts, including listening, and relationships involving talking, reading, and writing; teacher's notes on conversations, student conferences, and retelling of stories or personal experiences; teacher's notes illustrating developing speaking skills and ability to understand and follow directions; lists of favorite books, rhymes, and finger plays.

Mathematics – Teacher's notes about application of mathematical concepts during class activities; photos of children sorting, grouping, matching, or measuring; art work that demonstrates an evolving understanding of shapes; photos or sketches of children's constructions.

Arts – Teacher's notes or photos of children engaging in dramatic play; teacher's notes or photos of children using clay, paint, paper, found objects, and other materials to create, explore, or represent ideas; teacher's notes and/or pictures of the child participating in movement and dance, enjoying music, and exploring sounds and rhythm patterns.

Science – Records of children's observations, such as feeding schedule and amounts of food for classroom pets or watering schedule for plants and gardens; teacher's notes or photos of children using tools; photos that show children exploring the environment and experimenting with weights, measurements, and natural phenomena indoors and out.

Social Studies – Teacher's notes on children's observations during community field trips; children's drawings or stories of family and community; photos of children's block representations of community; teacher's notes about children's discussion of sequence of events or observations of geographic features; observations of children's participation in classroom decision-making; notes and photos of children during dramatic play.

Gathering Data

Creating portfolios of art, writings, photos, audio recordings, lists of favorite books, and such provides a meaningful collection of information that tracks a child's development over time. Here are a few effective techniques:

- Observe children performing typical tasks in comfortable circumstances.
- Collect samples of both spontaneous and structured work in the range of curricular objectives.
- Observe how children use language in talking about themselves and interacting with others:
  - How they demonstrate their understanding of the function and conventional forms of written language
  - How they use mathematical concepts and skills in daily classroom life
  - How they use language, writing, reading, and mathematics in demonstrating an understanding of science, social studies, the arts, and physical education
- Plan ahead for structured work samples collected during typical classroom activities, but at a designated time and place.

A card game can indicate a child's understanding of number concepts; a conversation about a story can gauge a child's language and reasoning skills. In preschool and kindergarten, appropriate assessment reflects the ongoing life of the classroom and typical activities of the children. It avoids approaches that place children in artificial situations. It relies on demonstrated performance during real, not contrived, activities.

and related services. This includes preschool children who are delayed/atypical or those who are autistic, deaf-blind, hearing impaired, other health impaired, orthopedically impaired, speech-language impaired, visually impaired, or traumatic brain-injured. Preschool children with disabilities become eligible for services upon reaching their third birthday.

Planning for Special-Needs Children

The relationship between assessment and curriculum planning is perhaps most explicit when a child qualifies for special education or related services. In this case, a multidisciplinary team, including the teacher and the child's parent or guardian, develops and writes an Individualized Education Plan (IEP). This plan establishes learning expectations for the child and the program modifications or interventions required to implement it.

The reciprocal relationship between assessment and curriculum planning continues as the IEP becomes the basis for assessing the child's learning and development. The IEP for each child must include these components:

- a statement of the child's present levels of educational performance
- a statement of annual goals
- a statement of short-term instructional objectives
- a statement of special education and related services to be provided
- a description of the extent to which the child will participate in regular education programs or natural preschool environments and a description of the program to be provided
- the projected dates for initiation of services and the anticipated duration of services
- objective criteria, evaluation procedures, and a schedule for determining, on at least an annual basis, whether the short-term instructional objectives are being achieved

The information gathered during an assessment influences curriculum for other children as well. For example, if a teacher discovers that a preschool or kindergarten child is performing below expectations in writing, she can use what has been learned about that child's particular interests to create opportunities that encourage him to write his own – perhaps to make signs for the block or dramatic play area. A child who has difficulty listening attentively to stories in large group situations might benefit from occasional opportunities to sit on someone's lap for a private story time. Information collected through observation can help teachers make adjustments to fit the program to the children in the class.

Assessing Children Learning English

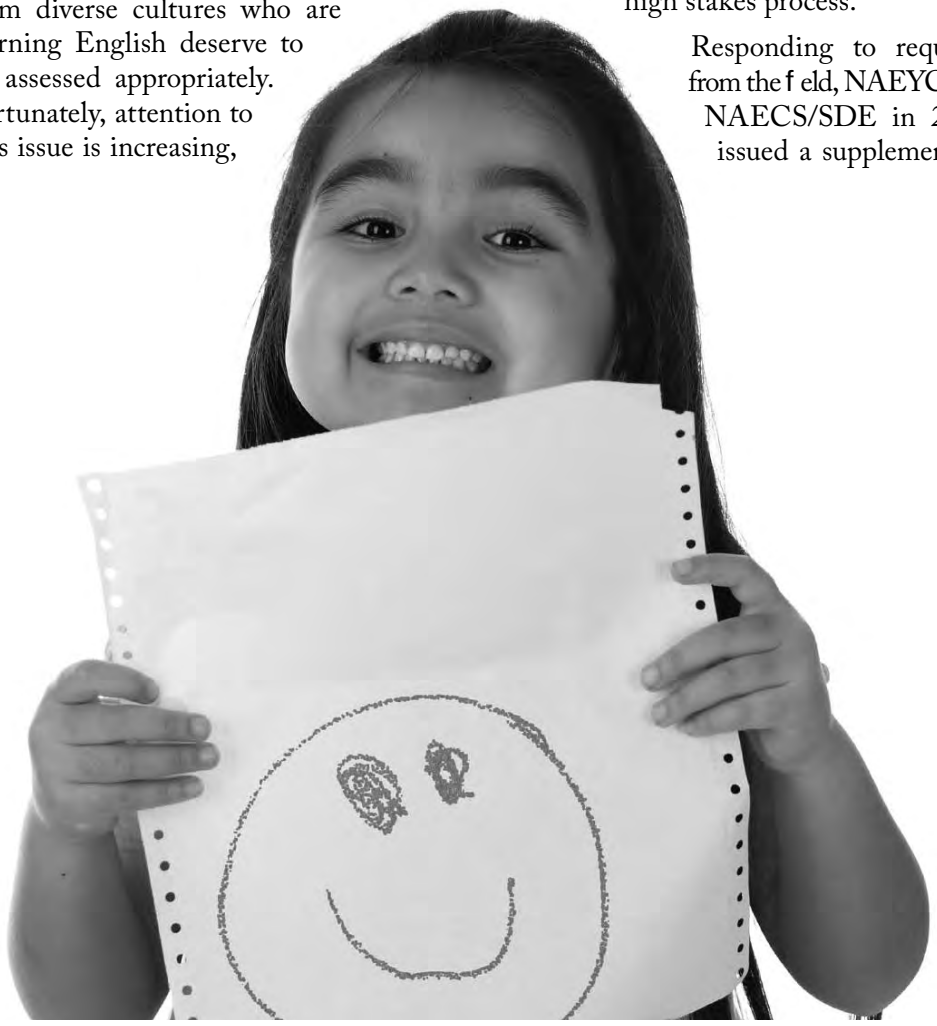
Assessing children who are learning English presents special challenges. The NAEYC & NAECS/SDE (2003) position statement on assessment cited throughout this chapter emphasizes the need for assessment to be linguistically and culturally responsive. Unfortunately, there are signif cant barriers to ful lling this need, including:

- Lack of a well-articulated program philosophy about children learning English
- An uninformed or resistant community
- Insuf cient professional development opportunities
- Lack of appropriate assessment tools
- Too few knowledgeable bilingual and bicultural professionals

Despite these obstacles, children from diverse cultures who are learning English deserve to be assessed appropriately. Fortunately, attention to this issue is increasing, bringing greater opportunities for professional development and new efforts to develop or modify instruments. The most important thing to remember about assessing children learning English is that all the standards that apply to good assessment for all children apply to children learning English. Keeping this in mind makes it far easier to think about ways to approach the challenges.

Teachers can have signif cant inf uence as they monitor and participate in the selection of instruments. Some popular tests are available in other languages (primarily Spanish). Be vigilant that the instruments are reliable and valid for the populations being assessed; it's essential to consult with professionals who are knowledgeable about an instrument's technical qualities. This is particularly true if the test will be used in any high stakes process.

Responding to requests from the f eld, NAEYC and NAECS/SDE in 2005 issued a supplement to



Observe children with your eyes and mind wide open.

Jeannette G. Stone, 2001

its 2003 position paper, offering the following seven recommendations for improving assessment practices for young English language learners.

1. As with the assessment of all young children, the assessment of young English language learners should be guided by specif c, benef cial purposes with appropriate adaptations to meet the needs of children whose home language is not English.
2. In assessing young English language learners, great emphasis should be given to the alignment of assessment tools and procedures with the specif c cultural and linguistic characteristics of the children being assessed.
3. The primary purpose of assessing young English language learners should be to help programs support their learning and development; classroom-based assessment should maximize the value of the results for the teacher's curriculum planning and teaching strategies.
4. The development of state and other accountability systems has led to increased use of standardized formal assessments of young children. Specif c considerations about the development and interpretation of these assessments should guide their use with young English language learners.
5. Whatever the purpose of the assessment, those conducting assessments of young English language learners should have cultural and linguistic competence, knowledge of the children being assessed, and specif c assessment-related knowledge and skills.
6. Families of young English language learners should play critical roles in the assessment process, being closely involved in a variety of appropriate ways.
7. Resources should be invested to ensure rapid progress on several fronts: expanding the knowledge base, developing more and better assessments, increasing the number of bilingual and bicultural professionals, and creating professional development opportunities for administrators, supervisors, practitioners, and other stakeholders in the effective assessment of young English language learners.

> Those conducting assessments of young English-language learners should have cultural and linguistic competence, knowledge of the children being assessed, and specific assessment-related knowledge and skills.
>
> NAEYC, 2003

Some of these recommendations are beyond the capacity of the classroom teacher. Nevertheless, teachers should be aware of all of them and act aggressively to support their implementation. As the NAEYC & NAECS/SDE paper concludes: "Until more resources and supports – f nancial, scientif c, and professional – are made available, early childhood professionals will have to continue to use their best judgment, wisdom, and practical knowledge to make decisions about how to effectively assess and use assessment results for each child in their care, with the limited means currently available to them. At the same time, early childhood professionals who guide programs and work directly with the millions of young English-language learners must continue to advocate for the support and resources they need in order to fully implement these recommendations."

Evaluating the Program

Program evaluation typically looks at both the results of child assessment and program assessment (e.g., teacher qualif - cations, suf ciency of services, quality of the classroom environment). These data can help teachers and program administrators discover ways to improve the program in large and small ways.

In the current environment, classroom teachers may f nd themselves in the role

of advocates as they respond to increasing calls to demonstrate the effectiveness of programs. Evaluating the program to gain information about how to make improvements is a legitimate use of data. Using the results of child assessments and program data to make high-stakes decisions is not. When the well-established difficulties of assessing young children are combined with the insufficiency of currently available assessment instruments, using these data to judge such things as teacher effectiveness or a child's readiness to access a subsequent level of schooling is highly inappropriate.

Administrators and other members of your community are legitimately interested in aggregate information about the extent to which all the children in a classroom or program are meeting the goals and objectives established by the school or program. When large numbers of children fall short of expectations, it could mean that new instructional strategies are needed. But it could also mean that the established expectations/objectives are not realistic for young children. Keeping detailed, accurate records of what the children in your classroom can do and how they develop over time can help determine the effectiveness of the program and provide valuable information to refine and redefine expectations/objectives over time.

Evaluation Goals

As the results of performance-based assessments are summarized and quantified to show children's progress, it is important to:

- look at making daily progress as well as achieving long-term goals.
- evaluate and report the quality of services to children with special needs and those learning English.
- assess and report the quality of communication with families.
- assess and report the use of community resources.
- assess and report the quality of the program environment.
- assess and report the quality of staff performance.
- assess and report opportunities to maintain and update professional knowledge and skills.
- include recommendations to maintain or change instructional goals or objectives based on children's needs.
- identify effective and ineffective instructional procedures.
- combine information from multiple sources to present a comprehensive assessment of child and program accomplishments.
- share program evaluation results with stakeholders.
- plan improvements in all program components.

Assessing the Quality of the Program Environment

The physical and interpersonal learning environment is in many ways a representation of the preschool and kindergarten curriculum. The emphasis that this new edition of *The North Carolina Guide for the Early Years* places on learning centers is an affirmation of that belief. Preschool and kindergarten teachers who learn how to assess the quality of the learning environment possess powerful tools to strengthen their practice and thus improve outcomes for children.

There are various highly respected environmental assessment tools available to early childhood educators. Here is a brief summary of those in most common use in North Carolina:

Good teaching is inseparable from good assessing.

Grant Wiggins, 1989

Comprehensive Environmental Tools

Assessment of Practices in Early Elementary Classrooms (APEEC)

Assesses global classroom quality that could be found in early elementary classroom environments. The instrument focuses on observation of developmentally appropriate practices in kindergarten-to-third-grade classrooms in the areas of the physical environment, instructional context, and social context.

Classroom Assessment Scoring System (CLASS)

Assesses the emotional and instructional climate of the classroom. Because materials can be variable across early childhood programs, this instrument is intriguing because it examines the use of curriculum and materials. Thus, CLASS examines what teachers do with the materials as opposed to what is available in the physical environment.

Early Childhood Environment Rating Scale (ECERS)

Assesses the quality of center-based programs for children. Items are organized in seven categories, and the scales are designed to reflect environmental considerations for all children, including those with special needs and those learning English.

Preschool Outdoor Environment Measurement Scale (POEMS)

Assesses the quality of outdoor environments for children 3-5 years old. The items are grouped into five domains designed to provide direction to teachers and administrators who want to offer high-quality programs and hands-on interactions for children in outdoor learning environments. Includes a user guide, scale and scoring protocol, reliability and validity information, key learning points for each domain, and an improvement and planning guide.

Preschool Program Quality Assessment, 2nd Edition (PQA)

Assesses key aspects of program quality, including 63 quality dimensions in seven domains.

Domain Specific/Content Area Tools

Caregiver Interaction Scale (CIS)

Examines the quality of a teacher's interaction with preschool children. This widely used tool is completed by an

observer who rates the teacher's behavior in a center- or home-based setting. The primary use of this instrument is to examine a teacher's interactions with children and to assess the teacher's emotional tone, discipline style, and responsiveness in the classroom.

Early Language and Literacy Classroom Observation Record (ELLCO)

Designed for pre-kindergarten to third-grade classrooms to help directors and principals gather data needed to build better classrooms and literacy programs. Observers record occurrence of nine literacy behaviors.

Assessment in Your Classroom: Some Concluding Thoughts

Make It Part of Every Day, Every Activity. Effective assessment takes place throughout the day – indoors, outdoors, during meals, rest time, field trips. Teachers work toward making observations and documentation a thoughtful process built into what they do throughout the day every day.

Be Realistic. Whether a teacher elects to use a commercially published assessment system or create one, it is important to start slowly. Realistic goals are important. They can be gradually expanded throughout the year. Perhaps collecting only samples of math and literacy work for portfolios is a realistic goal for an initial year. Once a teacher feels comfortable doing that, science and social studies items can be added. Or the number of review cycles might be limited to two to give the teacher a chance to become familiar with the system.

Be Sure It Fits. Well-planned, comprehensive assessment systems are commercially available. Curriculum materials currently being used may have forms and suggestions to get started. Be sure the selected process fits with the system your program or school is using. This may require a meeting among teachers and administrators.

Keep Others in the Loop. Parents and decision-makers need to know what is planned in advance. It is not helpful to surprise people with a portfolio and narrative report if this is different from the report cards kindergartners have been bringing home for the last several years. Some directors and administrators establish parent-teacher committees to schedule meetings to explain new assessment techniques. They might designate a particular staff member to serve as resident expert and answer questions that arise later. Whatever the program or school chooses, teachers can be proactive by scheduling a parent meeting early in the year to preview the new system.

Give It Time. Teachers should give themselves permission to make mistakes the first few times they try a new system. They will learn from their experience if they don't give up too quickly. Even if changes become necessary, these changes will provide learning.

Support is Essential. Teachers need training and resources to implement fair and accurate assessment that benefits children. Programs and school systems have a responsibility to enable teachers to successfully fulfill their responsibilities in the assessment process. Teachers have ethical obligations to maintain and enhance their professional knowledge and skills – including assessment skills. Programs and schools help by:

- fostering collaboration among teachers and other professionals
- giving teachers information about different assessment procedures
- providing teachers with information on community resources
- establishing reasonable timelines for assessment processes

SECTION II

The Essential Tools of Learning

The five domains of development identified in this section – Approaches to Learning, Emotional and Social Development, Health and Physical Development, Language Development and Early Literacy, and Cognitive Development – are taken from North Carolina's official definition of school readiness. All five are equally important parts of a child's learning and development. They are also highly interrelated – with progress in one area influencing progress in all of the others.

Every child, including those with disabilities, will demonstrate varying degrees of strengths in the domains and all are capable of a positive developmental outcome. When adults provide experiences that actively engage children in the learning process, they are laying the groundwork of skills, concepts, and dispositions that will be critical to their success in school and beyond.

Although all domains of learning are integrated throughout a child's day, this section of the *Guide* features detailed information on setting up and using 14 learning centers within the classroom. Beginning with Chapter Twelve, you will find a *Learning Center Focus* that relates to a particular domain.

Two domains – Approaches to Learning and Emotional and Social Development – do not feature a specific learning center. This is due to their all-embracing nature. The ways that young children approach learning are manifested in all domains and curriculum areas. Similarly, the emotional and social characteristics found in young children are the foundation for all learning and are manifested in all domain and curriculum areas.

Approaches to Learning

Chapter Highlights

The Approaches to Learning domain includes children's attitudes toward and interest in learning. It is not about what skills children acquire, but how they orient themselves to learning a wide range of skills. These dispositions are manifested in all domains and curriculum areas, including music, dramatic play, and art. Early childhood practitioners and academic researchers regard approaches to learning as a critical domain for children's school success.

This domain encompasses six dimensions:

- Pondering, processing, and applying experiences
- Curiosity, information-seeking, and eagerness
- Risk-taking, problem-solving, and flexibility
- Persistence, attentiveness, and responsibility
- Imagination, creativity, and invention
- Aesthetic sensibility

These capacities cross developmental domains and so cannot be categorized in a singular way, but they contribute to children's accomplishments in all areas. Preschool and kindergarten children are curious and confident in their ability to learn and enjoy exploration and discovery through play. They demonstrate some personal areas of interest as well as strategies for finding out more about those interests. They typically are starting to express creativity and imagination through a variety of avenues and they take initiative when appropriate and show pride in their

achievements. Moreover, they are exhibiting an increased ability to attend to and persist with tasks even after encountering obstacles.

The elements of this domain permeate every aspect of a child's educational experience. These characteristics and dispositions are the foundation of all future learning and are manifested differently from child to child.

Focusing on the Bigger Picture

Play is often talked about as if it were a relief from serious learning. But for children, play is serious learning. Play is really the work of childhood.

Fred Rogers

Approaches to Learning is a relatively recent addition to the traditional developmental domains of health and physical development, emotional and social development, and cognition. The domain was described in *Reconsidering Children's Early Development and Learning: Toward Common Views and Vocabulary*[1] written in support of Goal 1 of the National Education Goals. When states began to establish early learning guidelines in response to the federal Good Start, Grow Smart initiative, North Carolina was among those states electing to include approaches to learning as a domain in its guidelines. In North Carolina, as with most of those states, early learning guidelines focus on the pre-kindergarten level and the domain has come to be associated with preschool children. But it is not just about preschool children. It applies to all ages.

The authors of *Reconsidering Children's Early Development and Learning* explained: "It is important to consider approaches toward learning because, first, the mere acquisition of knowledge, skills, and capacities is an insufficient criterion of developmental success and an insufficient measure of program accomplishments. Children must be inclined to marshal such skills and capacities. For example, possession of a capacity does not necessarily mean that it will be used; children have the capacity to listen, but may or may not have the disposition to be listeners. Second, a narrow focus on skills as the end-product of education may undermine the disposition to use the skills."

Gender, temperament, and a child's family and community all help to set the course of their approaches toward learning. And these predispositions combine with other influences in their environment. This mix creates what has come to be referred to as learning styles. "The term *learning styles* has been used to encompass both motivational, attitudinal variables and cognitive styles in approaching problems."[2] Teachers' comments to children can encourage them to persist and take pride in their work. Research shows that when even very young children can attribute success to their efforts, rather than to intelligence or luck, they will be more engaged and motivated.[3]

Individual variation is more apparent in children's approaches to learning than in any other domain. These variations are reflected in the diversity of predispositions, attitudes, habits, and cultural patterns represented in any group of children. Teachers should take care not to view these variations as deficits. Preschool and kindergarten classrooms should be "non-critical environments in which all children are allowed to take risks and in which creative processes are nurtured and valued."[4]

Much more work is needed to understand how the dimensions identified as approaches to learning shape and influence how children think about and act on learning opportunities. The role of culture is particularly in need of greater understanding. In a state like ours, whose

1 Kagan, Moore, & Bredekamp, 1995.

2 Ibid.

3 Dweck, *Self-Theories: Their Role in Motivation, Personality, and Development*, 2000.

4 Washington State Early Learning and Development Benchmarks, 2005.

Children who ... find learning fascinating, challenging, and within their grasp will experience a rich and joyful childhood.

Marilou Hyson

population is increasingly multi-cultural, teachers who can be responsive to this variation will be more successful in helping children capitalize on their unique ways of approaching learning.

Nationally, a growing emphasis on narrow, skill-driven curricula and the influence of high-stakes testing threaten to curb children's enthusiasm for learning and teachers' attention to strengthening their students' positive approaches to learning. This follows an unfortunate pattern in education today: A good intention (raising achievement) leads to an unintended negative consequence (lowering incentives for learning). Teachers must find ways to work through this paradox to create the best possible learning environment.

Early Learning Expectations, Objectives, and Strategies

While inborn characteristics and environmental influences do shape a child's approaches to learning, teachers can strengthen those dispositions through the choices they make in organizing the classroom and interacting with children.

The Standard Course of Study for Kindergarten does not include a specific section on Approaches to Learning. Kindergarten teachers are encouraged to incorporate the framework of the Preschool Widely Held Expectations for Approaches to Learning in how they think about children's learning and development. These expectations are relevant across the age range. Here are a few

examples of effective strategies that preschool and kindergarten teachers can employ:

- Promote thinking and decision-making skills by arranging the environment to allow for exploration and experimentation.
- Encourage children to ask questions, create solutions to problems, and work together toward common goals by providing meaningful interactions with adults, peers, the environment, and materials.
- Listen to children and build on their individual ideas and concepts.
- Set an example by acknowledging one's own "mistakes" and modeling constructive reactions to them.
- Ask probing questions when children reach a state of confusion, to bring them to a greater understanding.
- Provide open-ended materials that can be used in more than one way and are not limited to one "right" answer.
- Laugh with children and show that you enjoy sharing their sense of humor.

Many more suggestions for teachers and families can be found in the Approaches to Learning section of *Foundations*, pages 14-21.

Emotional and Social Development

Chapter Highlights

Editor's note: This chapter is an adaptation of Dr. Lilian G. Katz's "Social and Emotional Development in the Primary Program," which first appeared in *The Primary Program: Growing and Learning in the Heartland* (2001, Iowa and Nebraska Departments of Education) and is used here with Dr. Katz's permission.

Emotional and Social Development encompasses children's feelings about themselves and their relationships with others. Development in this domain is influenced by a child's temperament, cultural expectations, and early experiences. Emotional support and secure relationships help build self-confidence and self-esteem.

Particularly important in this domain are the skills children demonstrate while making friends, appreciating differences, solving conflicts, and functioning effectively in groups. These characteristics form the foundation for learning and the relationships that give meaning to life. Positive relationships are essential to a child's emotional development and later academic success.

Preschool and kindergarten-age children are beginning to demonstrate the emotional well-being and social skills needed to interact well and to form and keep relationships with peers and grownups. They are beginning to express their own feelings appropriately and to seek help when needed. They are also beginning to demonstrate some degree of independence and the ability to follow basic rules and routines. They work and play alone at times, as well as participate in group activities and work or play cooperatively with other children.

Children who work and play well with others at an early age – including learning to understand different perspectives – tend to do better socially, academically, and in other areas of their lives

later on, according to recent research. Preschoolers and kindergartners who are better at self-regulation have a greater ability to handle stress and frustration in adolescence. "Teachers need to help children learn to solve their everyday disagreements, negotiate their problems, and handle their emotions – all of which are necessary skills for making friends and working well in a group. ... Dramatic play is effective at teaching self-regulation in impulsive children. ... This makes sense. Successful dramatic play requires cooperation, joint planning, and goal-setting among children – all functions that require a great deal of self-regulation."[1]

Self-regulation is a child's ability to gain control of bodily functions, manage powerful emotions and maintain focus and attention, [and is the] cornerstone of early childhood development.

Koff & Phillips, 2000

Developing Emotional Competence

The development of emotional competence is a highly complex process. Though difficult to define, specialists generally define it as consisting of awareness of one's own and others' feelings, the capacity to empathize with others' emotional states, to distinguish between inner feelings and outward expression of them, and awareness of the place of emotions in relationships.[2] It also includes gradual mastery over one's feelings so that they are strong enough to provoke action and interaction, but not so strong as to be overwhelming to the child or to be so intense as to provoke wariness among peers.

A growing body of research indicates that "emotion regulation," commonly referred to as "impulse control," is one of the most critical developmental accomplishments of the first five or six years of life.[3]

Children usually experience positive emotions when they are comfortable among their peers. Negative emotions are likely to reduce their chances of building close relationships with them. Furthermore, studies indicate that positive emotions contribute substantially to a child's openness to all the kinds of learning that matter during the early primary years.[4]

Developing Social Competence

Evidence has been accumulating for several decades to indicate that children who cannot find a good place for themselves in their peer group are significantly more likely than their more socially competent peers to experience difficulties with their academic work and to drop out of school.[5]

Copple & Bredekamp (2009) point out just how critical a matter this is. "Skill in basic areas of social and emotional competence has pervasive and long-lasting consequences, such as success in school, avoiding criminal behaviors, and social and psychological adjustment through the life span. The ability to form and sustain relationships with others, both with adults and children, is central to a child's social development – not to mention his happiness."

Hartup (1992) asserts that peer relationships contribute a great deal to both social and cognitive development: "Indeed, the single best childhood predictor of adult adaptation is *not* IQ, *not* school grades, and *not* classroom behavior but, rather, the adequacy with which the child gets along with other children. Children who are generally disliked, who are aggressive and disruptive, who are unable to sustain close relationships with other children, and who cannot establish a place for themselves in the peer culture are seriously at risk."

In addition to difficulties in school, the risks include later problems with employment, parenting, and other important

1 Riley, San Juan, Klinkner, & Ramminger, *Social & Emotional Development: Connecting Science and Practice in Early Childhood Settings*, 2008.

2 Saarni, "A Skill-Based Model of Emotional Competence," 1999.

3 Gross, "The Emerging Field of Emotion Regulation: An Integrative Review," 1998.

4 Frederickson, "What Good are Positive Emotions?", 1998.

5 Ladd, Birch, & Buhs, "Children's Social and Scholastic Lives in Kindergarten: Related Spheres of Influence," 1999.

aspects of adult life. Like the development of emotional competence, the achievement of social competence is also a complex aspect of human behavior. Social competence is usually defined as the capacity to initiate and maintain satisfying relationships with peers, as well as to be able to form friendships with some of them.[6] According to Hartup, the "essentials of friendship are reciprocity and commitment between individuals who see themselves more or less as equals."

The components of social competence include knowledge, skills, dispositions, and, of course, feelings.[7]

- **Social knowledge** refers to children's understanding and conceptualizations of such things as others' points of view, interests, desires, motives, preferences, and so forth.
- **Social skills** include such interpersonal strategies as how to approach others, initiate interaction with others, take turns, handle disagreements, resolve conflicts, express one's preferences, articulate one's wishes, and many others.
- Positive **social dispositions** include the dispositions to be open, receptive, and accepting of others, to seek companionship, to be generous, cooperative, humorous, patient, and so forth.
- Many **feelings** or emotions that are part of emotional competence are involved in social competence. For example, the capacity to feel empathy, to take pleasure in companionship, to feel affection toward others and to care about them are essential aspects of the give and take of social interaction throughout life.

6 Katz & McClellan, *Fostering Children's Social Competence: The Teacher's Role*, 1997.

7 Katz, "The Distinction between Self-Esteem and Narcissism," in *Talks with Teachers of Young Children: A Collection*, 1995.

How Teachers Can Influence Results

Teachers can play a significant role in fostering children's emotional and social growth. For many children they are powerful models of human competencies. The teacher also provides contexts that can maximize the expression of positive behavior and feelings and can minimize those experiences that may interfere with healthy emotional and social growth and self-esteem.

Teachers can provide very significant, visible, and observable models of emotionally and socially competent behavior. Children learn as much about what is expected and desired by adults by watching how adults interact with others as they do from their own direct interactions with their teachers.

A teacher's respect for all members of the class; an openness to and acceptance of the diversity of races, cultures, personalities, preferences, disabilities, and opinions in the group; and a sensitivity to their feelings and wishes are all readily observed by the children in the class. Respecting and accepting all the ways in which a group of young children may vary does not mean being indulgent or intimidated by the children's wishes and demands. Rather, it means that the teacher acknowledges there are many different points of view and, at the same time, respectfully and firmly expresses his or her own views concerning what behavior is valued and expected.

"Families of Feelings"

Teachers can contribute to emotional and social development by providing contexts in which children have ample opportunity to experience positive emotions and learn to manage negative ones. Frederickson (1998) suggests that positive emotions are best thought of as "families of feelings" that vary in intensity. These would include joy, contentment, interest, satisfaction, relief, and various kinds of caring, love,

As children see themselves mirrored in their teachers' eyes as worthy of serious interest, they come to feel good about themselves.

Jeannette G. Stone, 2001

or pleasure in the company of certain others. Frederickson further argues that such experiences "build intellectual resources," whereas negative emotions are likely to block intellectual learning. A particularly effective way to create such a context is to think of the class of children as a small community.

The teacher purposefully leads children from the world of me to the world of us.

Jeannette G. Stone, 2001

A community is a group of individuals who feel and believe they have a stake in each other's well-being and who accomplish by working together what they could not do alone. A primary classroom is experienced as a community when the children have ample opportunity to experience the kinds of satisfaction and pleasure that come from working for common goals. These experiences could include solving problems together, creating a range of products related to their learning, and overcoming obstacles in the course of this work, as for example when children cooperate in projects involving investigations of worthwhile topics and purposes.[8]

Teachers create the sense of community by encouraging children to offer each other suggestions and advice, to express their appreciation of each other's efforts and differences, and by helping children to interpret their classmates' wishes and ideas accurately. For example, in the course of working on projects in small groups within a class the teacher encourages children to prize and capitalize on the differences in experiences, interests, and aptitudes within the group so that they see themselves as enriched by their differences. Furthermore, as small groups of children work on various aspects of an investigation they can learn how to argue, to defend their position in a disagreement, and to try out strategies by which to resolve them.

During the primary years children's emotional and social growth are also enhanced by providing appropriate opportunities to discuss and develop agreements on what ground rules they want their class to observe. Periodic evaluations of their appropriateness and effectiveness can strengthen the children's sensitivity to the complexities of group life and to the benef ts of constructive discussion of those rules.

Coping with Social Difficulties

Occasionally one or two children in a class behave in ways that undermine the well-being of others. Children who behave in this way are often called bullies or referred to as bossy. In both cases the teacher has a signif cant role to play in helping both the aggressors and the aggrieved to deal with the problems these patterns of behavior can cause.

First, the teacher makes it clear in a f rm and matter-of-fact way that he/she does not approve of the behavior. Second, the teacher indicates to the victims how they can respond with f rmness and dignity to the occasions of victimization. It is well-documented in research that bullies – and bosses – are very selective about

8 Katz & Chard, 2000.

their victims. They don't pick totally passive children, but rather children who show clear distress and frustration during the bullying incidents.

The teacher can indicate to the victims the tone of voice and phrasing to use when resisting the aggressor that reflects confidence as well as gracefulness. Thirdly, the teacher takes every possible opportunity to develop a relationship with the aggressors *about other aspects of their work and class participation* that have no relationship to their undesirable behavior. In this way such children are less likely to invest their whole identity in the peer group on their negative behavior.

Studies involving the processes of self-attribution in children indicate that many children prefer to have a negative reputation in their peer group rather than having no identity at all (Katz, 1993). Teachers help a great deal when they use real opportunities for such children to try out other roles within the peer group.

Recent research indicates that "relational aggression" – more often observed in girls than boys – can also undermine the emotional and social well-being of the class. "Relational aggression includes attempts to exclude peers from group participation, besmirch another's reputation, and gossip about another's negative attributes," say Coie and Dodge (1998). When a teacher suspects that such relational aggression is occurring, she can help by making it clear in a firm and matter-of-fact way that she disapproves of the behavior, by teaching the victims how to respond gracefully and confidently in such incidents, and by forming a relationship with the perpetrator centered on completely different aspects of their participation in the life of the class.

On the basis of the accumulated evidence now available, there is good reason to believe that young children who do not overcome social difficulties by the end of the early primary years experience many difficulties later (Katz, 1993). They are significantly more likely to have difficulties with achievement and staying in school, finding satisfactory employment, and developing their own family relationships later in life. There is also evidence to suggest that children who do not overcome early rejection by their peers eventually find each other and gain feelings of solidarity, loyalty, and belonging they missed in the early years based on their shared hostility and rejection of the rest of society. Thus, failure to help such children can have very negative long-term consequences for these children – as well as for the rest of society.

Building Community

We build community each day when we expect children to:

- Know names – know and use each other's names, get to know each other's interests and feelings
- Take turns – without arguing, pouting or quitting
- Share – attention from the class, private time with the teacher, space at the sandbox, space at the computer, snacks, crayons, markers, etc.
- Make room in the circle – for latecomers and for children who aren't "best friends"
- Join in activities and small groups – in a constructive way
- Invite others to join
- Be friendly – greet and include others (not only friends) in conversation and activities
- Cooperate – work on projects, solve problems, and play games with input from everyone
- Solve conflicts – by talking about problems, sharing points of view, reaching mutually acceptable decisions without name-calling or hurtful behavior.
- These community expectations are balanced by respect for individual needs.

From *Teaching Children to Care: Classroom Management for Ethical and Academic Growth, K-8*, Charney, 2002.

Developing Self-Esteem

The development of self-esteem has long been of concern to primary school educators. Self-esteem is linked to both emotional and social competence. Though it is difficult to define, most specialists agree that self-esteem refers to the way individuals appraise or "estimate" them-

Intelligence plus character – that is the goal of true education.

Martin Luther King Jr.

selves on criteria that are learned very early at home and also are deeply embedded in their cultures.

The concepts of self and self-esteem vary among cultures in terms of the personal attributes that serve as criteria against which to appraise oneself. Western cultures tend to count such personal qualities as independence and self-reliance as important criteria, while many Asian and other non-Western cultures' criteria for self-appraisal include self-restraint, modesty, and connectedness with others.

As children grow beyond the preschool years and spend increasing proportions of time outside of the family context, the larger society imposes criteria upon which self-appraisal is based. With increasing age, however, children begin to internalize the criteria of self-worth they pick up in environments outside of the family and a sense of the standards to be attained on the criteria from the larger community they observe and in which they are beginning to participate.

Optimal self-esteem is associated with cheerfulness, optimism and high energy, which increases effectiveness and competence, which in turn strengthens feelings of self-esteem and self-worth. Low self-esteem is typically accompanied by doubts about one's worth and acceptability and with feeling forlorn, morose, even sad.

Such feelings may be accompanied by relatively low energy and weak motivation, invariably resulting in low effort. The low effort gives rise to increasing doubts about one's ability and acceptability in a way that further inhibits effort and accomplishment. In this way, feelings about oneself constitute a *recursive cycle* – such that the feelings arising from self-appraisal tend to produce behavior that strengthens those feelings, positive or negative.

The cyclic nature of self-esteem is similar to Bandura's (1989) conception of *self-efficacy* – namely, processes by which perceptions of one's own capacities and effective action "affect each other bi-directionally." In other words, effective action makes it possible to see oneself as competent, which in turn leads to effective action and so forth. The same cycle applies to self-perceptions of incompetence.

However, Bandura warns that "sense of personal efficacy [does] not arise simply from the incantation of capability. Saying something should not be confused with believing it to be so. Simply saying that one is capable is not necessarily self-convincing, especially when it contradicts preexisting firm beliefs. No amount of reiteration that I can fly will persuade me that I have the efficacy to get myself airborne and to propel myself through the air."[9]

When "Feeling Good" Isn't Good Enough[10]

This formulation of the dynamics of feelings about the self confirms the view that self-esteem merits the concern of educators as well as parents. Nevertheless, it also casts some doubt on the frequent assertion that if children are somehow made to "feel good about themselves," success in school will follow. In other words, just because young children need to "feel good about themselves," telling them that they are special (e.g., because they can color) or that they are unique and providing them with other similar flattery may not cause them to believe they are so; nor is such empty flattery likely to engender good feelings about oneself.[11]

Dunn's (1988) view of the nature of self-esteem is that it is related to the extent to which one sees oneself as the cause

9 Bandura, "Human Agency in Social Cognitive Theory," American Psychologist, 1989.

10 Adapted from "The Development of Emotional Competence" by Lilian G. Katz, 2001.

11 Katz, 1995.

of effects. She asserts that "the sense of cause [is] a crucial feature of the sense of self" and the essence of self-conf dence is the feeling of having an effect on things and being able to cause, or at least affect, events and others.

On the other hand, feeling loved by the signif cant others in one's environment involves feeling and knowing that one's behavior and status really matter to them – matter enough to cause them to have real emotion and to provoke action and reaction from them, including anger and stress as well as pride and joy. Thus, when a teacher speaks meaningfully to a child about how his work might be improved, the child is often getting a message of the teacher's caring about him and his progress.

Battling Low Self-Esteem

When academic achievement, symbolized by grades, becomes a major criterion of self-esteem, then one's own self-esteem can be boosted by f nding others with whom to compare oneself favorably. That is to say, children can develop a vested interest in f nding individual classmates or groups to look down on. If, for example, parents and schools convey to children that their self-esteem is related to academic achievement as indicated by grades and test scores, then a signif cant proportion of children must have low self-esteem – at least on that criterion. In such a school culture the development of cooperation and inter-group solidarity becomes very problematic.

An adaptive response of children at the low end of the distribution of academic achievement might be to distance themselves from the school culture. Such children may strive to meet other criteria of self-esteem, such as the criteria of various peer groups that may or may not enhance participation in the larger society. This suggests that schools and classes are most likely to help by balancing the curriculum so that suf cient contexts are provided in which all participants can contribute to group efforts, albeit in individual ways. A substantial body of research indicates that cooperative learning strategies and cooperative goals are effective ways to address these issues.[12] The work accomplished in these group contexts should be held to the same high standards that apply to all other work in the class.

Negative, Long-Term Issues

In sum, if children learn to base their self-appraisals on favorable comparisons of themselves with others, then the identif cation of inferior others – whether individuals or groups – may become endemic in a society. When the two tendencies – to base self-esteem on characteristics that are present at birth and to elevate one's self-appraisal by identifying others who are inferior on any given criterion – occur together in a society, conditions develop that are likely to support prejudice and oppression.

The most important way teachers support children's self-esteem is to have esteem for them. That means giving children opportunities to take initiative, to make some choices and decisions, and to express their views in a respectful and accepting environment. Self-esteem is also strengthened when praise is used seriously and genuinely, which is only possible when it is used sparingly.

Since almost all important learning occurs in the company of others, setting the stage in support of children's emotional and social development is as much a part of the teacher's role as is the curriculum itself. Nevertheless, it is a good idea to keep in mind that some of the emotional and social dif culties experienced by children cannot be addressed by a teacher within the classroom and may need the assistance of specialists.

The most important way teachers support children's self-esteem is to have esteem for them. That means giving children opportunities to take initiative, to make some choices and decisions, and to express their views in a respectful and accepting environment.

Lilian Katz, 1993

12 Ames, "Classrooms: Goals, Structures, and Student Motivation," 1992.

Early Learning Expectations, Objectives, and Strategies

The Standard Course of Study for Kindergarten includes specif c sections on Social Studies and Guidance. In addition, kindergarten teachers are encouraged to incorporate the framework of the *Foundations* Widely Held Expectations for Emotional and Social Development in how they think about children's learning and development. These expectations are relevant across the age range. Here are a few examples of effective teaching strategies that preschool and kindergarten teachers can employ:

- Help establish a sense of trust and security by developing warm and responsible relationships with every child. Greet each of them by name daily. Through smiles or friendly gestures, show you are pleased to see them.
- Make room in the classroom for cozy, safe areas where children can be alone if they wish.
- Protect children's right to express emotions. Allow them to be sad or angry and validate those feelings by naming and talking about them. Encourage them to ask for help when needed.
- Create many inviting areas of the room where small groups of children can play.
- Be aware of social interactions among children and create opportunities to support friendships.

Many more suggestions for teachers and families can be found in the Emotional and Social Development section of *Foundations*, pages 22-27.

Linking *Foundations* to the NC Standard Course of Study

North Carolina's learning expectations for preschool and kindergarten mesh closely across the domains, making it easy for teachers to find matching areas as they plan their curriculum and learning environment. Below is one example of how the Foundations Widely Held Expectations are linked with the Kindergarten Standard Course of Study Goals. You can build and update your own comprehensive expectations/objectives linkage chart – and keep it current – by visiting the DPI website (ncpublicschools.org), the Office of School Readiness website (www.osr.nc.gov), and the DPI Primary Education Section website (prim.ncwiseowl.org).

Foundations: Emotional and Social Development	**SCOS for Kindergarten: Social Studies**
• Children begin to develop an awareness of personal uniqueness, regarding themselves as having certain abilities, characteristics, preferences, and cultural identities. • Children begin to recognize that they are members of different groups (e.g., family, preschool class, ethnic groups). • Children begin to recognize, respect, and accept similarities and differences among people, including people with disabilities and those from varying cultures.	**Competency Goal 1:** The learner will investigate how individuals, families, and groups are similar and different. 1.01 - Describe how individuals are unique and valued. 1.02 - Identify different groups to which individuals belong. 1.03 - Examine diverse family structures around the world. 1.04 - Recognize that families and groups have similarities and differences. 1.05 - Compare and contrast customs of families in communities around the world.

Health and Physical Development

Chapter Highlights

The Health and Physical Development domain focuses on motor development, physical development, health and personal care, and safety as interrelated elements that are central to a young child's entire learning experience. This is closely linked with language development, cognition, social competencies, and emotional development. Preschool and kindergarten teachers have an important role to play in promoting attitudes and habits about nutrition, hygiene, and physical activity that will help children remain active and health-conscious throughout their lives.

There are new understandings about the need to actively "teach" physical development as part of early childhood education. "Sending children out to recess and encouraging them to participate in free play does not guarantee that they will develop physical skills and healthy attitudes, competencies and habits," Copple & Bredekamp emphasize in their 2009 edition of *Developmentally Appropriate Practice*. "Teachers working with [young children] should teach basic physical skills and then offer play-based opportunities so children can experiment and be creative with the skills they are learning."

Motor Development

Gross motor development involves body awareness, an understanding of spatial relationships, and control of large muscles. As children mature, they use large muscles to run, hop, climb,

If we want children to flourish, to become truly empowered, then let us allow them to love the earth before we ask them to save it. Perhaps this is what Thoreau had in mind when he said, "the more slowly trees grow at first, the sounder they are at the core and I think the same is true of human beings."

David Sobel,
in Beyond Ecophobia

balance, push, pull, and pedal. Fine motor skills grow as children develop hand-eye coordination and the ability to use hand and finger muscles to hold and manipulate objects. As children mature, they use fine muscles to hold and manipulate scissors, gardening tools, crayons, pencils, and paintbrushes, and to build with blocks. With maturity, children develop a right/left dominance or preference. The preferred hand, however, may not be firmly fixed in children of preschool and kindergarten age.

Physical activity has a powerful influence on how children feel about themselves.[1] Children who do not develop a foundation of basic motor skills (throwing, catching, kicking, skipping, galloping, etc.) are less likely to participate in daily physical activity. Children who feel competent in many motor skills are more likely to participate in physical activity later.[2]

Taken together, gross and fine motor skills provide a foundation for functional performance in a range of age-appropriate activities.

Physical Development

The percentage of children considered overweight has more than doubled in the past 30 years. Physical inactivity has contributed to a 100 percent increase in childhood obesity in the United States since 1980.[3] Regular physical activity helps children build and maintain healthy bones, muscles, and joints; control weight; build lean muscle, and reduce fat.[4] Physically active children have greater chances of being healthy for a lifetime.

Many activities can contribute to cardiovascular fitness, and young children need to see them demonstrated and practiced. Being outdoors is the strongest correlate of physical activities for preschoolers (Cosco, 2005; Baranowski, et al, 1993; Sallis, et al, 1993). A major tool for promoting active living is to provide extended periods of unstructured outdoor play in areas designed to promote physical activity and active learning. High-quality outdoor environments that are accessible, developmentally appropriate, and offer challenges that promote participation, cooperation, skill development, and many opportunities for play and learning can be used for extended periods of time allowing children opportunities to be physically active throughout the day. Physical activities should be integrated within the curriculum throughout the day.

Young children should have lots of opportunities for active play – adding up to at least one hour each day. They should not be sedentary for more than an hour at a time. Programs and schools should strenuously resist the trend to reduce or eliminate outdoor time in the name of more time for learning. For preschool and kindergarten children, outdoor time is an ideal time to engage in learning opportunities. Purposeful planning for physical activity will more likely result in successful benefits for young children.

Health and Personal Care

Essential aspects of physical health are good personal hygiene, good dental hygiene, basic personal care practices, and healthy choices regarding food and nutrition. Age-appropriate learning includes the importance of eating breakfast and balanced meals, getting adequate sleep, getting proper rest and exercise, and washing hands before meals and after rest room use.

A child's cognitive, social, and physical development depends heavily on the degree to which their diet includes appropriate amounts of nutrients and calories. In general, American children do not suffer from malnutrition but rather from mis-

1 Graham, *Teaching Children Physical Education,* 1992.

2 Gallahue, "Transforming Physical Education Curriculum," in Reaching Potentials: *Transforming Early Childhood Curriculum and Assessment,* Bredenkamp & Rosegrant, 1995.

3 Centers for Disease Control, 2000.

4 U.S. Department of Health and Human Services, *Trends in the Well-Being of America's Children and Youth,* 1996; CDC, 2000.

nourishment, typically an overabundance of foods high in fats and calories but low in nutritional value.[5] Proper nutrition, coupled with meaningful physical activity, may increase school readiness.[6]

Safety

The term safety as it relates to young children includes many concepts, such as being protected from exposure to harmful substances, objects, and situations as well as learning how to avoid them. In order to develop these abilities, children need to learn about safety rules and regulations, know when and how to ask for help, and recognize the boundary between safety and danger.

Young children need to learn how to respond to traf c, f re, and other warnings and how to get help in an emergency. They should also understand the potential impact of alcohol, tobacco, and other drugs.

Playing it Safe in the Classroom and Outdoors

Children are most likely to be injured in early childhood, and most of those injuries result from problems in the environment, a mismatch between abilities and activities, or lack of supervision. The highest risk for physical harm to young children in group settings is from injury and infectious diseases. Elements of a safe and sound preschool and kindergarten environment include these:

- The classroom is clean, well-lit, and well-ventilated. The environment is evaluated as needed to minimize health risks from allergens, dust, mold, mildew, insects, etc.
- The furniture is sturdy, in good repair, and of appropriate size.
- The classroom is arranged to accommodate children with physical disabilities, specif c health conditions, and learning styles.
- Outdoor play areas are accessible to all children, with approved ground covers. The areas are free of glass, litter, traf c, and other potential dangers. A Certif ed Playground Safety Inspector is periodically engaged to evaluate the playground.
- Toys and play equipment are appropriate for the age and stage of the children who will use them and free of hazards such as entrapment, entanglement, and crush points. There are impact-absorbing surfaces beneath climbing structures, inside and out.
- The outdoor environment should include shade trees and/or structures for children to be able to get out of the direct sunlight.
- Materials and equipment are modif ed as needed to meet a child's needs.
- Children wash their hands after toileting, sneezing, or nose wiping and before eating.
- A list of safety rules is posted, and children are taught how to use materials and equipment properly.
- An adult closely supervises the children at all times.
- Children always wear helmets when riding wheeled toys.
- All materials and equipment children come in contact with are examined to ensure they are safe and non-toxic (including plants). Art and

Young children are fascinated with learning what their bodies can do – how fast they can run, how high they can jump, how skillfully they can move.

Copple & Bredekamp, 2009

5 Bhattacharya & Currie, "Youths at Nutritional Risk: Malnourished or Misnourished," in *Risky Behavior among Youths: An Economic Analysis,* Gruber, 2001.

6 Landry, *Effective Early Childhood Programs: Turning Knowledge into Action,* 2005.

drawing materials are certified as non-toxic (e.g., "Conforms to ASTM D-4236").
- Procedures are in place and posted to ensure quick response in an emergency. First-aid kits are immediately accessible. Teachers know the triggers for asthma and allergies and how to respond.
- Up-to-date health records are maintained on each child, including information about immunizations, allergies, and chronic illnesses.
- A process is in place to identify children needing further health and special services and also a mechanism for ensuring that this information moves with the child to a new program.
- The N.C. Kindergarten Health Assessment is used as a communication tool between families, health care providers, and the school.
- Lunchroom, custodial, maintenance staff, related service staff, and special area teachers receive training in ways to ensure consistent compliance with environmental and health standards.
- Poisons and chemicals are locked away and stored in compliance with fire and environmental quality codes.

Linking *Foundations* to the NC Standard Course of Study

North Carolina's learning expectations for preschool and kindergarten mesh closely across the domains, making it easy for teachers to find matching areas as they plan their curriculum and learning environment. Below is one example of how the Foundations Widely Held Expectations are linked with the Kindergarten Standard Course of Study Goals. You can build and update your own comprehensive expectations/objectives linkage chart – and keep it current – by visiting the DPI website (ncpublicschools.org), the Office of School Readiness website (www.osr.nc.gov), and the DPI Primary Education Section website (prim.ncwiseowl.org).

Foundations: Health and Physical Development	**SCOS for Kindergarten: Healthful Living**
Children begin to recognize and eat nutritious foods and develop an awareness of personal health and fitness.	**Competency Goal 4:** The learner will apply knowledge and behavior self-management skills to areas of nutrition and physical activity for healthy growth, development, and maintenance. 4.01 – Recognize the categories of My Pyramid. 4.02 – Explore a variety of foods and beverages for good health, including unfamiliar and culturally diverse foods. 4.03 – Identify foods and beverages that are healthy choices for teeth and bones. 4.04 – Associate common foods with their origins. 4.05 – Demonstrate the ability to select a healthy breakfast and lunch with a variety of whole grains, vegetables, fruits, and low-fat dairy products. 4.06 – Generate examples of opportunities to participate in physical activity during non-school hours.

Early Learning Expectations, Objectives, and Strategies

The Standard Course of Study for Kindergarten includes a specific section on Healthful Living. In addition, kindergarten teachers are encouraged to incorporate the framework of the Preschool Widely Held Expectations for Health and Physical Development in how they think about children's learning and development. These expectations are relevant across the age range. Here are a few examples of effective teaching strategies that preschool and kindergarten teachers can employ:

- Encourage children to show independence in self-care practices. Provide time, support, and equipment as needed.
- Teach safety rules and model safe practices (e.g., bus safety, playground safety).
- Plan activities that use a variety of materials to support fine motor skill development, with adaptations as needed (paper, pencils, crayons, safety scissors, play dough, manipulatives, blocks, etc.).
- Encourage and support children's need for rest and relaxation by scheduling both active and quiet times.

Many more suggestions for teachers and families can be found in the Health and Physical Development section of *Foundations*, pages 28-33.

Learning Center Focus:
Outdoor Activities

Just as time is spent planning and organizing indoor space to ensure activities that promote growth and learning, careful thought is also essential for the outdoor environment. Regardless of its shape and size, any outside area can be a setting for learning.

The outdoor environment, including the playground as well as a smaller area immediately outside the classroom, may have a variety of surfaces – an open grassy space, a sand or cushioned ground cover, pathways or paved area for riding toys, shade, sunny garden spaces, sand and water play areas, pet spaces, and many places for children to explore. When planning the outdoor environment, provide a variety of settings equipped with materials for many children to use, rather than one large, all-purpose structure.

Movement and physical activity are at the very center of young children's lives – and they need an abundance of time every day to be active. The National Association for Sport and Physical Education, in guidelines developed for ages birth to f ve, suggests children receive at least 60 minutes of daily structured physical activity and another 60 minutes to several hours of daily unstructured physical activity.

What goes on outdoors, however, is more than exercise alone. Science comes alive here. Gardening projects, seasonal changes, and observing insects, birds, and other wildlife provide hands-on ways for young children to experience science.

The quality of the outdoor experience can make a big difference not only in how children learn but how they behave. In a recent study of 41 programs, it was found that children in lower-quality outdoor environments engaged more in functional or repetitive play, whereas children in higher-quality environments showed a tendency for more constructive play. As the quality of the outdoor program decreased, the frequency of negative behaviors increased.[7]

7 DeBord, et al, *Preschool Outdoor Environment Measurement Scale,* 2005.

In today's world of overpopulation and high consumption, it is essential that we make an effort to keep in touch with the earth: its natural rhythms, the changing seasons, its beauty, and mystery."

Paul E. Knoop, Jr.

In the Outdoor Activities Area, children:

- develop, practice, and improve gross and fine motor schools
- explore ideas and concepts in nature
- develop an appreciation for the environment
- learn and practice new skills
- make scientific observations
- gain self-confidence
- improve physical fitness
- improve balance and spatial awareness
- practice taking informed risks
- solve problems
- learn to take turns
- increase communication skills
- develop social skills
- act out home and community experiences
- explore nature
- learn about weather – through experience

Getting Organized

A well-designed outdoor learning environment stimulates the imagination of children, engages them in play and learning, and allows them to test their abilities as well as enjoy the benefits of fresh air and vigorous physical exercise.

Establish sand, water, and mud play areas. Bring prop boxes from the classroom to further encourage imaginative play. The outdoors should provide for a range of observation and exploration opportunities – the weather, the sky, the seasons, plant and animal life. The play area should be planned as an extension of the classroom. Art, music and dance, storytelling, dramatic play, carpentry, caring for classroom pets, and even meals and snacks can take place outdoors with planning and preparation. There is no bad weather, only bad clothing!

Basic Equipment

- Climbing structures with lots of moving parts (swings, ropes, bars, ladders, overhead rings, enclosures)
- Adapted equipment and materials that allow children with special needs to participate fully
- Binoculars and/or telescope
- Bird feeders

- Suspension bridges
- Ramp and tunnels
- Short sliding bars
- Slides
- Stairways and stepladders
- Sand box
- Water table
- Sand, water, pebbles, and garden dirt
- Equipment for digging (tubs, buckets, cups, scoops, small shovels)
- Movable objects (tires, hollow blocks, planks, and crates)
- Vinyl-covered picnic table or other sturdy table
- Equipment for hauling and building
- Balls of all sizes, beanbags, and hula hoops
- Balance beams (Place two beams side by side to promote cooperative skill development.)
- Jump ropes and gymnastics mats
- Wheeled riding toys
- Wagons and scooters
- Movement-oriented recordings
- Space for running and jumping

Creating Special Outdoor Areas for Play[8]

Digging and Pouring Area

- Sand play area
- Outside water source
- Containers for pouring, measuring, sifting
- Sand toys, shovels, sand wheels
- Wheelbarrow

Riding Area

- A hard surface (pathway or paved surface)
- Tricycles, wagons, scooters, helmets

Quiet Area

- Crayons, paper, and chalk
- Books
- Tape recorders and tapes
- Paints, easels
- Quiet game boards with large pieces

Questions to Promote Children's Thinking

- How do you stay safe when you are playing outside?
- How can you stay safe when you are visiting a new place?
- How do you know which foods are best for you?
- How do you feel when you come to school?
- How do you feel when you have played very hard?
- What is your favorite outside game? Why?
- What do you notice?
- I wonder why that happened?

- Playhouse or other type of structure for dramatic play
- Locate your quiet area in the shade so children can cool off. This area might include a picnic table under a tree or a blanket in a grassy area.

Garden Area

- Garden plot
- Large pots or old tires to def ne plant areas
- Garden tool sets
- Small wheelbarrow
- Seeds, plants
- Access to water
- Pet area
- Animals such as rabbits or guinea pigs that live outside in hutches are great for allowing children to experience the responsibility of caring for a pet.

Woodworking Area

- Workbench
- Tree stumps
- Hammers, saws, safety goggles, gloves, screwdrivers, mallets
- Soft wood scraps
- Nails with large heads
- Golf tees
- Sandpaper

8 DeBord, et al, *Preschool Outdoor Environment Measurement Scale,* 2005.

Observations and Ideas

- Many science activities can and should take place outdoors. Keep plastic bags and other containers readily available for the many treasures children find outdoors. Allow items to be brought indoors for continued investigation in the Science Center (collections of rocks, pinecones, acorns, etc.).
- Take prop boxes outside for additional play experiences. Use an old tree stump to hammer nails. Hang a hula hoop from a tree branch or other anchor to throw beanbags or balls through.
- Set up semi-permanent outdoor play settings such as an outdoor kitchen, a stage, or a gas station. Attach an old garden hose to a post to use as a gas hose and use other hoses for air and water. Label them. Place a "tool box" near the gas station with toy tools.

What Children May Do Outdoors

- Take turns moving across a swinging bridge.
- Dramatize or re-create *The Three Billy Goats Gruff*, using the swinging bridge as a prop, while the teacher acts as narrator of the story.
- Ride a tricycle on hardtop. Use traffic cones to establish tricycle path/course. Place traffic signs at strategic spots to establish traffic patterns and encourage following of traffic rules (stop, slow, etc.).
- Observe birds at the feeder and record the types of birds that have visited.
- Observe and comment on signs of spring (blooming flowers, new leaves on trees, green grass, etc.).
- Plan, plant, and care for an outdoor garden. Label the plants and measure them as they grow.

Language Development and Early Literacy

Chapter Highlights

The Language Development and Early Literacy domain encompasses young children's understanding and uses of language, emerging reading and writing skills, and the ability to communicate effectively.

Typically, by the time children reach preschool and kindergarten, they have a reasonable command of receptive and expressive language, which in our culture is extended to focus on the development of reading and writing. They are refining the communication skills they have been learning since birth and further developing many related competencies – using language as a tool to communicate their needs, interact socially with others, and describe events, thoughts, and feelings.

Children develop and exhibit language and communication abilities in a non-lockstep, linear progression – their abilities influenced by context, their familiarity with materials, and their particular needs to communicate. For example, a child may scribble, write, and draw all at the same time, depending on the audience or purpose.[1]

Research increasingly supports a balanced approach to early literacy instruction through purposeful, functional use within a print-rich environment. Skills and strategies are taught within these meaningful contexts rather than in isolation.

1 Schickedanz & Casbergue, *Writing in Preschool: Learning to Orchestrate Meaning and Marks,* 2004.

A traditional beginning reading program consists largely of formal instruction in reading and decoding, reading in groups, and the use of basal readers. An emergent literacy kindergarten is not characterized by such activities. Instead, reading and writing instruction are embedded in the daily activities of the classroom, in shared reading and teacher read-alouds, in children's play, and in learning center activities.

Strickland & Morrow, 2000

Effective support for language and literacy development in preschool and kindergarten is continuously sensitive to the wide variance among children's experiences, skill development and abilities. Instruction is differentiated to assure that all children succeed in becoming literate.

Guiding Principles for Teaching Early Literacy

1. Active learning

Effective early literacy instruction is embedded in play and contextual, active learning. It is based on children's interests and inf uenced by developmental abilities and cultural factors. An essential foundation for the development of reading and writing abilities is that of strong language capabilities. Oral and written language is made up of these components (Owens, 2008; Pierce, 2008):

- **Phonology:** the rules for putting sounds together to say and understand words. Phonology helps children later in school to learn and use phonics, the rule-based system for representing spoken sounds with letters.
- **Morphology:** the rules for adding pref xes and suf xes to words to change their meaning. For example, by adding an "s" to a word, a child learns usually by 18 months that this means "more than one" of that person, place, or thing. The ease in the English language of making

nouns plural is one reason why children learn to understand and use noun labels first.

- **Semantics:** knowledge and use of words in context. Children from birth to age 5 learn language through interactive conversations, so that they can hear and "try out" the rules for using words appropriately. The number of words that a child knows and uses in different contexts is one of the most significant predictors of his or her becoming literate.
- **Syntax:** the rules for putting words in the appropriate word order. When children can hear people use sentences and ask questions and have the opportunity to do the same, they are learning the rules of their language(s). That is why it is essential that they hear and have the opportunity to use and receive feedback, the appropriate words and word order in the language(s) of their home and out-of-home environments.
- **Pragmatics:** the actual, effective use of words and sentences. Children with good pragmatic language abilities can ask and respond to a variety of types of questions, retell stories, and carry on conversations with other children and adults. Children with these skills are often more successful academically and socially (Massey, 2004).

2. Support for second-language learners

Children who are learning English as a second language are limited in their knowledge of English but often are competent speakers of another language.[2]

Children pick up new languages and begin to function successfully in new settings faster than adults and apparently with much less effort. As second-language acquisition theory explains, this is because children are surrounded by language that is meaningful and in context and because of the way teachers speak to them.

As children learn English, they go through predictable stages, much like a baby learning to talk. Some who are learning multiple languages exhibit a "silent period" in one or more of these languages. Teachers should expect wide variations in how children make progress on learning English and on the skills and characteristics described in the expectations/objectives.

A second language must be taught in such a way that the message is understood by the child at all times, even though every word may not be familiar. This can be accomplished through the use of gestures, examples, demonstrations, illustrations, experiences, and teachers approaching children at their comprehension level – providing the amount or level of language the child can fully understand, plus just a little more.

3. Support for children with disabilities

The increasing integration of children with disabilities into educational programs with children without disabilities requires teachers to expand their understanding of how young learners with sensory and cognitive impairments acquire language and literacy. With appropriate instructional supports, the vast majority of children with disabilities can and do learn to read. Children with disabilities may need adaptive equipment, positioning devices, switches, page turners, and tape recorders in order to access the printed materials. These children may benefit from pictures, illustrations, modeling, and experiences to supplement center or group activities. Children with disabilities need concrete experiences upon which to build skills.

2 Curtain & Dahlberg, *Language and Children*, 2004; Rice, "Creating a Language-Focused Curriculum for Preschool Children," 1995.

Play is like a gold mine in its potential for facilitating literacy. First, it provides lots of clues for sorting out aspects of written language. Second, play provides a safe environment for risk-taking.

Gretchen Owocki, 1999

4. Making connections

Teachers should make sure that language is always comprehensible to children. Give young learners extended listening periods so they have the opportunity to gather meanings and associate them with language.

Children learn new things by connecting them with what they already know (assimilation and accommodation). This is why it is so important to help children build their vocabulary and background knowledge during the preschool and kindergarten years. If you are reading to a child and come across a word he doesn't understand, try to relate the word to a real experience he has had. For example, if the word is "elevator," you may say: "Remember the time you went to the hospital to see your grandmother and you rode upstairs in an elevator?" You are helping the child to assimilate the new word and accommodate it into his vocabulary.

5. Teaching to a child's way of learning

Most children absorb languages effortlessly and are adept imitators of speech sounds. They respond best to activities and learning situations that relate to their own interests and experiences. Preschoolers respond well with concurrent experiences and large motor involvement. Kindergarteners learn best through concrete experiences.

- Children learning a second language must have the opportunity to experience comprehensible linguistic input in the new language. Language becomes understandable through the context in which it is used. The context can provide clues about meaning even if the language is still unknown.
- Teachers must give structure and specif c directions and build regular routines and patterns into daily lessons.
- Children whose home language is not English learn best when their teacher encourages them to continue using the home language while learning English. Both parents and children should be encouraged to maintain and develop their f rst language further. Always make available English and non-English translations for linguistically diverse families.[3]
- Families are children's f rst and foremost language teachers. They help strengthen a child's communication and language development.[4] Children whose families read and talk with them are much more likely to become literate themselves. When a parent regularly reads to children, it improves their readiness for school, instills a love of reading, and builds language and communication skills.

6. Learning from one another

Peer-to-peer communication promotes the development of language and communication skills. It is crucial that children have extended opportunities to converse with one another and with adults. This happens naturally in a thoughtfully designed, play-based learning environment. Inclusive environments allow for children with disabilities to have age-appropriate models to promote language, social skills, and communication.[5]

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3 Lilly & Green, *Developing Partnerships with Families through Children's Literature,* 2004.

4 Armbruster, Lehr, & Osborn, *A Child Becomes a Reader,* 2003; Dickinson & Tabors, *Beginning Literacy with Language,* 2001; Hart and Risley, *Meaningful Differences in Everyday Experience of Young American Children,* 1995; Heath, *Ways with Words,* 1983; National Education Goals Panel, 1997; Vukelich & Christie, 2004.

5 Roskos, Tabors, & Lenhart, *Oral Language and Early Literacy in Preschool,* 2004.

7. Meaningful conversations

Children's language is further developed when adult-child conversations are reciprocal and meaningful and make up the majority of the daily interactions. Teachers should minimize whole-group talks, particularly in the giving of directions.

8. Interrelated learning

Development in one domain influences development in other domains. For example, children's language skill affects their ability to establish social relationships with adults and other children, just as their skill in social interaction supports or impedes their language development. Educators should recognize and use these interrelationships to organize learning experiences so that children develop optimally in all areas.[6]

6 Sroufe, Cooper, & DeHart, *Social Development in Early Childhood,* 1992; Kostelnik, Soderman, & Whiren, *Developmentally Appropriate Programs in Early Childhood Education.* 1993; NAEYC, 2000.

Building on Our Knowledge of Language and Literacy

Out of the recent clamor about how best to strengthen young children's communication skills a rich synthesis of practices has emerged that shows great promise to help all children succeed. This synthesis grows from the contributions of earlier theorists and researchers and incorporates the research and practical knowledge of today's scientists and practitioners.

The development of strong language skills is the key to mastering one of the essential tasks of the early school years: learning how to read. In the past decade, researchers and educators have increasingly called attention to the need to foster strong pre-literacy abilities during the preschool years. Current research shows that school-age competency in reading can be predicted from the degree of development of these three competencies:

Simply training children to memorize letters without providing learning in a larger literacy context has proven unsuccessful as a predictor of beginning reading success.

Strickland & Schickedanz, 2004

- Phonological processing: the ability to identify, compare, and use phonemes (the smallest units of spoken words)
- Print knowledge: familiarity with a wide variety of written materials
- Oral language

The first two skills help beginning readers "decode" words; the third skill helps them understand what they have read. Both decoding and comprehension must be present for reading to be successful.

Emergent practices in both the preschool and early elementary years have been strongly influenced by *Beginning to Read: Thinking and Learning about Print;*[7] the National Research Council book *Preventing Difficulties in Young Children;*[8] the 2000 report of the National Reading Panel, and recent initiatives of the federal government.[9]

Critics have highlighted shortcomings in attention to studies about comprehension – the meaning side of the reading equation – in some of these documents. Correcting this imbalance is crucial to the development of informed teaching practice for preschool and kindergarten. To help build a body of knowledge about young children's literacy, nationally recognized experts known as the National Early Literacy Panel reviewed the research on language, literacy, and communication in children ages birth through five years.[10]

Four research questions made up the panel's scope:

- What skills and abilities predict later reading outcomes?
- What programs and interventions contribute to or inhibit gains in those skills and abilities?
- What environments and settings contribute to or inhibit gains in those skills and abilities?
- What child characteristics contribute to or inhibit gains in those skills and abilities?

They highlighted four abilities that develop during the early childhood years and correlate most highly with achieving literacy abilities at the third-grade level:

- Oral language – listening comprehension, vocabulary, narrative knowledge, discourse
- Alphabetic code – alphabet knowledge, letter naming, invented spelling
- Phonological and phonemic awareness
- Print knowledge – concepts about print and environmental print

This view promises to offer confirmation of the importance of phonological processing and print knowledge as well as language skills closely associated in practice with oral language and book experiences.

Early Learning Expectations, Objectives, and Strategies

The Standard Course of Study for Kindergarten includes a specific section on English Language Arts. In addition, kindergarten teachers are encouraged to incorporate the framework of the Preschool Widely Held Expectations for Language Development and Communication in how they think about children's learning and development. These expectations are relevant across the age range. Here are a few examples of effective teaching strategies that preschool and kindergarten teachers can employ:

- Introduce new words and concepts by labeling what children are doing and experiencing while providing opportunities for conversations.
- Engage children in one-on-one conversations; listen and respond to what they are saying.

7 Adams, 1994.

8 Snow, Burns, & Griffin, 1998.

9 Vukelich & Christie, 2004.

10 National Institute for Literacy, 2006.

- Encourage creative attempts at putting words and sentences together to use language for a variety of purposes.
- Ask open-ended questions that encourage conversation.
- Provide and share fiction and non-fiction books that stimulate children's curiosity.
- Draw children's attention to print in the environment and discuss what it is communicating (e.g., instructions, labels, menus).
- Assist children in creating their own books, class books, and stories.
- Play word and rhyme games. Sing songs. Repeat chants.
- Provide opportunities to explore letters and sounds (e.g., with literacy tools and models such as magnetic letters, rubber stamps, alphabet puzzles, sponge letters, clay, ABC molds, and alphabet exploration software).
- Give children opportunities to draw, scribble, and print for a variety of purposes.
- Promote literacy-related play activities that reflect children's interests by supplying materials such as telephone books, recipe cards, shopping lists, and story books for use in daily activities.

Many more suggestions for teachers and families can be found in the Language Development and Communication section of *Foundations*, pages 34-41.

Rich conversations with adults in preschool equals academic success in later years.

Massey, 2004

Linking *Foundations* to the NC Standard Course of Study

North Carolina's learning expectations for preschool and kindergarten mesh closely across the domains, making it easy for teachers to find matching areas as they plan their curriculum and learning environment. Below is one example of how the Foundations Widely Held Expectations are linked with the Kindergarten Standard Course of Study Goals. You can build and update your own comprehensive expectations/objectives linkage chart – and keep it current – by visiting the DPI website (ncpublicschools.org), the Office of School Readiness website (www.osr.nc.gov), and the DPI Primary Education Section website (prim.ncwiseowl.org).

Foundations: Book and Print Awareness	**SCOS for Kindergarten: English Language Arts**
Children begin to show an interest in books, other print, and reading-related activities, including using and sharing books and print in their play.	**Competency Goal 1:** The learner will develop and apply enabling strategies and skills to read and write. 1.01 - Develop book and print awareness: • Identify the parts of books and function of each part. • Demonstrate an understanding of directionality and voice-print match by following print word for word when listening to familiar text read aloud. • Demonstrate an understanding of letters, words, sentences, and stories. • Identify the title, name of the author, and name of the illustrator.
Children begin to play with writing letters and mastering conventional letter forms, beginning with the first letter of their name.	**Competency Goal 1:** The learner will develop and apply enabling strategies and skills to read and write. 1.03 - Demonstrate decoding and word recognition strategies and skills: • Recognize and name upper and lower case letters of the alphabet. • Recognize some words by sight including a few common words, own name, and environmental print such as signs, labels, and trademarks. The learner will apply grammar and language conventions to communicate effectively. 5.01 - Develop spelling strategies and skills by: • Representing spoken language with temporary and/or conventional spelling. • Writing most letters of the alphabet.

Learning Center Focus:
Books and Listening

What we need is not better teacher talk, but less teacher talk if we are to increase pupil learning.

Thom Murray and John Swartz

The Books and Listening area of the classroom is where children experience the love of books while practicing the foundational skills needed for formal reading and writing. It is also a cozy place where they can relax, enjoy the world of children's literature, escape to faraway places in their imagination, listen to stories on tape or CD, and make up their own stories using f annel boards and puppets. When children are read to regularly and encouraged to look through books on their own and when they have the opportunity to listen to recorded stories and make up their own stories, they develop the motivation and skills to read and write by themselves. Acquiring a love for books is one of the most powerful incentives for children to become readers.[11]

11 Dodge & Colker, 2000.

In the Books and Listening Center, children:

- learn that printed words have meaning.
- learn to recognize the alphabet in meaningful ways.
- develop left-to-right directionality.
- strengthen visual discrimination skills.
- interpret what is read or heard.
- learn about ideas, people, and places.
- develop verbal and listening skills.
- increase their vocabulary.
- learn to retell a familiar story.
- understand sequence.
- recognize and compare familiar and unfamiliar sounds.
- learn to use a variety of words to express feelings and ideas.
- identify authors and illustrators as being the creators of stories.
- learn to distinguish between real and make-believe.

- follow simple story lines in stories read aloud.
- recognize that everyone has experiences to share, both through oral telling or emergent writing.

Getting Organized

Set up a comfortable, quiet area where you can read aloud and where children can spend individual time with favorite books. A welcome environment in the preschool classroom's reading center includes providing carpet, cushions, a couch or chairs, rocking chairs, and pillows.

Basic Equipment

- A wide variety of books of all genres (predictable, informational, poetry, narrative, wordless, decodable)
- Books on tape and books adapted for children whose limited motor skills make turning pages dif cult
- A display unit that allows books to face forward
- Tape or CD player
- Paper, pencils, crayons, markers, colored pencils
- Print materials such as menus, recipes, boxes, labels, calendars, catalogs, and telephone books that can be shared with other activity centers
- Retelling props such as f annel boards, f annel board stories, puppets

Questions to Promote Children's Thinking

- What do you see happening in this picture?
- What do you think this story will be about?
- What do you think will happen next?
- Have you ever felt like that?
- What happened first in the story? What happened last?
- If you could change the end of the story, what would you have happen?
- Which book is your favorite? Why?

Observations and Ideas

- Place relevant books in all of the learning centers and refresh/rotate them often.
- Be sure to have extra copies of very popular books.
- Display books so children can see the covers and titles.
- Label all storage areas clearly and teach children to recognize the labels.
- Help parents understand that the playful, creative child who comes to love learning is more likely to achieve and succeed than the anxious, pressured child.

Children who do not hear a lot of talk and who are not encouraged to talk themselves often have problems learning to read.

Armbruster, Lehr, & Osborne, 2003

Learning Center Focus:
Writing and Printing

All young children love to draw and write. In an effective writing center, children are invited to explore the world of print through a variety of forms. Writing is a developmental process. It begins with scribbles and proceeds to lines and circles, to random strings of letters, words and spaces, and eventually to sentences. Writing can and should be made a natural part of every learning center – but here, especially, children are encouraged to connect reading to writing. When they see writing as a necessary, purposeful, and enjoyable activity, they pursue it eagerly.

Because written language plays a central role in the daily workings of our world, children become aware of its signif cance very early in life. Just as young children f nd good reason to pay attention to the people, the talk, and the objects in their environments, they f nd good reason to pay attention to print. Just about everywhere they go, they f nd themselves in the midst of literacy activity. Children's early experiences with written language, both formal and informal, provide essential foundations for all of their literacy learning.[12]

In the Writing and Printing Center, children:

- learn they can communicate with squiggles and written words.
- strengthen and develop small muscles.
- use a variety of writing tools to convey thoughts and feelings.
- recognize that writing can entertain and inform.
- create stories using invented spelling.
- learn to respond to simple directions, commands, and questions.
- use language verbally in a variety of situations.

Getting Organized

The Writing and Printing center should be located in a quiet area with an ample work surface, shelving for supplies,

12 Owocki, *Make Way for Literacy: Teaching the Way Young Children Learn,* 2001.

enough chairs for several children to work at once, and a range of materials and tools.

Basic Equipment

- Table and shelves
- Lap desks, clipboards
- Variety of papers (lined and unlined, construction), cards, stationery, envelopes, forms
- Pencils, crayons, pens, chalk, markers, dry erase markers
- Pencil sharpener, erasers
- Letter and design stencils
- Alphabet letter and story stamps and stamp pads
- Scissors, hole punch
- Tape, glue, stapler, paper clips
- Yarn, ribbon, string
- Small blank construction paper books
- Journals
- Word banks
- Alphabet books
- Alphabet cards
- Dictionaries
- Magazines
- Small chalkboards or wipe-off boards
- Typewriter, computer, printer
- Creative, unique, and fun ways to write (whipped cream, pudding, sand)
- Pictures used with communication boards and devices

Observations and Ideas

Fold a large piece of construction paper in half and put blank pages in the middle to form a journal for each child to write and draw whenever he or she wishes. Staple the book across the top and glue a picture of the child on the front for easy identif - cation. When one journal is f lled, start a new one, but keep the completed ones to share during circle time. It's a great way to track children's progress in book form.

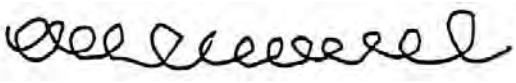
Questions to Promote Children's Thinking

- What happened in your story?
- Has anything like that ever happened to you?
- How is this person (name of story character) like you?
- What will you add to the list of things we will buy at the store?
- What will you draw in a picture of our trip (e.g., to the store)?
- What can you tell us about your ... block structure, painting, collection?
- What will you write to your parents?
- Do you want to add anything to your story?
- How could you make a card to send to your friend?
- How will the postal worker know where to send your letter?

Stages of Writing

Stage 1 The Recurring Principle

Writing is the same mark made over and over.



Stage 2 The Generative Principle

Phase A

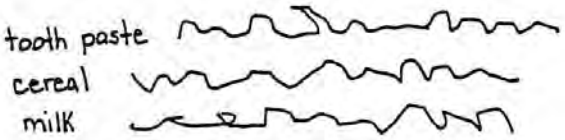
The marks that make writing are not all the same. Some are different from others.

Phase B

Writing is special marks made on paper.

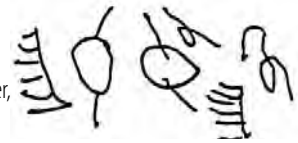
Stage 3 The Sign Principle

The marks on paper stand for something, and these marks are not pictures of those things. This stage does not always follow Stage 2. It frequently appears to develop with Stage 2 and occasionally appears in conjunction with Stage 1.



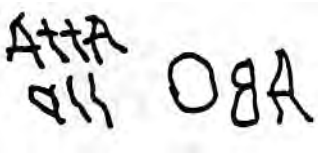
Stage 4 The Flexibility Principle

If some marks (letters) are known, others can be made from them, but not all marks are letters. Also, the same letter can be made in different ways. Sense of word, letter, and sound begin to develop.



Stage 5 The Linear Principle

Words are written on the page from left to right and from top to bottom. There is space between words. Sense of word, letter, and sounds begins to develop.



Source: Hill, Developing Early Literacy, 2006.

Cognitive Development

Chapter Highlights

Cognitive development is the process of deriving meaning from experience through acquiring, structuring, and restructuring knowledge. It is an integral part of every aspect of our lives – throughout our lives. The Cognitive Development domain focuses on preschool and kindergarten children's natural curiosity and ability to acquire, organize, reflect, and use information in increasingly complex ways.

In their search for meaning, young children learn through:

- exploring
- playing
- discovering
- talking
- problem-seeking and solving
- representing symbolically
- thinking logically from multiple perspectives

Preschool and kindergarten children are developing the cognitive capacities that will allow them to develop increasingly sophisticated concepts and to communicate with the world they live in. They have a growing awareness of self, family, and community. During these years they typically learn more about themselves and form ideas about family roles and community helpers. They become more aware of the properties and uses of the things in their environment and beyond, and they refine early concepts about numbers and how they can be used.

For all children to thrive academically and to reduce the achievement gap, schools and teachers should implement high-quality curricula and teaching strategies, embed teaching and learning in caring, nurturing relationships, and engage and empower families.

Carnegie Corporation of New York, 1998

They begin to understand that their actions have an effect on their environment and are able to think about things that are not present. They begin to understand simple scientific concepts, by noticing, wondering, and exploring. They ask many questions as they engage in increasingly more focused explorations. They begin to demonstrate problem-solving skills and express themselves creatively using a variety of media.

As has been emphasized throughout the *Guide*, no area of development is entirely separate from another. Children use their cognitive capacities in all that they do. When a child ponders whether she can jump across a puddle, she uses mathematical understandings as she decides whether her muscles will carry her that far. Whether or not she is successful, the outcome will affect her feelings about her capabilities. Children's feelings come into play in all that they undertake.

Unlike adults, children must construct their own knowledge, primarily from their own experience. That is why play is so critical to their learning. Children respond characteristically to different situations and events, depending on their stage of development. While most pass through developmental stages in the same order, the rate does vary from child to child.

Characteristics of a Young Learner

- Curious, seeking, social
- Natural explorer and inventor
- Thinks differently from adults
- Learns best through play
- Learns through social interaction
- Is developing thinking skills
- Represents knowledge in different ways
- Clarifies and extends thinking through language
- Uses language to communicate

The transition from one stage to another is neither abrupt nor final, and learners often respond in ways characteristic of more than one stage at a given time. Neither do children develop evenly across the domains (e.g., a child may exhibit problem-solving capacities well beyond expectations, but lag in developing the social skills that would enable him or her to share knowledge with another).

Children advance from relying on concrete experiences and literal meanings as they learn to use abstract and symbolic cues to process information and learn about their world. They develop conceptual frameworks as they expand their abilities to categorize and think conceptually. They begin to solve problems in purposeful ways, using varied strategies and resources rather than relying mostly on trial and error. As they interact with people and objects in the environment, they develop concepts about the physical and social characteristics of their world. Not only do they begin seeing relationships among people and objects, but they also imitate them.

Most children are motivated to learn by an intense desire to make sense out of their world and achieve the competencies desired by their culture.[1] They come to preschool and kindergarten already active thinkers, possessing natural curiosity and an eagerness to learn. As they become actively involved in their learning, pursuing topics of personal interest and relevance, asking their own questions, solving problems and reflecting on their own thinking, they experience the joy of learning and come to believe in themselves as learners.

The first five to seven years of life are a sensitive period for brain development. The more meaningful and varied a child's active encounters with the real world are in the early years, the stronger

1 Bredekamp & Copple, *Developmentally Appropriate Practice in Early Childhood Programs,* 1997.

the foundations for logical thinking and the greater the receptivity to instruction. When subject matter is dynamic, intellectually intriguing, and personal – when it bestows power to the learner – the details also become important and memorable.[2]

The teacher presents content so children can assimilate it in accordance with their stage of development. Too much too soon creates problems of understanding. Neither does the trivial content too often seen in preschool and kindergarten classrooms advance children's thinking abilities, their knowledge base, or positive attitudes toward learning.[3] An effective teacher is careful to avoid either extreme.

No single factor can account for cognitive development. It is a combination of the factors and the interaction among them that inf uences development:

- **Maturation:** Physical maturing, especially of the central nervous system
- **Experiences:** Handling, moving, thinking about concrete objects and events
- **Social Interaction:** Playing, communicating, working with other children and adults
- **Environment:** Home, community, school
- **Equilibration:** The process of bringing maturation, experience, and social interaction together to build and rebuild mental structures
- **Individuality:** Learning style, disposition, prior knowledge, interests, self-concept

Teachers can promote cognitive development in young children when they ...

- offer inviting, well organized classrooms
- establish warm and trusting relationships with children to create the conditions that foster children's thinking abilities
- are sensitive to what children already know and think [and] help them refine and add to that base
- draw on children's curiosity and encourage children to pursue their own questions and develop their own ideas
- help children connect concepts
- ask children thought-provoking questions
- support children as they plan and reflect on their work
- encourage children to record and document their knowledge by using various representational methods, such as words and gestures, writing, and drawing
- recognize the value of peer interactions and design learning environments and planning experiences that encourage children to interact and collaborate
- offer children meaningful choices
- offer children age-appropriate play materials and stimulating daily routines and social interactions
- offer a balance of sustained play, child choice, and verbal interactions with adult-guided activities that are engaging to children and adaptable to their varying readiness
- engage children in in-depth explorations of meaningful topics
- integrate skills and concepts into the total life of the classroom

Adapted from Developmentally Appropriate Practice, Copple & Bredekamp, 2009.

Mathematics

Children develop an understanding of mathematical concepts as they explore the world around them. Teachers of young children have always known that. However, the past decade has witnessed considerable attention to how young children develop mathematical concepts.

The conversations among researchers and practitioners have been rich and useful. A host of studies and curriculum projects is reshaping how mathematical concepts are presented to young chil-

2 Tomlinson, *The Differentiated Classroom: Responding to the Needs of All Learners*, 1999.

3 Katz, A*nother Look at What Young Children Should be Learning,* 1999.

Learning mathematical concepts and skills is complex. Children learn different concepts at different rates, and the concepts overlap one another. There is, however, a general sequence they follow. This progression is congruent with the most recent NCTM Standards and Focal Points (2006):

	Number and Operations	Measurement	Geometry	Data Analysis	Algebra
Preschool	Developing an understanding of whole numbers, including concepts of correspondence, counting, cardinality, and comparison.	Identifying measurable attributes and comparing objects by using these attributes.	Identifying shapes and describing spatial relationships.	Using objects' attributes for various purposes.	Recognizing and duplicating simple sequential patterns (e.g., square, circle, square, circle...)
Kindergarten	Representing, comparing, and ordering whole numbers and joining and separating sets.	Ordering objects by measurable attributes.	Describing shapes and space.	Using objects' attributes to sort and solve problems.	Identifying, duplicating, and extending simple number patterns and sequential and growing patterns.

dren within the five areas identified by the National Council of Teachers of Mathematics:

- Number and operations
- Algebra
- Geometry
- Measurement
- Data analysis and probability

Children from birth to age eight require particular attention in developing the foundations of mathematical literacy because during these years they undergo unparalleled cognitive, social, and emotional growth.[4] As preschool and kindergarten children mature, they develop concepts about how things work. They recognize things that are alike and different. They compare and sort things. They begin to make predictions. They understand functions and see patterns. They begin to make sense of the world by reasoning and problem-solving. Teachers recognize that young children can think in sophisticated ways.[5]

Children as Problem-Solvers

Problem-solving is at the heart of mathematics – it is what mathematicians do! – and many young children come to school with an innate understanding of this. The teacher's task is to build on this ability by posing challenging and meaningful problems that are accessible to all children.

The core of any early education mathematics curriculum should focus on:

- Developing young children's ability to problem-solve.
- Developing their capacity to ask thoughtful questions.
- Learning to recognize problems in their environment.
- Using mathematical reasoning with familiar materials in the classroom.
- Exploring various solutions to a problem.

Seeing connections among mathematical topics enables children to reason and make sense of new ideas and situations they encounter. Just as with language and literacy building, removing mathematical concepts from their social context through drill-and-practice methods makes them inaccessible to children. Rather than teach many skills by rote or timed tests, teachers can plan rich environments and offer sequenced opportunities for children to explore math concepts actively through play. A child learns math by doing, talking, reflecting, discussing, observing, investigating, listening, and reasoning.

Mathematics is about thinking, not merely manipulating quantities. Young children's math concepts should include

4 Diezmann & Yelland, *Developing Mathematical Literacy in the Early Childhood Years*, 2000.

5 National Council of Teachers of Mathematics, 2000.

thinking about numbers and operations, geometry and spatial sense, patterns and algebraic thinking, and displaying and analyzing data. Teachers enhance children's mathematics learning when they ask questions that provoke clarif cation, extension, and development of new understanding.[6]

Young children possess a vast amount of intuitive, informal mathematical knowledge. Instances that appear to be learning disabilities in mathematics are often caused by inappropriate teaching rather than intellectual inadequacy. As teachers, we need to remember that young children construct mathematical understanding in different ways, at different times, and with different materials. Our job is to provide an environment in which all children can learn mathematics.[7]

Early Learning Expectations, Objectives, and Strategies

The Standard Course of Study for Kindergarten includes a specif c section on Mathematics. In addition, kindergarten teachers are encouraged to incorporate the framework of the Preschool Widely Held Expectations for Mathematical Thinking and Expression in how they think about children's learning and development. These expectations are relevant across the age range. Here are a few examples of effective teaching strategies that preschool and kindergarten teachers can employ:

- Provide large amounts of uninterrupted time for active exploration.
- Model problem-solving strategies.
- Provide opportunities to observe naturally occurring patterns within the indoor and outdoor environments.
- Prompt thinking and analysis by asking open-ended questions.
- Make a variety of materials easily accessible for all children for the purpose of developing and ref ning mathematical knowledge.

Many more suggestions for teachers and families can be found in the Mathematical Thinking and Expression section of *Foundations*, pages 42-45.

Questions to Promote Children's Thinking

- Do we have enough ... (e.g., napkins, snacks)?
- How far is it to the front of the building?
- Which socks can you match to make pairs?
- How can we figure out what is the... (e.g., favorite food) ... in our class?
- Which is bigger/smaller?
- What comes next?

6 Landry, 2005.

7 Copley, *The Young Child and Mathematics,* 2000.

Linking *Foundations* to the NC Standard Course of Study

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Foundations: Mathematical Thinking and Expression	SCOS for Kindergarten: Mathematics
Children begin to experiment with and use numbers and counting in their play.	**Competency Goal 1:** The learner will understand numbers and ways to represent numbers. 1.01 – Develop number sense for whole numbers from 0 through 10. • Use 1 to 1 correspondence and other counting strategies to determine how many. • Compare and order sets and numbers (more than, less than, same/equal). • Recognize and write numerals. • Recognize (subitize) the amount in a given set of patterned dots/objects. • Determine number before and after a given number. • Identify and sequence ordinal numbers. • Compose and decompose numbers: a. recognize part-part-whole relationships. b. Use 5 and 10 as referents.

Learning Center Focus:
Blocks

As children experience the world around them, they form pictures in their minds of what they see. Playing with unit blocks gives them an opportunity to re-create these representations. It is a skill needed for abstract thinking. Playing with blocks, children acquire a concrete understanding of concepts crucial to logical thinking. As they choose, build, and clean up, they learn about sizes, shapes, numbers, order, area, length, and weight. Because blocks are easy to share with others, they also promote social interaction and meaningful conversations.

In the Block Center, children:

- develop mathematical language and vocabulary.
- learn about height, width, depth, and length.
- sort materials by color, shape, and size.
- match objects in one-to-one correspondence.
- demonstrate concepts of part/whole and same/different.
- form groups by sorting and matching objects according to attributes.
- learn to cooperate, share, plan, and negotiate.
- develop large and small muscle coordination and eye/hand coordination.
- learn mapping skills.
- develop spatial awareness and perceptive judgment.
- create a well-def ned sense of self in space.
- learn physical representations of addition and subtraction.
- learn size and shape differentiation, relations and recognition, including symmetry.
- express relative sizes.
- understand gravity, stability, weight, and balance.
- share and cooperate with others.
- utilize emergent reading and writing skills (making signs and labels for structures).

Getting Organized

The Block Center encompasses so many learning concepts, it needs to be given as much room as possible – ideally, a size capable of accommodating half or two-thirds of the classroom. It should be large enough to allow a number of children to work at once and in a location where they can leave their houses, cities, and landscapes on display for work at a later time. The space should be carpeted to make it comfortable and appealing and to soften the noise of falling blocks. Low shelves for storing unit blocks can help to def ne the area and slow down or prevent traf f c through the area. This also enables children to sort and classify as they place blocks back on the shelves.

Depending on your space and number of materials, remind children that no one may be excluded from any play area if the area has not reached its maximum capacity. With adult support, children can learn to join a project in progress. Say, "Jen, I see you want to play with Mary and Tasha. Mary and Tasha, is it OK for Jen to join you? How can Jen help you with your work?"

Basic Equipment

- 500 to 750 unit blocks in a variety of shapes and sizes (all blocks in the set are proportional to the basic unit)
- Hollow blocks
- At least three labeled shelves at child's-eye level for blocks and supplies
- Labeled containers for storing accessories and supplies
- Accessories and supplies
- Animal f gures
- Cars, trucks, and other vehicles of different sizes
- Sets of people f gures of various ethnic groups
- Dollhouse furniture
- Landscaping accessories
- Colored cubes

Questions to Promote Children's Thinking

- Can you see if you can find another way to make those blocks stand up?
- What other block shape might work there?
- How will the firefighters get into your building?
- It looks like you are all out of the long blocks. What else could you use to fill up the same space?
- Can you find two blocks that you could put together to be the same size as this one block?
- How will people know what building this is?
- How will people know which way to drive their cars on the road?
- Which animals will live in each part of your zoo?
- Tell me about your building.
- How did you decide to put all those blocks together?

- Flooring and tiling props (various colors of carpet squares cut into rectangular shapes, linoleum samples)
- Items from nature (pinecones, stones, shells)
- Plastic tubing
- Writing and drawing materials
- Tape measures and rulers
- Hats
- Photographs of neighborhood structures and commonly visited buildings
- Blueprints
- Camera for taking photos of projects

The Four Stages of Block Play

Stage 1: Carrying Blocks (functional play)

Young children who have not had an opportunity to play with blocks have a tendency to carry them around or transport them in moving toys. Children are experimenting with the blocks to get a sense of what they look and feel like and to know what to do with them.

Stage 2: Piling and Laying Blocks on the Floor (exploratory play)

Children make tall towers or long trains. They pile and organize blocks in any way imaginable and add different props (e.g., small people, toy cars, trucks).

Stage 3: Connecting Blocks to Create Structures (constructive play)

Children are moving from piling blocks to constructing. Roads link bridges, and problem-solving begins. Most children in Stage 3 (typically three- and four-year-olds) have had some experience playing with blocks. The techniques children use include:

Enclosures. They put blocks together to create an enclosed space and eventually use the space for dramatic play. This helps children think about mathematical concepts, particularly area and geometry.

Bridging. They first make bridges (setting two blocks upright and laying one block across them) as part of an enclosure and then as part of dramatic play. This helps teach balance and eye-hand coordination.

Designs. Children are fascinated with patterns, form, and symmetry, and they like to repeat their designs, sometimes until all the blocks are used. This helps them notice likenesses and differences and develops motor skills.

Stage 4: Making Elaborate Constructions (dramatic play)

By this time many children are experienced builders (four- to six-year-olds). They adapt to changes in their structures and build above, over, and around objects. The structures are remarkable, complex, and ingenious. At this stage children can label their constructions and often use them for dramatic play activities.[8]

Observations and Ideas

- Children need a large amount of uninterrupted time to build. Many times, one day is not enough for the structure to be finished and details and additional creativity added. By providing a space where buildings can be worked on over the course of several days or a week, children can become further invested in their work, adding greater detail and complexity to their structures.
- Take advantage of moments when structures are knocked down. Although this should only occur accidentally, your immediate role is to help the children discover why it happened. Perhaps a child is still learning about his or her body space and is unaware of where that space ends and the building begins. With your help, they can figure out why/how the blocks fell, devise new strategies, help stack the fallen blocks, and decide whether different ones are needed.
- Encourage creativity in the Block Center by including accessories (colored cubes, bridges, chimneys, ramps, flooring, different types of blocks, people, animals, vehicles, etc.). These elements add artistic flavor to the structures built by younger children and add to the purposefulness and usefulness of structures often built by older children.
- Children value the things they build and like to talk about them. Saying "Tell me about what you made" encourages a dialog and offers new opportunities to explore. Asking such questions as "How did you know to balance this block so that it wouldn't fall?" or "What was the first thing you did when building this structure?" or "How did you decide?" helps them develop their problem-solving skills and inductive reasoning.
- When interacting with children in the blocks area, always remember that it is their play, their ideas, and their dramatic themes being created. Asking questions and making suggestions to clarify and enhance their play is fine, but provide suggestions rather than tasks

8 From *Creative Curriculum for Early Childhood,* Dodge & Colker, 2000.

for them to do. There is a delicate balancing act between observing and scaffolding the children's work.

- Encourage children to build at least one foot (or "ruler length") away from the block shelf. This leaves the shelves accessible when construction is occurring and protects block projects from being knocked over.
- Adding paper, pencils, and other writing utensils to the blocks area encourages children to add signs, labels, and names to their structures, incorporating writing in a meaningful way. Encourage them to use both English and their home language, if it is different. Also adding books and posters related to building, blueprints, and architecture may encourage children to take risks in their constructions.
- If block structures cannot be saved, take photographs to document their construction. Encourage children to dictate, draw, or write about their structures.
- Identify where on the storage shelves various blocks can be found by taping outlines of the different shapes to the front. This will also help children know where to return them. Distributing similar shaped blocks between two or more shelves helps reduce traf c jams and provides easier access, especially for children with physical disabilities.

Block Clean-Up: Teamwork at its Best

Block clean-up can be challenging for everyone. In some situations, a messy, disorganized Block Center limits how much building can go on there. By creating a clean-up routine:

- Children are less likely to resist taking down a structure or feeling overwhelmed by the number of blocks to be put away.
- When materials, blocks, and accessories all have labeled containers or outlines on designated shelves, it reinforces children's learning about classification and attributes.
- Children learn to be responsible for tidying up.

One routine that has helped many preschool and kindergarten classrooms is to plan a weekly clean-up. Over the course of a week, children build, rebuild, and add to existing structures. On the last day of the week, the class works together as a team to put everything away. This allows children who spent a great deal of time in the center to help take apart structures without having sole responsibility for the whole area. The process also allows children who may be tentative about block building to familiarize themselves with the blocks and how they are used. With teamwork, the center is ready for a new round of learning and the class shares in the accomplishment of a huge job well done.

Some teachers prefer to schedule the clean-up first thing in the morning, providing a natural staggered entry to the center. Others incorporate extra time during regular clean-up time after centers. Cleaning up at the end of the day is a bit more challenging for children who are tired after working hard all day.

Clean-up time involves four steps. The teacher's role is that of facilitator:

1. **Disassembling.** The children begin by carefully removing all accessories from the building projects. As they enter the work area, the teacher seeks volunteers for specific tasks. "Who would like to be in charge of the animals?" "Who wants to work with Rodney and Brittany to pick up the colored blocks?"
2. **Sorting and stacking.** The children begin sorting and matching the blocks by shape and stacking them. Different children can help with removing blocks, finding matching shapes, and counting to be sure that there are only five blocks in each stack.
3. **Shelving.** The children share the task of taking the stacks of blocks to the shelves and returning them to their appropriate places.
4. **Tidying.** Several children stay behind to straighten the blocks on the shelves and tidy up the remaining blocks. The rest of the group heads to the next activity, such as songs and movement in the group area. Those who tidy up may volunteer or have this as their helper job.

Learning Center Focus:
Carpentry

When children use tools, it is quite a collaborative effort. Their minds, hands, and eyes work together; they use their muscles; they observe; they solve problems. They begin developing and practicing skills they can use later in life. Carpentry extends mathematical concepts and observation skills and encourages flexible, fluent, and unique thinking. Through collaboration and discussion, carpentry activities shared by peers promote the development of language. Because every child feels good about being allowed to do a "grown-up" activity, the challenge of working with tools helps build a healthy self-concept and sense of pride.

In the Carpentry Center, children:

- develop fine motor skills and coordination.
- learn to work with measurement tools.
- explore relationships and interaction of materials.
- learn to work independently.
- develop a willingness to try new things and to try again.
- understand stability and balance.
- develop spatial awareness and visual perception.
- know and observe rules and develop safety awareness.
- explore force, cause and effect, and properties of materials.
- gain information about the environment.
- make choices and decisions.

Getting Organized

The Carpentry Center is intended to provide a safe place for children to engage in the simple, satisfying activities of hammering, sawing, gluing, and clamping. The area for this activity should be well defined and contained, with space for two or three children to work. Locate it out of the line of traffic and, if possible, use carpet to absorb noise.

The area needs to be visible from all parts of the room so the teacher can easily observe and supervise. Modeling and reminding children how to use the tools reinforces the idea that tools are not toys and need to be used and treated carefully. Consider when the carpentry area is open. Depending on the class, constant supervision may be necessary. Therefore, the carpentry area is closed unless an adult is present. It must always be "Safety First!"

As children begin to work in this center, you may want to use golf tees, foam

Questions to Promote Children's Thinking

- Can you draw out your design plan for your birdhouse?
- How can you get these two pieces of wood to stay together?
- Which screwdriver do you need for this job?
- Can you draw and write about the steps you went through to build this airplane?
- Where did you get your ideas?

pieces, and wooden mallets to introduce the carpentry process. Gluing pieces of wood together is another beginning activity for young children. As children become more confident and skilled in their use of the beginning tools, they can be slowly introduced to the real wood-working tools.

Basic Equipment

- Workbench or low, fairly heavy table
- Sturdy tool rack, mobile if possible
- Wrench, pliers, saws, hammers, hand drills, screwdrivers
- Vise and/or C-clamps
- Sandpaper
- Woods
- Nails, nuts, bolts
- Paints and brushes
- Glue
- Safety goggles and hard hats
- Paper and pencils to draw plans
- Tape measures and rulers
- Foam pieces, golf tees, and wooden mallets for beginners
- Tree trunk

Observations and Ideas

- Store and label each tool's place on a tool rack or pegboard to show that organization is important. It is also a good idea to trace the shapes of the tools onto the pegboard with a permanent marker so children know where they belong. Shelves are needed for labeled containers of nails and screws. Be sure that all materials are easily accessible.
- Instead of arranging work spaces at a rectangular table along one side, place the work spaces diagonally across from each other. This opens the table to two or more children working safely at one time. Additional space for work not needing tools, such as gluing or painting wood creations, can be at a nearby work area.

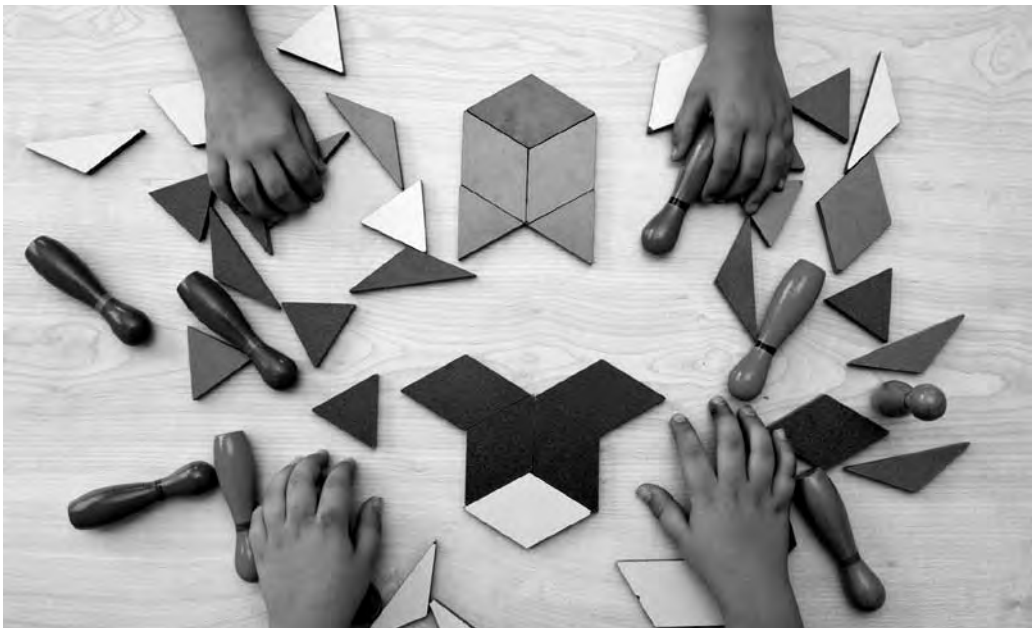
Workbench Wisdom

Tips for teaching children how to use basic tools and materials correctly and safely.

- **Hammer:** Grip toward the end of the handle for best leverage when hitting a nail. To remove a nail, place the hammer claw under the nail and pull the handle toward you.
- **Nails:** To begin a nail, hold it in place with your fingers and gently tap the head with the hammer. When the nail stands alone, remove your fingers and hit firmly. Nails will bend if they are too long, too thick, or are hit at an angle. Measure nails against the wood. If too long, they will come through the wood – an obvious danger. If too short, two pieces of wood will not end up attached.
- **Saw:** Place wood in a vise or C-clamp to hold it steady. When sawing, position one foot in front of the other. Saw at a 45-degree angle, using a downward motion and light pressure. (Cut a starting notch for beginners, as needed.) Saw the last few cuts gently so that the wood does not break off and splinter.
- **Wood:** Soft wood may split if nailed too close to the edge or if the nail is too wide. Smooth rough edges by rubbing sandpaper away from you in the same direction as the grain of the wood.

Miller, Learning through Play: Sand, Water, Clay & Wood, 1994.

- Selected wood pieces should be sanded thoroughly to be splinter-free. Chemically treated wood should not be used.
- Emphasizing tasks and the completion of activities helps children develop a sense of time. "Tell me about your picture (construction, experiment, etc.). Where did you get your ideas? If you were to change anything, what would it be? How will you know when your project is finished?"
- Encourage children to discuss or illustrate their plan. Perhaps they want to practice hammering nails into a large cut portion of the tree stump. Or maybe they want to add another side to an ongoing project. By talking about plans, children are better able to work with a personal sense of purpose and direction.
- Have a place designated to store works in progress or work that children wish to share and display.
- Check completed projects for safety, making sure children don't carry around items with protruding nails.



Learning Center Focus:

Manipulatives

Doing things well with their hands is important for many things children will learn in school. They need to be able to hold pencils and crayons correctly so they can learn to write and do mathematics. Play that involves the use of hands, muscles, and eyes helps children develop coordination and problem-solving skills. Puzzles and pegboards give practice coordinating eye-hand movements. Balances and sorting trays encourage comparison and evaluation of objects. Various materials to count, sort, and organize aid the learning of concepts and functions of numbers.

Preschool and kindergarten children need a lot of practice in digital dexterity – opening and closing items and using things without dropping, breaking, or spilling them. Trying new things is an important way that children learn.

Further, children need numerous experiences exploring materials. This helps them construct an understanding of ideas that they can then connect to mathematical vocabulary and symbols.

In the Manipulatives Center, children:

- use vocabulary to def ne quantities and relationships and make comparisons.
- demonstrate concepts of part and whole.
- explore spatial relationships.
- form groups by sorting and matching.
- develop perceptual awareness.
- practice counting.
- experience basic addition/subtraction concepts.
- develop the use of positional vocabulary.
- discover similarities and differences.
- explore, identify, name, and describe a variety of two- and three-dimensional shapes.
- repeat simple patterns using objects.
- discover attributes and sort materials using various attributes.
- make predictions and explain why.
- discover color, shape, line, and texture.
- solve problems by comparing and ordering objects.
- explore the weight and size of objects.

Getting Organized

A def ned work area away from foot traf c works best when children are using puzzles and other small manipulative materials. Arrange small tables, benches, and an open space with a f oor mat or carpet as spaces where individuals or small groups can play games. Many varied and interesting materials can be assembled for use in this area – anything that invites children to construct, f t things together, or develop patterns. Shelving put at the child's level will help to keep the area from becoming messy.

Basic Equipment

- Puzzles of varying dif culty and puzzle rack
- Matching games
- Lacing board
- Cooperative games
- Table blocks

(continued on page 146)

The Meaning behind the Manipulative

A variety of shapes, colors, and sizes of materials are often found in the Manipulatives Center. Although some objects can be called by different names, there are differences between certain materials.

Manipulative	*Description*	*Math Experience*
Attribute Blocks	Attribute blocks are shaped blocks that come in different colors, widths, and sizes. A typical set contains 60 pieces, including 5 different shapes, 2 sizes, 2 thicknesses, and 3 colors. Attribute blocks allow children opportunities to notice similarities and differences, from which they can be sorted, classified, organized, counted, and compared.	Attribute Train Game: Players draw from a collection of attribute blocks. The first player puts down a block. The next player puts down a block that differs in only one attribute (shape, size, or color) from the block put down by the previous player. After each child adds a block to the train, ask, "What can be next? Why?" Ask children to verbalize the attributes that are the same and those that are different.
Pattern Blocks	Pattern blocks are a type of mathematical manipulative that allow children to see how shapes can be decomposed into other shapes. The standard pattern blocks are divided into two sets. In the first set, the shapes can all be built out of the green equilateral triangle. This set contains: • Equilateral Triangle (Green) • Regular Rhombus (Blue) • Trapezoid (Red) • Hexagon (Yellow) The second set contains shapes that can't be built of the green triangle, but can still be used in tiling patterns: • Square (Orange) • Small Rhombus (Beige)	Pattern Block Exploration: Provide a black piece of construction paper as a work mat. Invite children to create designs by putting various blocks together.
Tangrams	A tangram is an ancient Chinese moving piece puzzle, consisting of seven geometric shapes. Tangrams are designed for children to explore figures and discover/visualize what they look like when transformed through rotations or flips or are put together or taken apart in different ways.	Tangram Challenge: Challenge your students to create their own designs with their tangram. When students have had an opportunity to explore and create, have them create their favorite design and then glue the arrangement on construction paper. Use these designs as a classroom set of puzzles, inviting children to re-create the designs. Some students may wish to re-create the design by matching the pieces directly on top of the puzzles.

- Sorting materials that are sized to avoid choking hazards (e.g., buttons, beads, jacks, pom-poms, nuts and bolts)
- Tinker toys, Legos, and other connectable materials
- Beads and string with bead patterns
- Button, zip, and snap boards
- Counting objects
- Sorting trays (Washed foam trays work well.)
- Pegs with boards and patterns
- Playing cards
- Dominoes
- Nature items (shells, rocks, leaves, etc.)
- Unif x cubes
- Two- and three-dimensional shapes
- Geoboards
- Two-colored counters
- Number tiles
- Coins (for children who have outgrown putting things in their mouths)
- Attribute blocks
- Pattern blocks
- Pan and number balances
- Tongs

Observations and Ideas

- Keep shelves clutter free by providing a space on the shelf for each collection of materials. Offer enough materials so that children have choices and can explore concepts in multiple ways, though keeping in mind that too many materials can be overwhelming.
- Stirring, pouring, opening boxes, and closing jars are safe things that children can do to practice using their hands and f ngers.
- Put pieces of games and puzzles in zippered bags or plastic tubs with lids. The plastic bags can be hung from a string with clothespins. Virtually everything should be labeled. Label the backs of puzzle pieces so that lost pieces can be easily returned to the right bag. Label the storage crate or shelf with a list of materials that can be found there.
- Provide opportunities for children to share their work with others – either while working side by side or as a more formal share time. Often, they learn about a material or different ways to work from each other rather than during a teacher-directed activity.

Questions to Promote Children's Thinking

- What do you suppose would happen if . . .?
- What will you do next?
- I wonder . . .
- How can we check to see how close your guess is?
- Why do you think that?
- How did you figure that out?
- Do you have any ideas about how we might begin?
- How can we do this differently?
- Hmmm, I had not thought of that. Tell me more.
- What other ways can we show that?
- Tell me about ___.
- How did you decide?
- What other things can we find?
- What would you do with this?
- Tell me how you did that.

Adapted from *Family Math for Young Children: Comparing,* by Coates & Stenmark, 1997.

Science

Four- and five-year-old children generate questions with an intensity that exceeds any later stage of life. A majority of those questions have something to do with how the world works – and how the world relates to science. Because of that, the core content in these years should probably be science. Virtually all of the rest of the curriculum can be linked in some way to learning more about science topics.

The process of science is learning to question, wonder, and systematically find out. Inquiry science activities encourage children to ask questions, look for answers, and become aware of what is happening in the environment.

When exploring a science topic, children can:

- Read (or be read to) about it.
- Draw or write to record their observations.
- Work cooperatively with a peer (social development).
- Use math to learn more (e.g., measure it, record aspects of it).

Thinking differently about science

- Learning about science is much more important than its current place in the curriculum would suggest.
- The preschool and kindergarten years are prime time for children to learn about and develop positive attitudes about scientific learning.

The scientific process skills most appropriate for young children are observation, comparison, measurement, classification, and communication.[9] Young children compare, describe, and sort as they begin to form explanations of how things work in the world. Science requires touching, tasting, feeling, smelling, pushing, pulling, rotating, mixing, comparing, and more. Therefore, the classroom environment and the activities within it must be organized so that children can continuously experience and manipulate materials.

With simple observations and experiments, children learn to gather data and make conclusions as they develop their

9 Charlesworth & Lind, *Math and Science for Young Children,* 2002.

visual and tactile senses. Developing a knowledge base to explain or predict the world requires many experiences over a long period of time. Children study the natural world, propose explanations, and solve problems based on the evidence they derive from their work.

Children as Young Scientists

Children make sense of the world by relating new experiences to some prior knowledge. They organize their unique experiences in ways that make sense to them. Children are young scientists as they:

Observe. Looking and observing are not the same thing! Encourage children to look carefully for specif c actions or information so that they become observers. Observation is not limited to visual input; let it involve all the senses. Provide guidance in observation techniques, but encourage children to discuss their own personal observations and make sense of them.

Communicate. Encourage children to share observations and data. They can talk about their f ndings; make pictorial records; dramatize; produce charts and graphs; write to share information and conclusions. For example, the popular books *Brown Bear, Brown Bear, What Do You See?* and *Polar Bear, Polar Bear, What Do You Hear?* can be revised to record data collected by children.

Compare. Collecting data involves comparing and measuring. Measurement for preschool and kindergarten children involves comparisons, approximations, non-standard units, and also standardized measures with guidance from the teacher. Children can measure classroom pet food by scoops, estimate how much pets will eat, and compare amounts different animals eat. They can gauge the height of their bean plants with paper clip chains, compare the size of rocks and buttons, and observe the amount of water produced when an ice cube melts in a beaker.

Organize. Organizing is systematically compiling and classifying information. Children begin to classify by color, shape, or function. Encourage them to classify objects and explain how they grouped them (e.g., blocks of a certain shape; buttons, shells, rocks, and other collections by their similarities and differences).

Predict. Simple experiments can help children relate concrete and abstract ideas. They can identify and explain observations. Children relate prior experiences to new situations as they make predictions. This is the f rst step in formulating and testing hypotheses. For example, when they see clouds, they can predict that it might rain or snow.

Infer. Young children use the skill of inferring very informally. Through concrete experiences, they can make observations of a particular material and infer what will happen to a different material under the same conditions. For example, when children observe what happens to sand when they pour water on it, they may infer that the same thing will happen when they pour it on soil.

Apply. As children advance from concrete to more abstract thinking, they are better able to apply knowledge to new situations. Providing relevant experiences with everyday objects gives them a reason to make connections to their world.

Common Understandings about Teaching Science

Science for all children

Early impressions about who learns and does science appear to be persistent and lasting. Science should be modeled as an activity involving all kinds of people and affecting all people in their daily lives. Models must be free of biased materials, being sensitive to issues regarding gender and ethnicity.

Science as inquiry

From the earliest levels, children should experience science in a form that engages them in the active construction of ideas and explanations. According to Chalufour & Worth (2006), inquiry is about asking questions beginning when children "notice, wonder, and explore" things in their world. As children play and explore, they ask their own questions through words and actions. These questions lead them to investigate and ask more questions.

During this inquiry process, teachers extend children's thinking by asking more questions and posing problems. Children can now begin to make predictions as they engage in more focused explorations. As children reflect on what they have seen, heard, smelled, felt, or tasted, teachers guide them into bringing together data to formulate relationships and give them opportunities to record their new knowledge through drawing and writing.

The science-technology-society connection

Science is not something that happens in a book, on a screen, or in a laboratory far away. It is part of the everyday experience. Society's demands have encouraged further technological and scientific development; some is considered beneficial, some not. There are many issues and points of view to be considered for every topic and even very young children should be assisted in recognizing that there are many consequences to decisions and to progress (e.g., acquiring habits around recycling, conserving resources by turning off water faucets).

Experimentation

The active process of science is learned, not taught. Children should be provided with a variety of opportunities for playing, questioning, exploring, demonstrating, investigating, and experimenting. Experimentation also adds opportunities for simple hypothesizing and predicting, observing, collecting data over time, formulating conclusions, and comparing results with the original hypothesis/prediction. Each of these approaches can be appropriate for children of different interests and abilities, using a variety of themes.

Questions for the Teacher

How can you...

- Create an environment in which teachers and children work together as active learners?
- Engage children in scientific inquiry generated by questions from their own experiences?
- Encourage children's curiosity and openness to new ideas and data?
- Recognize and respond to diversity in children and encourage all children to participate fully in learning science?
- Have purposeful conversations with children about science ideas?
- Encourage and model the skills of scientific inquiry, as well as the curiosity, openness to new ideas, and skepticism that characterize science?
- Provide a safe environment for children and guide them in safe and appropriate use of materials and animals?
- Arrange opportunities for children to work individually, in small groups, and in whole group situations?
- Encourage children to communicate information in a variety of ways and through a variety of media?
- Encourage self-directed problem solving and experimentation?
- Extend learning by asking questions or making suggestions that stimulate thinking in science?
- Provide proper food and habitats for animals in the classroom?
- Provide a balanced science program including activities that focus on biological, physical, and earth sciences?

Resources

It isn't possible to anticipate the resources needed for all children in a particular classroom, but teachers should feel supported by enough quality materials to begin providing for a range of interests and abilities. In addition, teachers should feel encouraged to identify, acquire, and develop additional materials, including supplies and equipment for daily classroom use, from sources including the school and district, organizations, associations, and commercial suppliers.

Guided by teachers ... as students focus on the processes of doing investigations, they develop the ability to ask scientific questions, investigate aspects of the world around them, and use their observations to construct reasonable explanations for the questions posed.

National Research Council, 1996

Science Content and Possibilities

A child might bring something to school that has the potential for some science study and which catches the interest of the class. Children might generate lists of what they already know about the item and what they would like to find out. Thus, the teacher embarks upon a topic or theme with the class that arises from the interests of the children.

When developing the theme, the teacher plans experiences that enhance the development of knowledge, skills, and attitudes toward science and which address the three broad disciplines of biological, physical, and earth/space science, remembering that preschool and kindergarten children learn best by seeing and experiencing. This means that the greatest emphasis should be placed on topics in the life sciences.

With children as the primary generators of topics, the content will reflect their interests and concerns. There are numerous sources of science content from which teachers can draw. A balance of content should be selected for science activities with an emphasis on the life sciences for children in this age range. (See the chart at bottom of this page.)

Active Learning in Science

Topics and supporting activities should be:

Learner-centered. The study of science in preschool and kindergarten must be linked to what children are interested in and care about. By incorporating children's ideas into instructional strategies, the teacher can effectively guide them toward accommodating their own experiences into a more scientific view.

Activity-centered. Concrete, hands-on experiences allow children to construct their own realistic understanding of what science is. Approaches should include the manipulation of materials and equipment.

Life Science

Living Things
- Plants
- Growing seeds
- Plants and seasons
- Animal behavior
- Animals and seasons
- Animal babies
- Aquatic studies
- Farming and seasons

You and Your Body
- Food/nutrition
- Senses
- Ourselves
- Your body
- Health
- Drugs

You and the Environment
- Animal communities
- Pond life
- Grasslands
- Woodlands
- Recycling
- Endangered animals
- Rainforests

Physical Science

Properties of Matter
- Solids, liquids, gases
- Water play
- Changes in matter
- Magnets
- Simple machines

Heat and Temperature
- Ice cubes
- Hot and cold
- Melting
- Freezing

Light and Color
- Light
- Shadows
- Rainbows
- Earth and Space Science

Atmosphere and Weather

Earth Materials
- Soil
- Rocks
- Minerals
- Fossils
- Water

Air and wind
- Kites
- Weather
- Seasons

Astronomy and Space
- Day and night
- The moon
- Sunlight
- Things in space

Access to a variety of living things encourages dispositions of caring and responsibility.

Modeled by teachers. The importance of modeling a positive attitude toward science has been well documented. Open-minded, enthusiastic teachers foster these same dispositions in children, challenging them to pursue their interests to their fullest potential. Plentiful experiences in science, unfortunately, are frequently limited by how many teachers view their own expertise and interest. Teachers should take special care not to project their own inhibitions and fears to children (e.g., passing on fear of various insects and animals). Preschool and kindergarten classrooms are the perfect venue for teachers to learn along with the children.

Early Learning Expectations, Objectives, and Strategies

The NC Standard Course of Study for Kindergarten includes a specif c section on Science. In addition, kindergarten teachers are encouraged to incorporate the framework of the Preschool Widely Held Expectations for Scientif c Thinking and Invention in how they think about children's learning and development. These expectations are relevant across the age range. Here are a few examples of effective teaching strategies that preschool and kindergarten teachers can employ:

- Engage children in observing events, exploring natural objects, and ref ecting on what they learn.
- Model language that encourages children to express wonder, pose questions, and provide evidence of discoveries.
- Provide simple tools (magnifying glass, binoculars) to use in exploration.
- Provide a variety of outdoor natural materials (smooth stones, shells, pinecones) that children can investigate.
- Encourage scientif c exploration throughout the classroom.

Many more suggestions for teachers and for families accompany the Science section in *Foundations: Early Learning Standards for North Carolina Preschoolers and Strategies for Guiding Their Success,* pages 46-47.

Questions to Promote Children's Thinking

- What do you think will happen if ...?
- Why do you think that side of the balance went down?
- How could you make it go back up?
- Why do you think this rock feels dry and this rock feels wet? Warm? Cold?
- What does this remind you of?
- What was the best part of the experiment?
- What did you do first?
- Does the red cup hold as much water as the blue cup?
- Does the bean seed look the same today as it did yesterday?
- What did you find out when you looked through the magnifying glass?
- How did you make that new color?

Linking *Foundations* to the NC Standard Course of Study

North Carolina's learning expectations for preschool and kindergarten mesh closely across the domains, making it easy for teachers to find matching areas as they plan their curriculum and learning environment. Below is one example of how the Foundations Widely Held Expectations are linked with the Kindergarten Standard Course of Study Goals. You can build and update your own comprehensive expectations/objectives linkage chart – and keep it current – by visiting the DPI website (ncpublicschools.org), the Office of School Readiness website (www.osr.nc.gov), and the DPI Primary Education Section website (prim.ncwiseowl.org).

Foundations: Scientif c Thinking and Invention	**SCOS for Kindergarten: Science**
Children begin to identify, discriminate, and make comparisons among objects by observing physical characteristics.	**Competency Goal 3:** The learner will make observations and build an understanding of the properties of common objects. 3.01 - Observe and describe the properties of different kinds of objects (clay, wood, etc.) and how they are used. 3.02 – Describe how objects look, feel, smell, taste, and sound using their own senses. 3.03 – Observe that objects can be described and sorted by their properties.

Learning Center Focus:
Science and Discovery

The process of science is learning to question, wonder, and systematically find out. Science activities encourage children to ask questions, look for answers, and become aware of what is happening in the environment. The Science and Discovery Center should be a place where young children can observe, hypothesize, investigate, and record their findings. With simple observations and experiments, they learn to gather data and make conclusions as they develop their visual and tactile senses. Science and Discovery centers should offer opportunities for children to participate individually, with a partner, or in small groups.

In the Science and Discovery Center, children:

- classify materials and make predictions.
- measure by weight and distance.
- develop motor skills by using hand magnifiers and balances.
- count and expand vocabulary.
- learn to use the senses (sight, hearing, touch, smell, taste) to gain information.
- learn about living things.
- compare similarities and differences among objects.
- observe color, texture, size, and shape of objects.
- learn about change and cause and effect.
- develop curiosity about the natural world.
- observe relationships between objects.
- investigate forces such as gravity and magnetism.
- match, sort, classify, and group objects.

Getting Organized

A well-equipped Science and Discovery Center contains materials that require looking, probing, and touching and supports all types of sensory exploration. The center should include a hand lens, collections from nature, plastic knives,

microscope, science books, and posters. Keep a class journal in the center for children to record their observations, predictions, and results of ongoing activities. If it's feasible, use both indoor and outdoor settings for scientif c observations and explorations. An Outdoor Science Center is ideal.

Basic Equipment

- Collections of natural objects
- Insects and small animals from the everyday world
- Classroom pets
- Terrarium
- Sorting trays
- Binoculars
- Weighing devices and small items to be weighed (shells, bottle tops, rocks, rice, buttons)
- Real and play clocks
- Markers and pencils, glue, scissors
- Paper or small notebooks (preferably child-made) to record observations
- Microscope and magnifying glasses
- Small mirrors and f ashlights
- Magnets and magnetic materials
- Pulleys and simple machines
- Plants, seeds, and gardening tools
- Thermometer, weatherboard
- Science-related books, magazines, and toys
- Kaleidoscopes
- View-Masters
- Color paddles
- Braille books
- Cameras
- Eyepieces that offer an insect's view of the world
- Models of eye, ear, teeth
- Popsicle sticks
- Paper plates
- Tweezers, tongs, eyedroppers
- Sponges
- Bells
- Sound cans
- Musical instruments
- Cans, beans, sand, rocks for making sound cans
- Tuning forks
- Stethoscope
- Containers
- Walkie-talkies
- Food coloring
- Wax paper, aluminum foil
- Spoons and shovels for digging
- Classroom pets
- Terrarium
- Scratch-and-sniff stickers
- Textured materials (fake fur, bark, shells, pine cones, sandpaper, metal, cotton)
- Recording sheets, science journals

Questions to Promote Children's Thinking

- What do you suppose would happen if . . .?
- What will you do next?
- I wonder . . .?
- Why do you think that?
- How did you figure that out?
- Do you have any ideas about how we might begin?
- How does it move?
- What changes do you see?
- Which have changed the most?
- How do you know?
- Which one is ... (e.g., heavier, taller)? How could you find out? Why do you think so?
- What can you add to the class definition of ... (e.g., animals, weather)?
- What characteristics do the ... (e.g., flower, caterpillar) have that make it a ... (e.g., plant, insect)?
- What do you think will happen?
- Why do you think the ... (e.g., ice melted, clouds disappeared)?
- Can you draw a picture of your findings? Can you add some words?
- Which holds more: the tall, thin jar or the short, fat one?

Observations and Ideas

An explorations area, including a table to display various collections (e.g., stones, leaves, fossils, shells), demonstrates to children that their personal interests are important to others. Caring for pets and plants, if possible in the context of the classroom or outdoor area, offers new experiences to think about and new things to try, as well as the opportunity to develop respect for the environment and a sense of responsibility.

Learning Center Focus:
Sand and Water

Through sand and water exploration, children begin to learn basic scientif c and mathematical concepts, such as volume and capacity, empty and full, f oating and sinking. Also, by sifting sand and scooping water, they improve physical dexterity.

When children work together at the sand and water tables, they are faced with real problems that require sharing, compromising, and negotiating. Sand and water play can be two separate activities, but wet sand play allows children to encounter principles of math and science f rsthand. In mixing sand and water, they discover that they have changed the properties of both.

In the Sand and Water Center, children:

- learn about volume and measurement.
- learn to make predictions and estimates.
- explore force, cause and effect, and systems.
- make comparisons.
- discover properties of matter.
- learn about gravity, stability, weight, and balance.
- know terms related to direction and location.
- use vocabulary to designate quantities (more than, less than, equal to, as much as).
- acquire fundamental movement skills.
- develop perceptual awareness skills.
- develop awareness of cycle, interaction of materials and change.
- observe relationships between materials and among materials.
- play cooperatively with others.

Getting Organized

It goes without saying that the Sand and Water Area needs to be located near a water supply, either indoors or outdoors. Indoors, it should be in a waterproofed f oor space rather than on carpet. Preferably, there should be space for both a water table and a sand table adequate for more than one child to work at a time, along with storage shelves and a place for a broom, dustpan, and mop. It should also be located, if possible, near other areas that tend to be noisy, to avoid disturbing children who might be engaged in quieter activities.

Basic Equipment

- Different grades of sand and sand table
- Other sensory materials (e.g., sterilized potting soil, bird seed, rice, foam peanuts)
- Toy cars, trucks, highway signs, construction equipment
- Toy people and animals
- Buckets, shovels, scoops
- Various sized sieves
- Rake, sifter, strainer, colander
- Cookie cutters
- Shells, sticks, rocks
- Water and water table
- Heavy-duty plastic tub
- Liquid detergent for making bubbles
- Large f at trays for soap solutions
- Funnels, sponges, corks, and eyedroppers
- Measuring cups, spoons
- Ladles, wire whisks
- Eggbeaters, bowls, straws
- Tempera paint, food coloring
- Coffee pot, squirt bottles
- Paint brushes
- Plastic tubing
- All-plastic baby dolls
- Objects that sink or f oat
- Water wheels

Observations and Ideas

As the school year goes on, add or replace basic materials in the Sand and Water Center with others that require higher-order thinking. For example, items at the water table that earlier encouraged free exploration could be supplemented with f shing weights, corks, stones, string, and tape. The children are now challenged to make f oating things sink and sinking things f oat.

Mathematical concepts can be developed during sand play by providing children with measuring spoons, cups, and containers in a variety of sizes and shapes. In observing children's sand play and interacting with them, use mathematical terms like more/less, many/few, empty/full, and heavy/light. Then challenge children to count how many scoops it takes to f ll a container.

Questions to Promote Children's Thinking

- How does the water sound when you pour it?
- Do your two pitchers hold the same amount of water?
- What did you find out when you put the boat in the water?
- Tell me about what you made.
- You really made the water wheel go fast. What could you do to make it turn slowly?
- Why do you think your mud cakes didn't hold their shape?

Stages of Sand and Water Play

Children approach these natural materials with delight and enthusiasm. It is possible to observe stages in the ways they use materials.

Stage 1: Exploration

Children actively discover the properties of both materials, which lend themselves well to sensory experiences. Children feel the grittiness of sand between their f ngers and the cool wetness of water as it streams down their elbows. They discover what these materials can do and what they can do with the materials. They observe differences between wet and dry sand. Most of the time children are happy to explore independently even when other children share the center.

Stage 2: Meaningful play

Children use all the information gathered from the previous stage. At the sand table, children play with molded sand forms – making mountains, barns, roads. At the water table, they conduct experiments and test hypotheses. At this stage children are more likely to work together on specif c projects.

Stage 3: Creative play

Children work cooperatively to represent real life experiences in their use of the materials. The water table becomes the local lake ready for the area boat race. Designs, landscapes, and structures become much more detailed at the sand table. Imaginative scenarios abound.

Learning Center Focus:

Cooking

Cooking lets children experience the world of food first-hand by learning how it is prepared and how it contributes to health and well-being. Include opportunities to learn about food, to be creative, and to prepare healthy snacks. Cooking experiences can include large-group projects such as scrambled eggs, small-group projects such as homemade applesauce, and individual recipes such as trail mix or celery stuffed with cream cheese. Cooking experiences can be used for special occasions as well as an everyday snack-making routine.

Many exciting discoveries happen during cooking. Seeing bread rise teaches science concepts. Measuring milk to make pudding teaches measurement and volume. Peeling carrots, kneading bread dough, and cutting cookie dough develops physical as well as language skills. Making hummus teaches about nutritious snacks and also about other cultures. Completing a task like making cheese crackers teaches math skills and gives children a sense of accomplishment. As children follow pictures and written recipe cards, they are developing beginning reading skills. Cooking appeals to the senses and provides learning opportunities in many areas – literacy, math, social studies, healthful living, and science.

Remember that each child's health and safety are of primary concern. **Make sure you are aware of any food allergies or cultural preferences of your children.**

In the Cooking Center, children:

- work cooperatively in small groups.
- develop self-help skills.
- have the opportunity to complete a task.
- solve problems.
- develop beginning reading skills.
- develop math skills (addition, fractions, doubling).
- develop fine motor skills.
- learn about the foods of their own and other cultures.
- learn about healthy foods.
- learn safe food-handling practices.

Getting Organized

The Cooking Center should be located in an area with an ample work surface, shelving for supplies, and access to water and power. Procedures for hand washing and safe food preparation must be included in any cooking center.

Basic Equipment

- Table and shelves
- Pots, pans of all sizes
- Cooking utensils
- Wok
- Measuring instruments
- Toaster ovens
- Hot plates or stove
- Refrigerator
- Sifter
- Hand juicer
- Hand mixer
- Graters
- Serving dishes
- Hot pads
- Aprons
- Disposable eating utensils (plates, napkins, forks, knives, spoons, chopsticks)
- Bamboo steamer
- Paper to draw/write own recipes
- Recipe cards and posters

Questions to Promote Children's Thinking

- I think you really like punching that bread dough. How does it feel?
- Do you like the taste of _____? How does it taste? Salty? Sweet?
- Can you tell me how you made your sandwich? What steps did you follow?
- This flour is really hard to stir. What could we do to make it easier?

Observations and Ideas

Cooking activities provide lots of opportunities to learn new words both in English and in the home languages of children in the class. Make posters of these words with pictures to illustrate them. Label utensils. If they are hung on a wall, make an outline of the items so that children can return them efficiently and learn matching at the same time.

Children make a direct connection between cooking and activities done by adults; they enjoy taking on these roles. This provides an excellent opportunity to promote the preparation and eating of healthy foods in appropriate amounts.

Creative Arts

In many ways, the creative arts are a child's first language. Children draw before they write; sing before they read; use large and small muscles in creating art, music, and dance before they ever use writing instruments; and act out roles through their play before they ever think of it as drama. The arts represent probably the most integrated activity humans undertake, deeply involving emotional, social, cognitive, and physical development. The arts are basic to everything a young child feels, does, and thinks about.

Children are naturally involved in the arts from a very early age. They move, sing, pantomime, create play situations, and create visual expressions spontaneously. They learn through experimenting and observing their own actions and products and those of others.

As children progress in their experiences in the arts, many elements are blended. Learning takes place at different rates and is not necessarily sequential. Intuitive leaps make it possible to make new, suddenly exciting connections. Concepts and learnings may overlap. Freedom to try new ideas and explore new possibilities with a variety of media is vital to a child's development.

Through the creative arts, children:

- satisfy their need to be active.
- release emotions and direct them into desirable activities.
- develop a rhythmic sense through dramatization, singing, and play.
- find an outlet for self-expression.
- develop imagination.
- develop self-confidence.
- solve problems.
- develop an appreciation for the efforts of others.
- dare to try new ways of doing things.
- develop the ability to make choices.
- grow toward achieving independence and autonomy.
- appreciate the value of tools.
- learn about the properties of a variety of materials.
- heighten their perceptual powers.
- grow to meet new challenges with greater flexibility.
- come to appreciate the aesthetic elements in their environment.[10]

Fostering Creativity

As children become more comfortable with varied elements of the arts, they reach out to expand their range of operations. They prosper when challenged in a stimulating environment, but they should never be coerced into producing a specific product. Though arts experiences and understandings may progress at different rates and levels for each child, certain fundamental components apply to all children.

Problem Recognition/Problem-Solving

In the arts, problem recognition is as important as the ability to solve problems since children are not dealing with fixed situations where the outcomes are already

10 Lasky & Mukerji, *Art: Basic for Young Children,* 1980.

known. Children naturally approach problems in different ways and make new and different connections easily. This provides a basis for later development of critical and creative thinking.

The Creative Process

Children are naturally creative. Helping them focus on the process rather than on the product itself results in greater confidence in their capabilities. They need opportunities to explore new concepts and apply them in different ways, using varied media and materials. Coloring books, pre-cut models, and patterned art projects are not considered creative since they do not allow children to use their own ideas, be personally expressive, or come up with something new. These types of activities can inhibit creativity and imagination in young children.

Intuition

Children are naturally intuitive and often know things they have not been taught specifically. Intuition is fundamental to creativity. It develops a child's ability to use previously learned knowledge and information in new situations. The arts help children make unique connections and use movement, speech, music, and visual expressions in new as well as familiar situations. Intuition enables children to synthesize ideas and originate uses for materials and objects – a vital part of the arts experience.

Risk-Taking

Creativity implies a willingness to take chances. Creative problems have no fixed answers. Experimentation and exploration are paramount, even though some efforts may appear unsuccessful. Children need a classroom climate that encourages risk-taking without penalties when the venture is not successful. Encourage classmates to be respectful, receptive, and cooperative. Developing a willingness to venture into new directions and take risks in both thinking and doing is vital to effective learning.

Questions to Promote Children's Thinking

- How are these alike or different?
- Is there a pattern in this?
- What do you think should happen next?
- What would happen if...?
- Which is ... (e.g., larger or smaller, louder or softer, brighter or darker)?
- How would you move if you were this animal?
- What can you tell me about your work?
- How did you feel when you heard/saw that?
- How is this ... (e.g., shape, sound, movement, phrase) ... different from the other one?

Relationships: Visual, Aural, Spatial

As young children explore the world, they learn about color, shape, sound, movement, speech, and the like. The arts provide opportunities for observing relationships among these elements. Children's involvement in any activity depends both on their ability to concentrate and their interest at the moment. Encourage them to experiment with new ways to relate these elements and to observe the effects of their actions. These processes are fundamental to learning in the arts.

Refining Perception

As children experience the arts, they assess what they learn and apply knowledge to new situations. They develop more refined senses and more subtle understandings of concepts. Teachers encourage these developments by providing opportunities for more complex observation and by asking questions that stimulate thinking. As children enhance their ability to perceive details, they develop a better understanding of the world around them.

Communication

Children practice communication by participating in the arts. During arts experiences, children learn the difference between effective and ineffective ways

Coloring books, pre-cut models, and patterned craft projects are not considered creative art, and many feel that these types of materials inhibit creativity and imagination in young children.

of conveying their ideas and feelings. By developing their ability to communicate, they become equipped to survive in a demanding world and to be lifelong learners.

Early Learning Expectations, Objectives, and Strategies

The NC Standard Course of Study for Kindergarten includes a specif c section on Arts Education. In addition, kindergarten teachers are encouraged to incorporate the framework of the Preschool Widely Held Expectations for Creative Expression in how they think about children's learning and development. These expectations are relevant across the age range. Here are a few examples of effective teaching strategies that preschool and kindergarten teachers can employ:

- Encourage children to talk about and share their creative expressions with others.
- Give children opportunities to respond through music, movement, dance, drama, and visual arts.
- Provide access to a variety of materials, media, and activities that encourage children to use their imagination and express ideas through art, construction, movement, music, etc.
- Demonstrate that you value children's creative expressions by displaying their work in the classroom at their eye level.

Many more suggestions for teachers and families can be found in the Creative Expression section of *Foundations*, pages 50-51.

Questions for the Teacher

How can you...

- Provide an environment that encourages risk-taking and develops creative processes?
- Guide children in the safe and appropriate use of materials?
- Encourage children to search for new connections and possibilities?
- Maintain a balance between individual, small group, and whole-class learning activities?
- Make provisions for children to initiate activities?
- Provide opportunities for children to talk about their arts experiences?
- Nurture confidence in making intuitive choices?
- Encourage children to be tolerant of the efforts of others?
- Provide assistance with problem recognition?
- Stimulate children to search for alternate approaches?

Linking *Foundations* to the NC Standard Course of Study

North Carolina's learning expectations for preschool and kindergarten mesh closely across the domains, making it easy for teachers to find matching areas as they plan their curriculum and learning environment. Below is one example of how the Foundations Widely Held Expectations are linked with the Kindergarten Standard Course of Study Goals. You can build and update your own comprehensive expectations/objectives linkage chart – and keep it current – by visiting the DPI website (ncpublicschools.org), the Office of School Readiness website (www.osr.nc.gov), and the DPI Primary Education Section website (prim.ncwiseowl.org).

Foundations: Creative Expression	**SCOS for Kindergarten: Arts Education**
Children begin to plan and create their own drawings, paintings, and models using various art materials.	**Competency Goal 2:** The learner will develop skills necessary for understanding and applying media, techniques, and processes. (National Standard 1) 2.01 – Become familiar with a limited number of basic art media, techniques, and processes, which may include: • Drawing – crayons, oil pastels, non-toxic markers, brushes, computers, pencils, sidewalk chalk • Cut paper – glue, scissors, folding, bending, 3-D, clay, paper, found objects, including wood scraps • Printmaking – stamps, gadgets, found objects, vegetables, monoprint • Painting – tempera, watercolors, large brushes, sponges, finger paint • Ceramics – pinch, coil, found stamps 2.02 – Explore media freely.

The Child as Image Maker: Moving from Stage to Stage

By the time children arrive at school, they have had considerable experience in image making. A scribble stage can begin as early as eighteen months if the child is given the opportunity. Research provides some insights regarding universal stages children go through in their image development. The activities and materials offered must be suited to the developmental age as well as to the interests and abilities of students. The following is a brief summary of normal image development stages.

The Scribbling Stage

At this stage, the child realizes the excitement of making a mark. The exploration of different types of marks – from straight strokes to circular lines – develops, and children achieve a greater mastery of control and placement as they continue to experiment.

The Symbols Stage

Soon after children discover they can make a mark, they realize that a drawn mark can stand for something and be named. In children's play three-dimensional objects can also become symbols. By the age of four or five most children are drawing pictures to tell stories and to work out problems. They develop symbols for figures, faces, and objects in their environment. These schemas evolve as the child continues to learn from drawing and modeling experiences.

The Stage of Complexity

Beginning in early elementary school, children strive for more detail and realism in their art. They become less easily satisfied with the completeness of the composition of their drawing. The three-dimensional forms children produce also need to become more realistic to satisfy them. Symbols are replaced by attempts to represent specific objects or people.

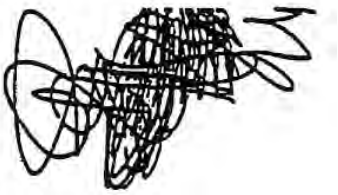
As students move through the primary years, their passion for realism continues. This can lead to a sense of frustration if they are not helped to see that there are solutions to problems in art. With continued exploration and learning from experience children are able to learn to use symbolic, realistic, and imaginative solutions to visual problems.

To help children learn to their potential, visual art experiences must challenge and extend their ability and thinking. While there is some agreement regarding the overall pattern of artistic development, children have individual needs, interests, and capabilities. These will vary considerably and be influenced by previous experiences, knowledge, and skill; by their level of maturity, and by social and cultural background. Children may make rapid leaps forward or return to earlier forms of image-making for reasons of their own.

Development does not take place automatically as a result of maturation. All children need continuing and sequential learning experiences. Observing changes in the images and objects created will help teachers and parents understand, share, and assist children's artistic development.

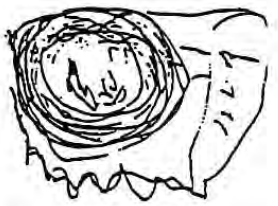
Stage 1 Disordered Scribble-Random Marks on Paper

The child does not seem to realize an ability to control the marks made on the paper.



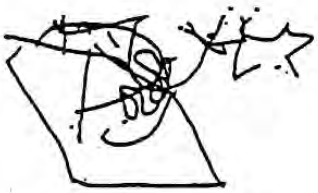
Stage 2 Controlled Scribble

The child realizes there is a connection between the mark on the paper and the movement of his arm. Different colors may be used.



Stage 3 Naming the Scribble

Naming a scribble signifies a change in the child's thinking. Previously the child gained satisfaction from just making the marks, now these marks are connected to something meaningful. The child will make a scribble and then name it (e.g., "a doggie" or "lunchtime").

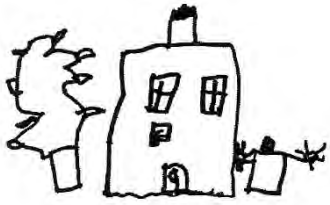


Stage 4 Floating Figures

Drawings begin to resemble people. Drawings gradually gain detail.

Stage 5 Baseline

The figure is grounded on grass, floor, etc.



For young children in art, the process of creating is what's important, not what they actually create. In a safe and comfortable environment, they build self-esteem and confidence while learning that each person has different ideas and ways of working.

Learning Center Focus:

Art

Working with art materials benef ts all aspects of children's development. As they draw, paint, and make collages, they experiment with color, line, shape, and size. By mixing color, they learn cause and effect. In making lines and shapes with markers and crayons, they develop the f ne motor control needed for writing; in cutting paper and molding play dough, they ref ne their small-muscle movements. For young children in art, the process of creating is what's important, not what they actually create. In a safe and comfortable environment, they build self-esteem and conf dence while learning that each person has different ideas and ways of working.

In the Art Center, children:

- discover color, shape, texture, and size by seeing and touching objects.
- experiment informally with a variety of media.
- look at and talk about artwork, including primary sources.
- use the senses to gain information about the environment.
- enhance creativity.
- express feelings.
- develop problem-solving skills.
- develop independence.
- develop organization skills.
- experiment with art materials to understand properties and cause and effect.
- develop manipulative skills.
- develop eye-hand coordination.
- respond to story-telling by drawing or painting.
- make choices and decisions.

Getting Organized

The Art Center is preferably an uncarpeted area close to a sink for easy cleanup. A variety of tools and materials should be easily accessible to children who want to

work by themselves. The area should also be large enough to accommodate special group activities that can be messy (papier-mâché projects, finger painting, class murals and collages). The Art Center should include options for working at an easel, at a table, or on the floor. Surfaces and materials should be organized so children with physical or visual disabilities have easy access. Also consider having a project-drying and storage area.

Basic Equipment

- Double-sided easels and work tables that are accessible to children in wheelchairs, if needed
- Individual storage bins (e.g., baskets, shoeboxes)
- Magazines, newspapers, catalogs, wallpaper books
- Soft clay and play dough, with airtight bins for storage
- Rolling pins
- Trays
- Plastic knives, scissors, hole punches
- Crayons, markers, and chalk
- Paints, pastels (oil crayons), and brushes – all sizes
- Various kinds and grades of paper
- Glue and tape
- Collage materials (buttons, beans, feathers, fabric, greeting cards, yarn, glitter)
- Nature items
- Sponges, pipe cleaners, modeling tools
- Paper towel rolls, shoe boxes, tongue depressors, wire
- "Beautiful junk"
- Aprons and smocks
- Adapted equipment and materials as necessary for children with special needs

Questions to Promote Children's Thinking

- How did you make that new color?
- What are some ways you could fill up this paper?
- How could you make these stick together?
- What do you think you could do with these pinecones and acorns?
- Is there anything else you would like to add to your painting?

Observations and Ideas

Although praising children's artwork may always seem the right thing to do, the way in which an adult responds is the key to helping artistic development. Blanket comments like "Oh, that's pretty" or "I really like that" may in fact discourage a child who wasn't thinking about "pretty" or producing something "likable," but was instead trying to match up the edges of the pieces in a collage. Pay attention to what the child is actually doing and describe one thing you observe (e.g., "I see you used three red, patterned papers" or "I see that all the blue papers are different shapes").

The teacher can encourage exploration and problem-solving through the strategic placement of materials. At the play dough table, providing a scale may lead a child to place a lump of dough in one pan and try to balance it by finding objects around the room to put in the other pan. A recipe book might encourage another child to make a play dough cake, using measuring spoons and cups to portion out imaginary ingredients.

Collect one drawing a week from each child and put them in individual folders, making sure to keep them in order of completion. At the end of the school year, put a cover on the collection to create a booklet. Parents will be able to see and enjoy their child's drawing progress.

Learning Center Focus:

Stitchery and Weaving

Children love to watch stitching or weaving take shape through their own efforts. Small muscle development, spatial concept development (over, under, through, in-between, long, short), and opportunities for problem-solving come naturally from these art forms. Weaving is a natural form of art that includes the intertwining of materials. It is also a form of synthesis. When separate elements are joined to form a whole, eventually a product is made. It then becomes a thing of beauty.

Weaving and stitchery are challenging tasks for young children. Introducing the concept of "in-and-out" through games first will help young children make the transition from large-muscle movements to more fine motor movements needed for weaving. Children will first need experiences with materials that are easy to manipulate (chicken wire and pipe cleaners; plastic strawberry baskets and ribbon; and plastic foam trays, yarn, and plastic needles). Then, as skill increases, they can move to using burlap or felt.

In the Stitchery and Weaving Center, children:

- refine hand-eye coordination.
- learn directionality.
- create patterns.
- enhance creativity.
- experience pride.
- refine sense of touch.
- develop self discipline.

Getting Organized

The Stitchery and Weaving Center can be located adjacent to (or as part of) the Art Center or adjacent to a housekeeping area. There should be ample work surfaces, shelving or other containers for supplies, enough chairs for several children to work at once, and a range of materials and tools.

Basic Equipment

- Table and shelving
- Collections of fabric scraps and strips
- Large needles (both plastic and metal with blunt points)
- Burlap pieces
- Hole punch
- Scissors, decorative pinking shears
- Weaving frames (large and small paper, wood with chicken wire or hardware cloth, plastic mesh, forked branches, six-pack rings tied together to make a frame)
- Yarn, cords, ribbon
- Beads, buttons, feathers, trims of all kinds
- Plastic foam trays
- Plastic strawberry baskets

Observations and Ideas

Early interest in sewing may be the result of wanting to embellish an art project. This may be the time to set up a separate space for sewing and weaving. Children may be encouraged to create or repair items for the housekeeping area (e.g., table linens, napkins, potholders). Sewing and weaving can be the natural extension of an activity begun in another center. Representations or examples of sewing and weaving techniques or the teacher's or children's actual projects should be available to help children see how things work (e.g., how to run stitches, set up a weaving device).

Learning Center Focus:
Music

Music is a natural bridge to learning. Children's experiences with music contribute to their cognitive, physical, and emotional-social development in many ways. Music also provides a delightful outlet for the tireless energy of young children.

Children mostly experience music in preschool and kindergarten as they sing and move together at Circle Time or during classroom transitions. Teachers often play music (be sure to include classical) in the background during appropriate times of the day. Children also need opportunities to be music makers. By exploring sound away from teacher-led experiences, children can develop their innate capacities to respond to the music of others and make music on their own and with peers.

In the Music Center, children:

- learn to identify instruments.
- explore sound using simple instruments.
- strengthen small motor skills by playing musical instruments.
- listen to a variety of musical genres.
- ref ne listening skills by noticing changes in tempo.
- make simple instruments from raw materials.
- begin to think of themselves as music makers.
- cooperate with peers to make music.
- pretend to write down their music.
- develop an appreciation for and love of music.

Getting Organized

The Music Center should be located close to the Dramatic Play Center and the Art Center so children can take advantage of natural opportunities to do crossover activities (e.g., make instruments from materials in the Art Center) or turn the Dramatic Play Center into a music venue

such as a recording studio.[11] A carpeted surface is helpful in reducing the traveling of sound. The number of children who can use the center at one time may be limited and teachers may want to have the center available only during certain times of the day.

Basic Equipment[12]

To develop musical response:

- recorded music and tape player
- props, streamers, scarves
- variety of recorded music

To understand sound:

- large canning jars, water, mallets, kitchen utensils
- maracas and drums
- coffee cans, f lm canisters, rice, beans

To create musical compositions:

- created instruments
- classroom instruments
- variety of sound sources
- large musical staff paper
- writing utensils
- cassettes and tape-recorder

To "read" music and read about music:

- collection of printed songs
- class charts of favorite songs
- notated and recorded songs
- books of familiar songs
- books about music

Questions to Promote Children's Thinking

- How does it sound?
- What would happen if ...?
- Are you making music that is loud or soft? How could you make it sound the opposite?
- What do you like about that kind of music?
- Which kind of music would you like to listen to during rest time today?
- How does the music make you feel?

To respond through creative writing:

- recorded music for story or poem starters
- writing paper, pens, and pencils for "writing down" one's own music

To respond through visual art forms (probably by moving to the Art Center):

- writing paper, drawing paper, pencils, markers, crayons, paint

Observations and Ideas

Linking the activities in the Music Center to adjacent and related centers is especially important. By being able to play freely with the tools of musicians, children are more likely to begin to think of themselves as musicians.

11 Kemple, Batey, & Hartle, "Music Play: Creating Centers for Musical Play and Exploration," 2004.

12 Adapted from "Building Connections through Music-Based Learning Centers," *by* Burton, n.d.

Children who are in high-quality early childhood programs and who have secure attachments to their preschool teachers are more likely to be prosocial and considerate of others.

Copple & Bredekamp, 2009

Social Studies

Learnings in citizenship form the heart of preschool and kindergarten programs. Social interactions, a sense of responsibility, and relationships are important parts of the curriculum and have a direct connection to the goal of graduating future-ready students from North Carolina schools.

As children play and work together under their teacher's guidance, they learn increasingly to:

- work cooperatively.
- take responsibility for their own actions.
- consider the rights and feelings of others.
- become dependable members of the group.
- share in making and carrying out group and individual plans.
- practice reasonable self-control.
- assume responsibility for the care of equipment, materials, and the appearance of their environment.
- listen to and follow directions.
- know about some of the work that adults do.
- recognize the interdependence of people in the home, school, and neighborhood.
- appreciate the contributions and differences of others.
- resolve minor conf icts.

This set of skills and attitudes overlap with children's emotional and social development and approaches to learning, and they represent the roots of good citizenship. Social studies in the early years are crucial if we expect the young people of our state to become active, responsible citizens. If children do not acquire the foundations of knowledge, attitudes, and skills in the early years, it is unlikely that teachers in later years will be successful in preparing them for citizenship in the 21st century.

In a position statement released in 1988, the National Council for the Social Studies (NCSS) said: "For elementary school children, as well as for all age groups, social studies have several purposes. The social studies equip them with the knowledge and understanding of the past necessary for coping with the present and planning for the future, enable them to understand and participate effectively

Questions to Promote Children's Thinking

- What chores do you have at home and at school?
- How do we get the food we eat?
- What stories do grown-ups tell you about when they were children?
- What things would you include in a map of your ... (e.g., classroom, school, neighborhood)?
- Why do we need to share?
- Why do we have rules for our classroom?
- How is trash collected in your neighborhood?
- What can you do to help keep your neighborhood, school, and bedroom clean?

in their world, and explain their relationship to other people and to social, economic and political institutions.

"Social studies can provide students with the skills for productive problem-solving and decision-making, as well as for assessing issues and making thoughtful value judgments. Above all, the social studies help students to integrate these skills and understandings into a framework for responsible citizen participation, whether in their play group, the school, the community, or the world."

In 2007, University of San Francisco professor (and NCSS member) Judith Pace sounded an alarm about the current state of social studies education: "High-stakes accountability based on reading and math scores is marginalizing the social studies curriculum in elementary schools. We need not only to save, but to strengthen, social studies education. Many argue that young people today are not educated to care about political matters, understand complex issues, make informed decisions, and contribute to a just society."[13] Including social studies concepts in early childhood programs is crucial to our democratic society.

Studying culture helps young children understand themselves both as individuals and as members of various groups. They learn to respect cultural similarities and differences. They recognize common and unique human characteristics and identify similarities and differences in family structure, lifestyles, ways of communicating, customs, and habits. They become active members of the classroom community.

In preschool and kindergarten, social studies content focuses on self and the child's relationship to family, school, and community. It also recognizes the importance of introducing young children to global issues and developing multicultural understanding.[14]

During these years, children experience age-appropriate social studies learning around the following themes identified by the NCSS:

Time, Continuity, Change. Young children are just beginning to understand time concepts. Learning about events of long ago is abstract and carries little meaning for them. Even though young children may not understand the concept of long ago, they are often quite interested in the past, especially as it relates to their families and themselves.

- Children can use the calendar and other artifacts to begin understanding chronological time.
- They can sequence events in their lives, such as the schedule of their school day and in the lives of family members.
- They can appreciate stories of family history and their relation to current events.
- They can understand that change affects their lives and that change can be recorded to help understand how things change.

Social studies programs should include experiences that provide for the study of the ways human beings view themselves

13 Pace, "Why We Need to Save (and Strengthen) Social Studies," 2007.

14 Mindes, "Social Studies in Kindergarten," in K Today: Teaching and Learning in the Kindergarten Year, Gullo, 2006.

in and over time. Young children experience the sequence and order of routines and the passage of time. They enjoy listening to stories of the recent past as well as long ago and can begin to recognize that individuals may hold different views about the past and to understand linkages between decisions and consequences.

People, Places, and Environments. Children's feelings about themselves are the foundations from which they learn to relate and communicate. A positive, strong sense of self helps children live and work within a group and relate to others as members of a group.

- Children can explore factors that contribute to their personal identity.
- They learn to look at themselves as individuals and to make choices and changes unique to their situations, needs, and interests.
- They develop positive self-concepts.
- Young learners draw upon immediate personal experiences as a basis for exploring geographic concepts and skills.
- They are also interested in things distant and unfamiliar that relate to their personal experiences and to happenings in their environment.

Individual Development and Identity. Young children are egocentric. Their horizons broaden as they enter play groups, preschool and kindergarten classrooms, and neighborhood and family groups. Classrooms are among the first places children experiment with behaviors, guided by caring adults who help them develop attitudes and dispositions needed to be successful group members. As children learn to be contributing, active members, they expand the quality and level of their social interactions. They begin to consider other points of view and learn to work with others for the common good.

Power, Authority, and Governance. As children see rules made and enforced at home and in school, they gain their first practical experiences with the core of politics and power and their use. Young children develop their senses of fairness and order through relationships with others. As they understand rules and their purposes, they begin to have opportunities to participate in decision-making and in establishing rules. They learn to recognize persons who hold positions of authority. Games, field trips, guest speakers, and daily interactions with children and adults in school settings provide experiences in interpersonal relationships and opportunities to develop conflict-resolution strategies.

Production, Distribution, and Consumption. Young children can learn economic concepts through appropriate incidental and structured experiences. They can, for example, begin to distinguish between wants and needs and to understand them in terms of available resources.

- Children start to recognize basic needs of people.
- They begin to understand the difference between producers and consumers and learn that money and other forms of economic exchange are used to obtain goods and services.
- They learn about how people produce, distribute, and consume goods and services.
- They can observe diverse jobs in their communities.

> Play ... is a way of learning by trial and error to cope with the actual world.
>
> Lawrence Frank

Questions for the Teacher

How can you...

- Provide opportunities for problem-solving, decision-making, and planning?
- Encourage children to get information from a variety of sources?
- Structure activities that encourage self-management?
- Structure activities that encourage social participation?
- Incorporate a variety of individual, small group, and whole group activities?
- Help children balance their sense of self with respect for others?
- Affirm children's cultures and traditions?
- Create an environment that encourages interactions?
- Establish a feeling of community in the classroom?

In the twenty-first century, young children must operate in a society that values respect for diversity.

Gayle Mindes, 2006

Science, Technology, and Society. From computers in the classroom to assistive technology, from recycling to space ships, children see science and technology touching their world. Children learn how technology influences communication and the community. They observe relationships among technology, environment, health, and welfare of citizens.

Global Connections. As young children begin to move from an egocentric perception of the world, they explore the ways they are connected to the community and the world beyond. They become increasingly aware of interdependence and the need to cooperate. Even very young children understand the need to protect the environment and what actions they can take to do that. Young children can begin to understand basic issues of respect and human rights.

Civic Ideals and Practices. Classrooms provide many opportunities to learn about and practice basic democratic ideals. These ideals can be modeled and practiced in the classroom, home, and community. Children learn the rights and responsibilities of classroom membership. They begin to understand that self-discipline and responsibility are basic to democracy.

Social studies include experiences that provide for the study of the ideas, principles, and practices of citizenship in a democratic republic. Children are introduced to civic ideals and practices by helping to set classroom expectations and by determining how to balance the needs of individuals and the group.

Current Perspectives about Teaching Social Studies

Young children learn social studies concepts through a variety of projects and playful activities that involve independent research in library books; excursions and interviewing visitors; discussions; language, writing, and reading skills; and opportunities to develop social skills such as planning, sharing, taking turns, and working in committees.

Social studies is the study of the complex and intertwined relationships between people, their environment, and their needs. When teachers use social studies as the central focus of an integrated curriculum, they can tap into children's natural curiosity about the larger world – asking questions, making observations, comparing, and sharing their discoveries. They are doing what social scientists do: using inquiry skills to learn more about the world around them (Koralek & Gayle, 2006).

The classroom is treated as a laboratory of social relations where children explore values and learn rules of social living. Relevant art, music, dance, drama, woodworking, and games are incorporated into social studies activities and projects. Multicultural and nonsexist activities and materials are provided to enhance individuals' self-esteem and to enrich the lives of all the children with respectful acceptance and appreciation of differences and similarities. Effective teaching practices incorporate:

Initiative, Choices, and Decision-Making

Experiences are designed so children can take initiative. They make choices from a variety of classroom learning centers and then make decisions about the materials they will use. They may experiment and try something new, or they may simply decide to repeat an action, using the same materials over and over again. Either way, children experience success because they select experiences that match their own interests, needs, and developmental level.

Teachers do not always protect children from making mistakes or from being disappointed.[15] By experiencing the consequences of their choices, children have

15 Dewey, *Democracy and Education,* 1944; Marion, *Guidance of Young Children,* 1995.

a chance to reflect on their actions, determine what went wrong, and determine what they would change. Learning to take initiative teaches children to develop an independence of thought necessary for them to become productive members of a democratic society.[16]

Age Appropriateness

Meaningful experiences are age appropriate. Children should not be asked to repeat things they already know or achieve objectives clearly beyond their capabilities, development, and level of maturity. If they feel successful, children come to think of themselves as learners who can and will achieve.[17] Research has demonstrated that success or failure during these early years predicts the course of later schooling.[18]

Content with Integrity and Meaning

Good teachers have always been concerned about fostering children's concept development.[19] Concepts are the ingredients for thinking. They are like mental filing cabinets where related facts are connected and organized into an idea.

Involving Others

Interacting with the physical environment is not the only way young children learn. Children also interact with their peers, teacher, and other adults to clarify their experiences. Both adults and peers are sources of information for children and serve as sounding boards against which children can test the accuracy of their thinking and knowledge.

Play

Children are given the time and opportunity to play – especially socio-dramatic play, which requires other children. Props relevant to the content encourage them to reflect on and then re-create their experiences. When children play "as if" they were the mother, baby, father, or teacher and "as if" a block was a telephone, they are thinking abstractly (symbolic play). Other types of play (e.g., board games, organized circle games, building with blocks, outdoor play, puzzles) are also a part of the curriculum. Each gives children practice in observing, sorting, ordering, discriminating, classifying, and predicting. And rough-and-tumble physical play is just as important to concept development and learning.

Questions to Promote Children's Thinking

- Who would like to pretend to be the store keeper?
- What sorts of supplies does the store keeper need to do her job?
- Have you mixed your cake yet? What ingredients will you need?
- Can you please set the table for our guests? How many places do you need?
- I'm planning a party and I need some food. Can you help me? How much are the cupcakes?
- Could you write a grocery list for us? What do we need?
- How did you feel when you went to the doctor?
- Would you like to read your baby a story?
- I would like to order a vase of flowers, please. Can you help me pick out some flowers?
- What can we do about this sick puppy?

Group Work and Projects

Children are often assigned to a small group to carry out a specific project. Children may also form groups themselves, selecting a friend or two to join in creating a mural or some other task. Other groups may include children from another class or children of differing ages. From time to time the class will meet as a whole. Listening to stories, singing songs, making decisions about their classroom, sharing news, or listening to a visitor involves the entire community of children. These experiences give children practice in following a common idea, arguing a point, listening to viewpoints, and forming their own opinions.

16 Seefeldt, Social Studies for the Preschool-Primary Child, 1993.

17 Bredekamp & Copple, 1997.

18 Alexander & Entwisle, "Achievement in the First Two Years of School: Patterns and Processes," 1988.

19 Bruner, Toward a Theory of Instruction, 1966.

Everyday Experiences

Many social studies concepts can be developed through everyday experiences in an engaging and appropriate classroom. Being part of a community of learners, children have numerous relevant opportunities to contribute to group rule and decision-making, working and collaborating with others, respecting others, and expressing opinions.[20]

Interactions with Teachers and Other Adults

Children do not learn in isolation. Adult interaction in children's learning and development is not only valuable, but necessary.[21]

Emphasis on Language Development

Language and experiences go together. You cannot have one without the other. Experiences demand listening, speaking, writing, and reading. Experiences give children something in common to talk about. A common experience such as going to the supermarket inspires themes for socio-dramatic play, murals, and other group projects. Before taking a trip, children write or dictate a list of questions they will ask; afterward, they compose a thank-you note. Following the visit, they can draw, paint, build, or write about their experiences.

Experiencing Continuity of Learning

Because children's growth is continuous, their early educational experiences must also be continuous.[22] One experience builds on another. Experiences are chosen not only because they are connected to other experiences, but also because they will enhance and deepen children's concepts, ideas, and perceptions of content. Experiences continue, each expanding and extending the other. Children have time to expand and extend their ideas and work. They know that with each school day, there will be something for them to continue doing, learning, and experiencing.

Time to Reflect

Children are given time and opportunities to think about what they are doing. Dewey (1938) maintained that children are truly engaged in learning only when they are able to reflect on an experience. Young children need space, time, and freedom to be alone once in a while.

Organizing

Children organize their experiences in different ways. They might create a display to illustrate what they have learned, or make a presentation to the entire group, talking and showing pictures. They can also draw, paint, or write about their experiences.

Evaluating

Children are asked to evaluate their own learning – to think about the things they enjoyed doing, the things that went well for them, and things they could change. As they mature, children can pick out their best work to include in a portfolio, decide how completely they acquired a skill, and rate themselves on how well they accomplished specific tasks. They can also be asked to tell about all the things they know now that they did not know at the beginning of the year (or when they were younger) and to tell what they want to learn next and how they can learn it.[23]

20 Mindes, 2006.

21 Bredekamp & Rosegrant, 1995.

22 Barbour & Seefeldt, *Developmental Continuity across Preschool and Primary Grades*, 1993.

23 Seefeldt & Barbour, *Early Childhood Education: An Introduction*, 1998.

Early Learning Expectations, Objectives, and Strategies

The NC Standard Course of Study for Kindergarten includes a specif c section on Social Studies. In addition, kindergarten teachers are encouraged to incorporate the framework of the Preschool Widely Held Expectations for Social Connections in how they think about children's learning and development. These expectations are relevant across the age range. Here are a few examples of effective teaching strategies preschool and kindergarten teachers can employ:

- Equip a dramatic play area with a variety of props ref ecting different aspects of families, communities, and cultures to encourage a true understanding of others.
- Involve children in school and community service projects.
- Involve children in the making of rules for the classroom.
- Hold class meetings to discuss concerns and issues that occur in the classroom.

Many more suggestions for teachers and families can be found in the Social Connections section of *Foundations*, pages 48-49.

Stages of Dramatic Play

Stage 1: Imitative Role Play (as early as age one)
Children try to talk, act, and dress like someone they know, using real objects as props. They depend on an element of reality in play, such as picking up a pot and pretending "to cook like daddy."

Stage 2: Make-Believe Play
Play is enriched by imagination. Being less dependent on concrete props for role-play, they may use a stick for a microphone or a blanket draped over the head to simulate long hair.

Stage 3: Socio-Dramatic Play
This stage includes pieces of Stages 1 and 2 but stands apart from them because it requires more time and verbal interaction between two or more children as they plan roles. Several children might play doctor's office – one acting as doctor, another as nurse, and a third as patient. The children talk about their roles and how the scene will be acted out.

Linking *Foundations* to the NC Standard Course of Study

North Carolina's learning expectations for preschool and kindergarten mesh closely across the domains, making it easy for teachers to find matching areas as they plan their curriculum and learning environment. Below is one example of how the Foundations Widely Held Expectations are linked with the Kindergarten Standard Course of Study Goals. You can build and update your own comprehensive expectations/objectives linkage chart – and keep it current – by visiting the DPI website (ncpublicschools.org), the Office of School Readiness website (www.osr.nc.gov), and the DPI Primary Education Section website (prim.ncwiseowl.org).

Foundations: Social Connections	**SCOS for Kindergarten: Social Studies**
Children begin to identify, value, and respect similarities and differences between themselves and others (gender, race, special needs, culture, language, history, and family structures).	**Competency Goal 1:** The learner will investigate how individuals, families, and groups are similar and different. 1.01 – Describe how individuals are unique and valued. 1.02 – Identify different groups to which individuals belong. 1.03 – Examine diverse family structures around the world. 1.04 – Recognize that families and groups have similarities and differences. 1.05 – Compare and contrast customs of families in communities around the world.

Learning Center Focus:

Dramatic Play

Imitating what happens in the world around them is the central focus of how children play. When they dress up and play with household items, they practice understanding and mastering adult roles. In playing out situations in their real lives or in pretend lives, they learn how to express themselves and think abstractly, an important precursor to reading.

Dramatic play gives children opportunities to learn new words, both spoken and written, and becomes the basis for discussions that add to comprehension. In all pretend activities, children can incorporate early experimentation with writing – using their own invented spelling to create grocery lists, letters to friends, and stories.

Fantasy play is instrumental in developing a capacity for thinking about the past (memory) and the future (imagination) and for developing linguistic skills. Pretend play elicits elaborate language and is frequently where children's first endeavors to read and write take place.

Pretend play is the foundation of children's cognitive, social, and emotional development. Children pretending by themselves is referred to as dramatic play. When two or more children take on related roles and interact with each other, dramatic play becomes socio-dramatic. Pretend play enables children to feel in control of their world. It reflects their understanding of what goes on in their lives. They practice roles, events, and social rules over and over again. Children use, see, touch, make, and imagine events and objects that have a basis within their realm of experiences.

In the Dramatic Play Center, children:

- expand their vocabulary in a variety of situations.
- match objects in one-to-one correspondence.
- identify basic economic concepts.
- experience consequences of actions in social relationships.
- address fears and worries.
- use symbols to represent real objects.

- incorporate emerging literacy skills into the roles they play.
- persevere at a task by remaining involved in a play episode.
- practice self-help skills.
- develop concepts of family by practicing roles and sequences in basic family routines.
- learn to work cooperatively and observe rules.
- engage in creative dramatic activities.
- interact and play cooperatively with others.
- discover cause and effect, interaction of materials, and change.
- learn to sort and classify objects.
- participate in leader/follower roles.
- make choices and decisions.

Getting Organized

The Dramatic Play Center needs sufficient equipment and materials to stimulate role-playing, self-expression, and initiative. It should be a clearly defined area that provides a sense of separation from the other activity centers. Shelves or cupboards can provide low walls that give the children some privacy but still allow the teacher to monitor activities. Locating the Dramatic Play Center near the Block Center will encourage cross-over play.

Basic Equipment

- Stove, sink, or refrigerator and kitchen supplies
- Large hollow blocks
- Theme props and prop boxes (hospital, restaurant, space lab, museum, grocery store, office)
- Multicultural dolls and hand puppets
- Table and chairs
- Telephones
- Cash register
- Full-length mirror
- Play food
- Dress-up clothes
- Toy iron and ironing board
- Print materials (maps, phone books, coupons)
- Writing materials
- Steering wheel
- Keys
- Flowers and plants to arrange
- Doctor and nurse kits

Observations and Ideas

Children are fascinated by what people do for a living. The Dramatic Play area can be transformed into a post office, fire station, beauty parlor or grocery store through a variety of prop boxes. A hospital prop box could be filled with bandages, stethoscopes, black bags, empty pill bottles, and hot water bottles. Prompt the creation of a shoe store by collecting a box containing an assortment of shoes, shoeboxes, and shoeshine kits with clear polish and rags. (Maybe making a simple graph about the kinds of shoes could be a companion activity.)

Don't be afraid of child-directed activities. Young children learning social skills need to learn to negotiate, compromise, persuade, and cooperate. When allowed to play, they will do all of these things. Rather than stepping in to referee each conflict, teachers should observe and be ready to help children work out problems through discussion when necessary. This will allow children to practice those skills.

Creating and Using Prop Boxes

Adding new props to the Dramatic Play Center or, as appropriate, to other learning centers will refocus children's play and give them new opportunities for learning. Collecting and storing theme-related materials in prop boxes make changes quicker and simpler.

Collect or purchase boxes of uniform size and cover them with contact paper to give a neat, uniform appearance. (Select patterns and colors that do not contribute to a visual overload.) Apple boxes, empty computer boxes, or copier paper boxes work well. Label each box and list the contents. If space is a problem, stack prop boxes two high to create a divider between centers.

> Dramatic Play is effective at teaching self-regulation in impulsive children. This makes sense. Successful dramatic play requires cooperation, joint planning, and goal-setting among children – all functions that require a great deal of self-regulation.
>
> Riley, 2008

General office

- Paper and pads of paper
- Typewriter, computer, adding machine
- Desk accessories (e.g., penholder, plastic/paper files, memo holder)
- Pens, pencils
- Posters/pictures of office workers
- File folders
- Stapler and hole punches
- Tape, tape dispenser
- Stamps, envelopes
- Phone
- Pads of forms, receipt books
- Magnets for memos

Veterinarian clinic

- Eyedroppers and empty pill bottles
- Clipboard
- Disposable masks
- Stethoscope
- Pet-care papers
- Hospital smocks
- Pictures of veterinarians at work
- Phone, message pads
- Office signs
- Latex gloves
- Grooming items
- Cloth bandages
- Small stuffed animals
- Adhesive tape
- Pet carriers

Repair shop

- Scrap wood
- Safety goggles, gloves, hard hats
- Phone
- Nuts and bolts
- Oil can
- Pictures of mechanics at work
- Screwdrivers
- Clipboards with paper for writing up orders
- Penlights
- Wrench
- Toolbox
- Vise
- Measuring tape, rulers
- Small nonfunctional appliances to work on (e.g., hand mixer, clock, toaster, radio)

School

- Paper and pencils
- Pictures of teachers working
- Write-on boards
- Self-inking stamps
- Schoolbooks and notebooks
- Magic markers
- Chalk, chalkboard, eraser

Gas station

- Cash register, play money
- Assorted tools, tire pump, lug wrench
- Car seat
- Oil cans, rags, large box decorated like a car
- Phone, message pads
- Posters from local garage, tire store
- Work clothes, caps
- Paper towels
- Steering wheel
- Hose or tubing
- Penlights
- Squeegee
- Toolbox

Beach party

- Inner tubes, beach balls
- Umbrellas
- Wading pool
- Swimsuits
- Plastic fish
- Beach towels
- Sunglasses
- Empty tanning lotion bottles
- Hawaiian leis
- Fishing poles
- Straw hats

Flower shop

- Flower/garden magazines, pictures, posters of flowers
- Plastic flowers
- Small garden tools
- Empty watering can
- Vases, baskets, foam squares
- Cash register, play money
- Empty seed packets
- Garden hats, gloves, aprons
- Phone, message pads

Accessories

- Rings, earrings, bracelets, necklaces, watches
- Small mirrors
- Jewelry boxes
- Eyeglasses, sunglasses

Bakery

- Cookie sheets, baking tins, pans
- Bowls and mixing spoons
- Phone, message pads
- Play dough
- Rolling pins, spatula
- Picture of bakers and baked goods
- Cupcake paper cups
- Measuring spoons, cups
- Aprons and hot pads
- Empty food, milk, and spice containers
- Index cards, markers

Grocery store

- Plastic foods, empty food boxes, cans
- Adding machine
- Aprons
- Pictures of grocery food items
- Grocery receipt slips
- Cash register, play money
- Grocery bags (the new reusable kind), baskets
- Coupons

Hair salon

- Hairdresser smocks
- Towels, plastic drapes to cover clothing
- Curling iron, hair dryer without cord
- Shampoo bottles, empty spray bottles
- Hair styling books and mirrors
- Phone, message pads, appointment book
- Clipboard, magazines
- Plastic drapes to cover clothing
- Perm rollers, regular rollers
- Brushes, combs, bobby pins, hair clips
- Wigs, ribbons, hair bows, headbands

Fast food restaurant

- Cash register, play money
- Posters from fast-food restaurant
- Plastic food
- Serving trays, paper fast-food containers
- Aprons, hats, caps
- Menus and bags

Integrating Technology into the Classroom

Chapter Highlights

Thanks to advances in technology, computers and the Internet have fast become an integral part of our daily lives and increasingly also have become part of children's education.

The benef ts of integrating various technologies into preschool and kindergarten programs vary depending on the kind of experiences offered and the frequency of access. To be effective, technology must become part of the entire educational environment, not used in isolation.

Studies show these kinds of gains in technology-enriched classrooms:[1]

- Children become more social and collaborative.
- They communicate effectively about increasingly complex processes.
- They become independent learners and self-starters.
- They know their areas of expertise and share spontaneously.
- They use technology routinely and appropriately.
- Their recording and writing skills improve.
- They gain a better understanding of math.
- Their problem-solving and critical thinking skills increase.

Technology is most effective when integrated into the curriculum to solve real problems dealing with topics the children are

1 Bialo & Sivin-Kachala, *The Effectiveness of Technology in Schools,* 1996; Dwyer, *Apple Classrooms of Tomorrow: What We've Learned,* 1994.

We know materials and media are frequently misused or used ineffectively in education. The bottom line on computer use in early childhood classrooms is this: Used well, computers can make a unique and substantial contribution to the education of young children.

Clements and Sarama, 2003

interested in. When children function as explorers, researchers, engaged learners, and problem-solvers, they make lasting meaning and achieve authentic learning – and technology tools can help them do that. That's why computers and other equipment for learning need to be in the classroom as opposed to isolated in a hallway or specif c room away from everyday activities.

Adults have the responsibility to advocate for appropriate uses of technology by young children. Despite revolutionary advances in educational computing, technology remains simply one tool among many. Technology should not displace the hands-on, minds-on learning of young children as they play and interact with real materials and the children and adults in their class. As Jamie McKenzie has stated[2]: "Potentially powerful and stimulating, the computer is only an inert object that never can be a substitute for the personal touch of the classroom teacher."

Possibilities and Trade-Of s

There's more to technology than computers alone. Teachers can use multimedia presentation devices, video cameras, digital cameras, interactive white boards, document cameras, digital recorders, scanners, tape recorders, CDs, and MP3 players to present information, apply new knowledge, record observations, document learning, interpret results, self-assess, and communicate with the large world outside the classroom.

None of this is free, of course. Equity requires rethinking the way we look at and use the resources we have now. It is not uncommon for programs and schools to redirect a major part of their materials budget to purchase new technology. Today's digital recordings can replace some printed materials, particularly reference materials. Teachers may be asked what they are willing to give up or trade for more technology dollars.

Are the benef ts of such decisions grounded in solid philosophies about how children learn? Is the part technology plays in assisting children to develop higher-order thinking skills and problem-solving versus accumulation of information, facts, and data well understood? Young children learn so much from experiencing their environment, we must be concerned about technology becoming the only source of information to the exclusion of meaningful, f rst-hand experiences with persons, places, and things.

Choosing Appropriate Software

More interactive software needs to be directed to preschool-age children. Interactive software can enhance the decision-making process, math exploration, problem-solving, social interactions, collaboration, and perspective formation.[3] Some software labeled "integrated learning" may be only a cluster of activities related to a subject area without consideration for development of concepts and goals. Teachers need time to explore, practice with, and plan for the uses of software in relation to the established goals for learning.

Software designed to help children explore their emerging literacy skills is especially effective. Several programs offer simple word-processing opportunities. Playing with these programs helps preschool and kindergarten children to:

- accomplish writing tasks they could not do on their own.
- compose longer and more complex stories.
- worry less about mistakes.
- gain conf dence in their emergent writing abilities.

2 In *The School Administrator,* 1998.

3 Foreman, "Literacy, Collaboration, and Technology: New Connections and Challenges," 1994.

Software Selection – Questions to Consider:

- Does the software help children learn across all the developmental domains and content areas?
- Does it use pictures and spoken instructions rather than written ones so children can work independently?
- Are children able to control the level of dif culty, pace, and direction of the program?
- Does the program engage the learner in authentic work?
- Does it have a number of different topics at varying levels?
- Do children get quick feedback to help feed their interest?
- Does the program use sights and sounds that appeal to children?
- Is the software available in other languages?
- Has the software been previewed or have children been observed using it elsewhere to determine the level of dif culty and overall quality?
- Are children encouraged to use their imagination and sense of humor?
- Do children experience success and feelings of empowerment through use of this software?
- If the program has a game element, is it pro-social, educational, free of stereotypes and violence, and fun?
- Is the software suitable for the particular learning styles and needs of children in your classroom (such as those with disabilities or who are learning English)?
- Is appropriate software available to help record and report children's progress over time?
- Are there software management programs for teachers and administrators that facilitate recording and reporting of information to parents and the community?
- Can the software be implemented in other languages (not only Spanish) to ref ect the diversity of the classroom?
- Is there software available to help teachers communicate more easily with parents?
- Are there guidelines or instruments available to assist teachers in making software selections?

Using the Internet

The Internet has become an invaluable communication and knowledge-sharing tool for educators at all levels. Research suggests that electronic networking is helping teachers connect with their peers, feel less isolated, and increase their sense of professionalism and autonomy.[4] Further, by modeling use of the Internet for professional improvement, teachers are providing an example to the children in their classes of technology being used for authentic work.

Keeping Children Safe on the Net

It goes without saying that Internet use by young children needs to be carefully monitored. This amazing tool can be both a boon and a bane! Here are some guidelines to assure that time spent online is healthy and appropriate:

- All children need a purpose when exploring online. Bookmark safe and informative sites, and help children learn to assess the quality and accuracy of information.
- Use child-friendly search engines like Yahooligans, KidsClick, and Ask Jeeves for Kids.
- Limit how long and what time of day children are allowed online.
- Help children learn Internet etiquette and vocabulary.
- Instruct children never to give their name, home address, telephone number, or school/child care setting's name without parent/teacher permission.

> For every type of lesson, it's important to ask two basic questions. What is it that we are trying to teach the children? And what technology is best suited to do that?
>
> Chip Wood, 1999

4 Honey & Henriquez, "Telecommunications and K-12 Educators," 1993.

- Instruct children never to send a photograph to someone they meet on the Internet without permission from a parent or teacher.
- Instruct children never to agree to get together in person with someone they meet on the Internet without permission from a parent.
- Instruct children to tell you if they receive an inappropriate message or material that makes them feel uncomfortable.
- Get to know the people the children in your class are interacting with on the Internet to facilitate positive communication and reduce potential risks.
- Invest in software that protects against the viewing of offensive material. Internet service providers may already have systems in place.
- Become acquainted with websites created for visual- and hearing-impaired learners as well as adaptive devices for children with other disabilities.

School districts now routinely establish acceptable-use policies to protect children using the Internet in the classroom. These policies should be adopted by the school and shared with staff, parents, and members of the community.

Adapting Technology to Special Needs

Technology should be accessible to all children in the classroom, regardless of disabilities and other special needs. Some children require adaptive accommodations. Customized boards, setups, and overlays can be made with text, sound, and icons to help with communication, reading, and writing skills. Teachers can get in touch with organizations in their area to see what is available. The Alliance for Technology Access (www.atacess.org) is a great starting point. The ATA is a group of parents, consumers, and professionals who work to help children and adults with disabilities gain access to the benefits of adaptive technology.

Such applications of adaptive technology may be used to:

- encourage movement for development of fine motor skills by use of input accommodations (e.g., switches and touch screens).
- improve range of motion with specific response adaptations.
- develop visual attending skills for sight-impaired students.
- develop auditory attending skills for hearing-impaired students.
- develop receptive language skills for language-delayed or English language learners.
- develop the ability to follow directions by use of both language versions of software.
- provide a means to use expressive language in composing and recording stories.
- discourage inappropriate behavior by providing positive reinforcement.

Learning Center Focus:
Computer

Since we live in the age of technology, it is critical that young children have an opportunity to practice computer skills and to explore the wide variety of uses for the computer and other multimedia options. Technology in its many forms offers numerous opportunities to support learning in various learning centers. This example of a center devoted to computers illustrates how emerging technologies influence the lives of children in preschool and kindergarten and how to use them appropriately.

In the Computer Center, children:

- access software that encourages them to work together as partners or as a small group versus merely taking turns.
- learn from one another and develop positive attitudes about what they are learning.
- gain confidence in their growing skills at keyboarding and accessing programs and the Internet.
- develop a greater understanding of cause-and-effect relationships.
- develop perseverance.
- develop small muscle skills, reinforce eye-hand coordination, and improve visual skills.
- develop language skills and concepts and early literacy skills.
- use their creativity with computer resources, including changing the way a software program was intended to be used.

Getting Organized

The Computer Center should be large enough to house a computer, printer, scanner, and storage for tools, and it needs to be located in an area with enough electrical outlets for all of the devices. A computer table that can be raised or lowered may be needed for children with

> For the first time in history, our job, as educators, is to prepare our students for a future that we cannot clearly describe.
>
> David F. Warlick, 2004

special needs. Consult with a physical or occupational therapist about proper positioning and alternative access devices. The computer work station should be able to accommodate two children working together; a small bench may be more effective than chairs for this purpose.

Basic Equipment

- Low table or height-adjustable computer furniture with shelves
- Computer and monitor (keyboard at elbow height and monitors at eye-level)
- Printer and scanner
- Software (usually limit choices to 8-10 programs at any one time)
- Chairs that move easily or a small bench
- Papers and writing instruments for making "notes"
- Alphabet books and dictionaries
- Display space for children's work

Observations and Ideas

Encourage children to bring their journals to the Computer Center to record any findings. Those who become skilled at something (e.g., particular software) can post their names on a Helpers List. The Computer Center offers positive experiences in peer-to-peer cooperation. A more able child may be able to support another in learning something new.

Multiple learning centers – among them Science and Math – benefit from having a computer available and not all need printers. In classrooms where space is at a premium, housing computer equipment adjacent to the Writing and Printing Center is ideal. Placing computers around the classroom helps children see how technology can be a tool to help them learn.

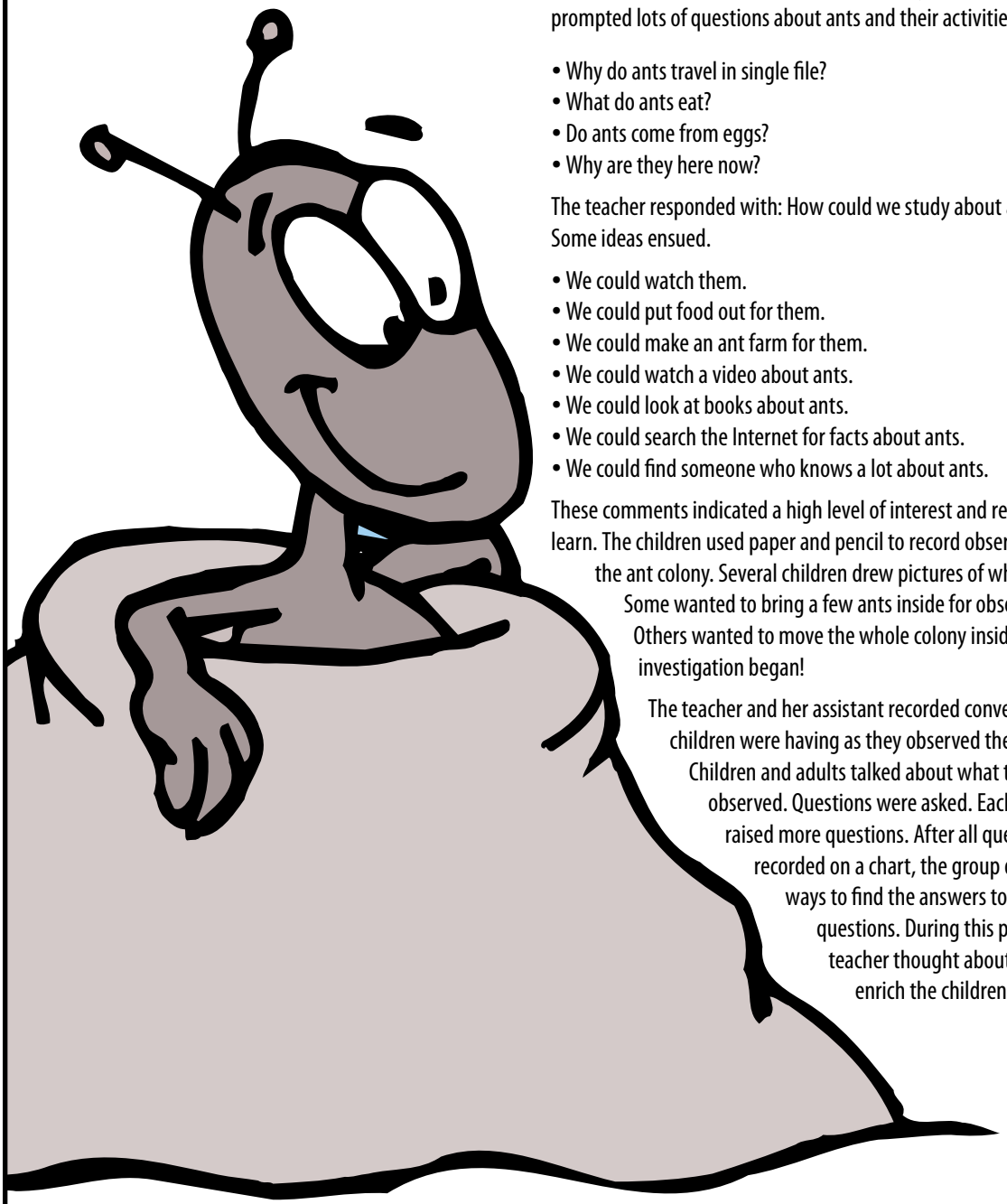
Think about how tape recorders, cameras, TVs and VCRs, and digital microscopes can also enhance learning. These technologies may have their best use as adjuncts to other learning centers.

Questions to Promote Children's Thinking

- What do you suppose would happen if . . .?
- What will you do next?
- I wonder . . .?
- I wonder if you could find the answer to that question on the Internet?
- Why do you think that?
- How did you figure that out?
- Do you have any ideas about how we might begin?
- What other ways can we show that?
- What other things can we find?
- What would you do with this?
- Tell me how you did that.
- What information did you find out?
- How can you use this information in your project?
- Where can we find out more about _____?

The Ant Project: Integrated Learning

What does a technology-literate classroom look, sound, and feel like? Sometimes, it's all about taking something very small from our everyday world and using technology (along with other learning tools) to create learnings that are larger than life to a child.



It began with children observing an ant colony near their school. This prompted lots of questions about ants and their activities.

- Why do ants travel in single file?
- What do ants eat?
- Do ants come from eggs?
- Why are they here now?

The teacher responded with: How could we study about ants? Some ideas ensued.

- We could watch them.
- We could put food out for them.
- We could make an ant farm for them.
- We could watch a video about ants.
- We could look at books about ants.
- We could search the Internet for facts about ants.
- We could find someone who knows a lot about ants.

These comments indicated a high level of interest and readiness to learn. The children used paper and pencil to record observations of the ant colony. Several children drew pictures of what they saw. Some wanted to bring a few ants inside for observation. Others wanted to move the whole colony inside. The investigation began!

The teacher and her assistant recorded conversations children were having as they observed the colony. Children and adults talked about what they observed. Questions were asked. Each question raised more questions. After all questions were recorded on a chart, the group discussed ways to find the answers to their questions. During this process the teacher thought about ways to enrich the children's knowledge.

The Ant Project: *(continued)*

When children were asked "How do we find out the answers to our questions?" a multitude of possibilities became available. Together they decided to find answers to the following:

- How can we record what they do?
- If we put out food, what will they eat?
- Where will they take it?
- Will more ants come to help the others?
- Shall we leave the ants here or should we move them?
- How do we show others what we have learned?

These tasks were investigated. Children recorded information by making drawings of what they saw. They then dictated to an adult what they saw happening. Together a chart was made to show which foods were favorites of the ants, where they took the food, and how they worked together as a team. *If You Were an Ant*, a book by S.J. Calder, was read and reread to the children.

The teacher reminded the children of techniques for recording ideas and information:

- Making a list
- Drawing and labeling
- Taking notes
- Collecting key words
- Using headings
- Using photos and video
- Using models
- Using data collection sheets

The children began their study by employing some of those techniques. Pencil and paper were taken outside to make drawings and take notes. Children lay down in the tall grass to try to see things from an ant's perspective. A magnifying glass and microscope aided in detailed drawings. Some drawings were done with crayon and some were drawn in Kid Pix.

The media specialist helped locate books, CD-ROMs, laser discs, and video. A chart was made to show which foods the ants took from the variety offered. One child continued the study at home, involving the family in discussions about what happens when ants come inside the house and safe ways to get them out of the house. The family found additional materials at the public library and decided to purchase a book about ants for the family library.

The children made ant antennae to wear on their heads as they marched to the song "Ants Go Marching." They watched a short video called "Little Creatures Who Run the World," from the PBS program "NOVA." Children talked about what life would be like as an ant; some dictated a story into the computer to hear themselves reading it back. More questions kept arising during their work. Why do people poison ants? Are ants good for anything? Do they drink water?

The children became great interviewers of the park ranger. They e-mailed an expert at the Smithsonian Institution with questions about their specific ants. They still had not answered the question about leaving the ants alone or poisoning them. They constructed ant models from pieces of foam and pipe cleaners. The science teacher provided a microscope for improving detailed observations. Drawings and conversations brought forth more knowledge. Magnifying glasses were taken out to the ant hill as well as used with the ant farm in the classroom. One parent invited the class to come to her farm to visit a huge ant colony.

The kindergarten class then invited first graders to visit and share the information they had gathered. Each child had dictated a story about what he/she knew about ants before and what he/she knows about ants now. Some students shared their drawings and talked about what it would be like to be an ant. One student with a communication delay took a first grader by the hand and escorted him to the ant farm, handed him the magnifying glass, and then took him to the microscope. The first graders had been reading *The Ant and the Grasshopper*. When they returned to their own classroom, they asked their teacher if they could make a puppet show for the kindergarten students.

After much discussion with the park ranger and the expert at the Smithsonian, the children decided to let the ants stay where they were. They were

not harmful, and ant poison was dangerous to the environment in many ways.

Parents came for conferences a week later and the children were asked to add a piece of their work to their portfolio that showed how much they had learned about ants. They then described for the parents why they selected that particular piece. The children created a rubric for looking at quality in their work.

A Multitude of Learning

Discovery and literacy development in science, social studies, language arts, mathematics, communication, social skills, self-assessment, reflection, and technology took place during this integrated project. Multiple tools of technology were available for use, and also plentiful activities that did not use technology. There were ample opportunities for free play.

At the conclusion of any study, it is important for the child to have an opportunity to share the results with others (e.g., a teacher, classmate, administrator, another class). Technology may play a part in this, or it may not. Possibilities include:

- A PowerPoint presentation
- An oral report illustrated with drawings, charts, and models
- Reading a book the child wrote, illustrated, or dictated
- Digital photographs or videos

Adapted from "A Project on Ants" by Bette Gibson, 1999, in S. Chard's The Project Approach: Project Examples.

Some suggested activities

- Purchase an ant farm for in-classroom observation.
- Do a search on the Internet.
- Take a virtual visit to the Smithsonian (www.si.edu) to see the types of ants that exist.
- Observe outside and find the accurate name for the ants we see.
- Use a software drawing program to record observations.
- Invite the park ranger in to talk about the ants we might find in the wooded area near the school and invite him to go with us on a field trip to observe.
- Record the conversations the children have as they watch the ant farm in the room. "Why are they making tunnels?" "How can they carry such big pieces?" "Why is one ant bigger than the rest?"
- Photograph ant activity over time.
- Take a field trip to a farm to observe ants at work in a different location.
- Give a presentation to another class on what has been learned through their investigations.
- Videotape the presentation to be shown to parents at conference time.

Early Learning Resources and References

Highlights

Glossary

Alphabetic principle: The understanding that there are systematic and predictable relationships between written letters and spoken sounds.

Assessment: A systematic procedure for obtaining information from observation, interviews, portfolios, projects, tests, and other sources that can be used to make judgments about characteristics of preschool and kindergarten children and their programs.

Assistive technology: Any item, piece of equipment, product or system, whether acquired commercially off the shelf, modified, or customized, that is used to maintain or improve the functional capabilities of anyone with disabilities.

Communication: The ability to give and receive thoughts, information, and ideas. Communication takes many forms – gestures, facial expressions, images, words, sentences, stories – and is accomplished through many languages.

Comprehension: Understanding what is heard or read.

Concepts of print: Children's understandings about the functions, structure, and conventions of written language.

Developmentally appropriate practice: The process of making decisions about the care and education of children based on what is known about child development and learning; what is known about the strengths, interests, and needs of the individual child; and knowledge of the social and cultural contexts in which children live.

Domain: A way to categorize various aspects of human development and learning. The Guide for the Early Years addresses five domains: emotional and social development, cognitive development, language development and early literacy, health and physical development, and approaches to learning.

Environmental print: Print that is encountered outside of books and is an integral part of everyday living.

Expectations/competencies: Appropriate learning standards for students, designed as a framework for quality. Referenced in the Guide as Widely Held Expectations for Preschool and the NC Standard Course of Study for Kindergarten.

Expressive language: Includes speaking and other means of communication such as sign language and the use of communication devices.

Family: Includes biological parents (custodial and non-custodial), adoptive parents, foster parents, step-parents, grandparents, other relatives of significance to the child, and siblings. Also, anyone who has extensive contact with a child or is a significant person in a child's life could be included.

Fluency: Achieving speed and accuracy in recognizing words, comprehending connected text, and coordinating the two.

Inclusive: Refers to a program in which all children – special needs students and students without special needs – learn together. Inclusive classrooms do not segregate children because of any characteristic related to physical or mental ability or language spoken.

Individualized Education Plan: A written plan for a child with disabilities, developed by a team of professionals and the child's family and reviewed and updated yearly.

Integrated: Refers to a program that brings together several subject areas and teaches them in relation to one idea or theme. A daily or weekly schedule in a classroom using an integrated curriculum model is rarely characterized by segments of time for specific subjects such as match, science, etc.

Intentional teaching: Refers to teaching practices that are meaningful and responsive to how children learn.

Language: An organized system of symbols used to express and receive meaning. Its main purpose is to support interaction among people.

Language delay: Refers to significant difficulties children exhibit and experience in learning to talk, understand, or use any aspect of language.

Literacy: Includes both reading and writing. Early reading involves developing knowledge and skills in oral language, vocabulary used in understanding the world, concepts of print, the alphabetic principle, and phonology. Early writing involves a progression of developing skills beginning with using symbols with meaning, then writing scribbles that have meaning, and then attempting to make letters.

Phonemic awareness: The understanding that speech is made up of a series of individual sounds.

Phonics: Instructional practices that emphasize how spellings are related to speech sounds in systematic ways.

Phonological awareness: The ability to notice, think about, and work with the individual sounds in spoken words. It is also the understanding that words are made up of speech sounds or phonemes.

Professional development: Refers to opportunities for program staff to increase their preparation and skills to care for and educate children. These include in-service training, workshops, college courses and degree programs, teacher exchanges, observations, coaching, seminars, mentoring, and credentialing programs.

Receptive language: Entails the understanding of connected speech and non-verbal modes such as signs, gestures, and picture symbols.

Research-based: Refers to program practices based on current best evidence from respected research and evaluation.

Screening: The use of a brief procedure or instrument to identify children who may need further assessment to verify developmental and/or health risks.

Speech and language disorders: Refers to problems in communication and related areas, such as oral motor function. These delays and disorders range from simple sound substitutions to the inability to understand or use language or use the oral-motor mechanism for functional speech and feeding. Causes include hearing loss, neurological disorders, brain injury, mental retardation, drug abuse, physical impairments such as cleft lip or palate, and vocal abuse or misuse.

Standardized assessment: A testing instrument administered, scored, and interpreted in a standard manner. It may be either norm-referenced or criterion-referenced.

Test: One or more questions, problems, and/or tasks designed to estimate a child's knowledge, understanding, ability, skill, and/or attitudes consistently.

Transition: Procedures and activities that facilitate a child's introduction to new learning environments. Within a program's daily schedule, it also refers to moving from one activity or place to another.

Zone of proximal development: The difference between what a learner can do without help and what he or she can do with help. The concept was developed by Lev Vygotsky, who believed the "zone" was a crucial time for full social engagement of the child in order to achieve maximum learning.

Play

Play is the major vehicle children use to learn about the world and the people and things in the world. Its importance in planning a quality learning environment cannot be overestimated. You can observe children's insights in the developmental stages of play. Children of preschool and kindergarten age will exhibit play behaviors both well below and beyond their chronological age range.

Stages of Play

Exploratory or sensory-motor play (birth to 24 months)

Children engage in activities simply for enjoyment. Examples include repetitive motor movements, such as pouring water into and out of containers, making noises with mouth or objects and repeatedly climbing up and down steps.

Relational play (9 to 24 months)

Children use objects the ways they were intended to be used. They use simple objects correctly, such as a brush for the hair; they combine related objects, such as a truck and driver; and they make objects do what they are made to do, such as pumping the handle on a top.

Constructive play (24 months and up)

Children have a goal in mind that requires transforming objects into a new conf guration (e.g., building a fence with blocks, making a face from clay).

Dramatic play (21 to 72 months)

Children pretend to do something or be someone. They pretend with objects (e.g., drink from a cup), pretend without objects (e.g., brush their teeth with a f nger), or pretend through other inanimate objects (e.g., have dolls pretend to feed the animals).

Games-with-rules play (36 months and up)

Games with rules (Rubin, 1984; Smilansky, 1968) involve the child in an activity with accepted rules or limits. The game implies shared expectations and a willingness to conform to agreed-upon procedures (Garvey, 1977). An element of competition may also be suggested, either with another child or alone (Rubin, 1984). The game can be a preset standard game, such as the card game Go Fish, or it can be a game with rules the child makes up.

Rough-and-tumble play (60 months and up)

Boisterous and physical are two ways to describe rough-and-tumble play, which Garvey (1977) def nes as "action patterns that are performed at a high pitch of activity, usually by a group," although two children can also engage in rough-and-tumble play. It can include such things as running, hopping, tickling, playful punching, or rolling around on the f oor. Aggressive behavior, in contrast to rough-and-tumble, is not done in a playful manner.

The Stages of Block Play

Stage 1: Carrying Blocks (functional play)

Young children who have not had an opportunity to play with blocks have a tendency to carry them around or transport them in moving toys. Children are experimenting with the blocks to get a sense of what they look and feel like and to know what to do with them.

Stage 2: Piling and Laying Blocks on the Floor (exploratory play)

Children make tall towers or long trains. They pile and organize blocks in any way imaginable and add different props (e.g., small people, toy cars, trucks).

Stage 3: Connecting Blocks to Create Structures (constructive play)

Children are moving from piling blocks to constructing. Roads link bridges, and problem-solving begins. Most children in Stage 3 (typically three- and four-year-olds) have had some experience playing with blocks. The techniques children use include:

Enclosures. They put blocks together to create an enclosed space and eventually use the space for dramatic play. This helps children think about mathematical concepts, particularly area and geometry.

Bridging. They f rst make bridges (setting two blocks upright and laying one block across them) as part of an enclosure and then as part of dramatic play. This helps teach balance and eye-hand coordination.

Designs. Children are fascinated with patterns, form, and symmetry, and they like to repeat their designs, sometimes until all the blocks are used. This helps them notice likenesses and differences and develops motor skills.

Stage 4: Making Elaborate Constructions (dramatic play)

By this time many children are experienced builders (four- to six-year-olds). They adapt to changes in their structures and build above, over, and around objects. The structures are remarkable, complex, and ingenious. At this stage children can label their constructions and often use them for dramatic play activities.

Stages of Sand and Water Play

Children approach these natural materials with delight and enthusiasm. It is possible to observe stages in the ways they use materials.

Stage 1: Exploration

Children actively discover the properties of both materials, which lend themselves well to sensory experiences. Children feel the grittiness of sand between their f ngers and the cool wetness of water as it streams down their elbows. They discover what these materials can do and what they can do with the materials. They observe differences between wet and dry sand. Most of the time children are happy to explore independently even when other children share the center.

Stage 2: Meaningful play

Children use all the information gathered from the previous stage. At the sand table, children play with molded sand forms – making mountains, barns, roads. At the water table, they conduct experiments and test hypothesis. At this stage children are more likely to work together on specif c projects.

Stage 3: Creative play

Children work cooperatively to represent real life experiences in their use of the materials. The water table becomes the local lake ready for the area boat race. Designs, landscapes, and structures become much more detailed at the sand table. Imaginative scenarios abound.

Stages of Dramatic Play

Stage 1: Imitative Role Play (as early as age one)

Children try to talk, act, and dress like someone they know, using real objects as props. They depend on an element of reality in play, such as picking up a pot and pretending "to cook like daddy."

Stage 2: Make-Believe Play

Play is enriched by imagination. Being less dependent on concrete props for role-play, they may use a stick for a microphone or a blanket draped over the head to simulate long hair.

Stage 3: Socio-Dramatic Play

This stage includes pieces of Stages 1 and 2 but stands apart from them because it requires more time and verbal interaction between two or more children as they plan roles. Several children might play doctor's of ce – one acting as doctor, another as nurse, and a third as patient. The children talk about their roles and how the scene will be acted out.

The Child as Image Maker: Moving from Stage to Stage

By the time children arrive at school, they have had considerable experience in image making. A scribble stage can begin as early as eighteen months if the child is given the opportunity. Research provides some insights regarding universal stages children go through in their image development. The activities and materials offered must be suited to the developmental age as well as to the interests and abilities of students. The following is a brief summary of normal image development stages.

The Scribbling Stage

At this stage, the child realizes the excitement of making a mark. The exploration of different types of marks – from straight strokes to circular lines – develops, and children achieve a greater mastery of control and placement as they continue to experiment.

The Symbols Stage

Soon after children discover they can make a mark, they realize that a drawn mark can stand for something and be named. In children's play three-dimensional objects can also become symbols. By the age of four or f ve most children are drawing pictures to tell stories and to work out problems. They develop

symbols for figures, faces, and objects in their environment. These schemas evolve as the child continues to learn from drawing and modeling experiences.

The Stage of Complexity

Beginning in early elementary school, children strive for more detail and realism in their art. They become less easily satisfied with the completeness of the composition of their drawing. The three-dimensional forms children produce also need to become more realistic to satisfy them. Symbols are replaced by attempts to represent specific objects or people.

As students move through the primary years, their passion for realism continues. This can lead to a sense of frustration if they are not helped to see that there are solutions to problems in art. With continued exploration and learning from experience children are able to learn to use symbolic, realistic, and imaginative solutions to visual problems.

To help children learn to their potential, visual art experiences must challenge and extend their ability and thinking. While there is some agreement regarding the overall pattern of artistic development, children have individual needs, interests, and capabilities. These will vary considerably and be influenced by previous experiences, knowledge, and skill; by their level of maturity, and by social and cultural background. Children may make rapid leaps forward or return to earlier forms of image-making for reasons of their own.

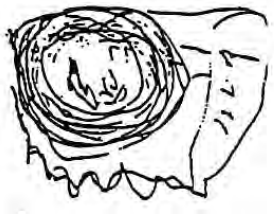
Development does not take place automatically as a result of maturation. All children need continuing and sequential learning experiences. Observing changes in the images and objects created will help teachers and parents understand, share and assist children's artistic development.

Stage 1 Disordered Scribble-Random Marks on Paper

The child does not seem to realize an ability to control the marks made on the paper.

Stage 2 Controlled Scribble

The child realizes there is a connection between the mark on the paper and the movement of his arm. Different colors may be used.



Stage 3 Naming the Scribble

Naming a scribble signifies a change in the child's thinking. Previously the child gained satisfaction from just making the marks, now these marks are connected to something meaningful. The child will make a scribble and then name it (e.g. "a doggie" or "lunchtime").

Stage 4 Floating Figures

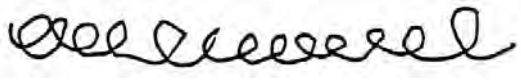
Drawings begin to resemble people. Drawings gradually gain detail.

Stage 5 Baseline

The figure is grounded on grass, floor, etc.

Stages of Writing

Stage 1 The Recurring Principle

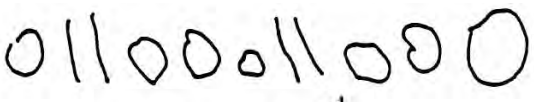


Writing is the same mark made over and over.

Stage 2 The Generative Principle

Phase A

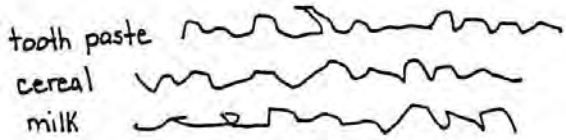
The marks that make writing are not all the same. Some are different from others.



Phase B

Writing is special marks made on paper.

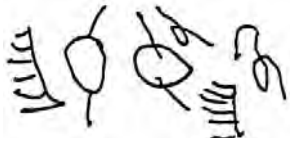
Stage 3 The Sign Principle



The marks on paper stand for something, and these marks are not pictures of those things. This stage does not always follow Stage 2. It frequently appears to develop with Stage 2 and occasionally appears in conjunction with Stage 1.

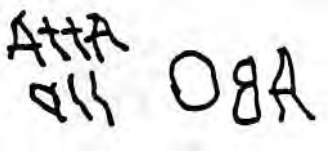
Stage 4 The Flexibility Principle

If some marks (letters) are known, others can be made from them, but not all marks are letters. Also, the same letter can be made in different ways. Sense of word, letter, and sound begin to develop.



Stage 5 The Linear Principle

Words are written on the page from left to right and from top to bottom. There is space between words. Sense of word, letter, and sounds begins to develop.



Classroom Environmental Principles

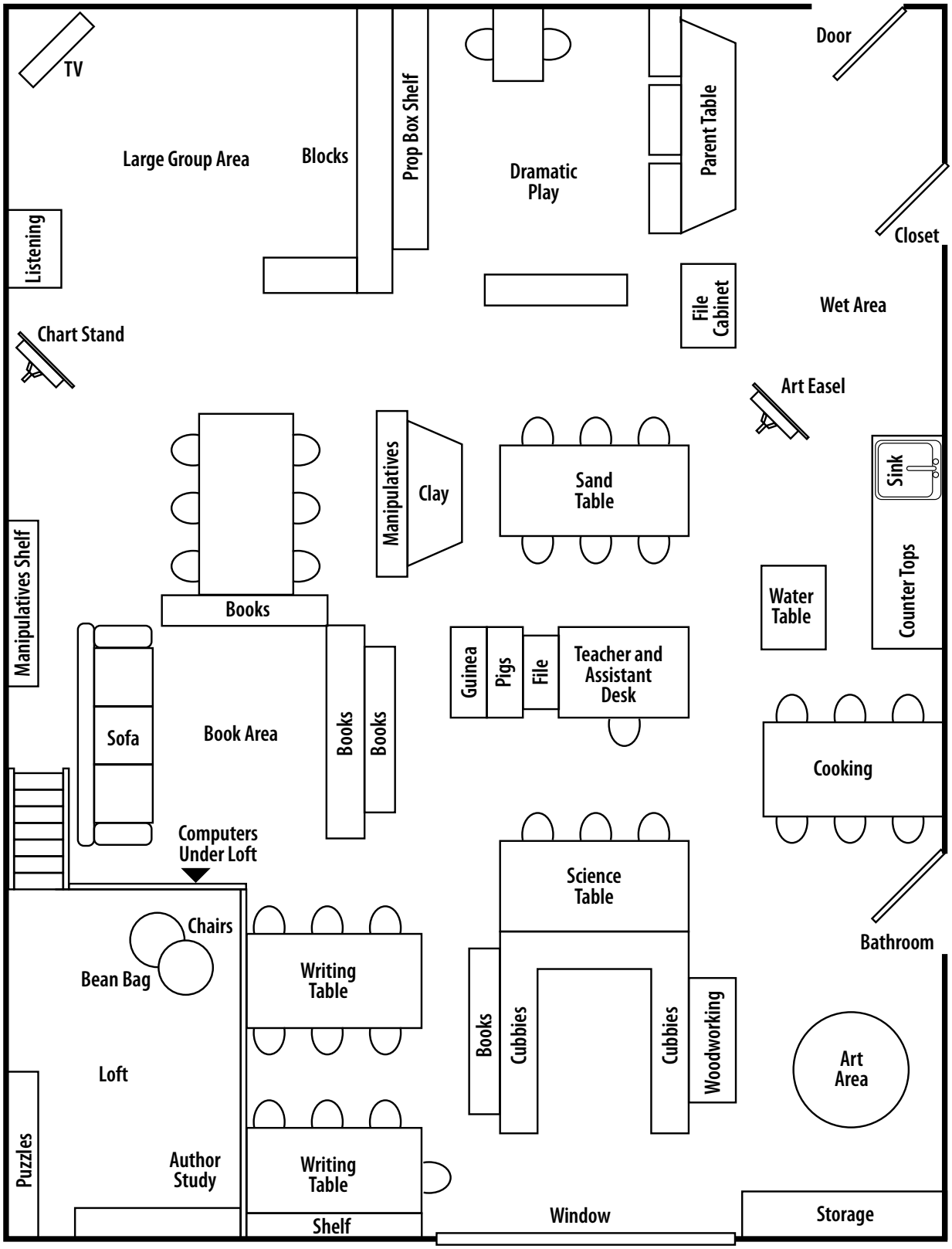
1. Centers should be **clearly def ned**. Features such as rugs or low shelves clearly convey to children where an area begins and ends.
2. Wall displays and materials should be at the **eye level** of the children.
3. The classroom needs **both cozy and spacious areas**, spaced devoted to a particular activity and others that change with the shifting interest of the child. The classroom needs at least one space for being alone.
4. The classroom should be filled with an array of **resource-rich activity centers** for groups of children. Ideally, each center would have areas for storage, surface areas, equipment plug-in, and a display place. Consider water sources and plugs when arranging the environment.
5. Dividers should be used to help contain the centers. Typically, a three-sided enclosure helps to **def ne the space**. The amount and location of the enclosures should be determined by the type of activity. For example, the block center needs to be the largest work area in the classroom and large enough for several different structures to exist. This area should also be protected from free-flowing traffic.
6. The **tables and chairs should be integrated into the centers** and spaced appropriately around the room. This avoids allowing tables and chairs to consume a large amount of the available space, and it allows for needed table space in the centers. The classroom can have a limited number of chairs, since it is not often when all of the children will be sitting at the same time. If chairs are needed, they can be pulled from various areas.
7. Large open pathways should be avoided. **Traffic patterns** should allow for free, convenient movement without encouraging running.
8. Place **noisy areas together and separate from the quiet areas** in the classroom for a more effective work/play environment.
9. The environment should be arranged to accommodate individual, small group, and large group activities. Remember that the large group area can also serve for several center opportunities.
10. When **selecting and placing** materials in your kindergarten classroom,
    a. Choose sturdy materials that will not self-destruct when children use them.
    b. Choose materials that reflect the diversity of your class/community.
    c. Place materials and equipment in their own place and in appropriate, labeled containers. Shelves are organized and free of clutter. This supports the children as they find and replace materials.
    d. Arrange and display materials so that they are inviting to the children and suggest multiple possibilities for use by being clearly visible and accessible.
    e. Change and combine materials to increase the levels of complexity, thus helping children become more self-directed and increasing their level of involvement.
11. Ideally, the **outdoor environment** is an enclosed area with immediate access from the indoor environment. This area is considered to be an extension of the indoor environment.

Environment Checklist

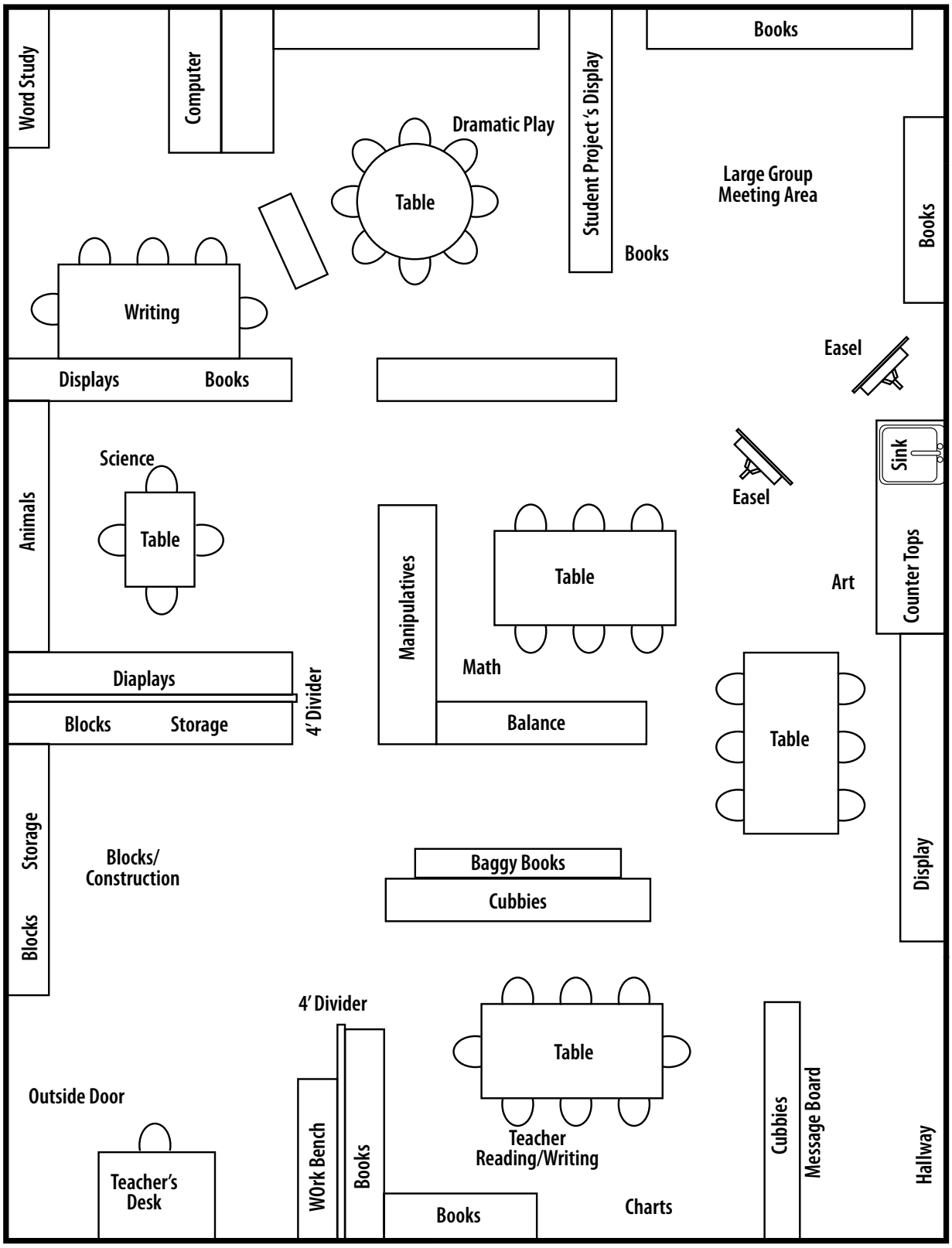
Use this checklist to help as you evaluate your own environment for children.

- ❑ The classroom is warm, caring, safe, secure, and clean.
- ❑ The classroom is inviting and aesthetically pleasing.
- ❑ Provisions for coats and/or cubbies are provided and located in an accessible and logical location.
- ❑ Centers are clearly defined.
- ❑ Wall displays and materials are at the eye level of the children.
- ❑ Displays are mostly child created, rather than commercial items.
- ❑ The classroom has both cozy and spacious areas.
- ❑ The classroom has at least one space for being alone.
- ❑ The classroom is filled with an array of resource-rich activity centers for groups of children.
- ❑ Water sources and plugs are considered in the arrangement of the environment.
- ❑ Dividers are used to help contain the centers.
- ❑ The block center is the largest work area in the classroom and large enough for several different structures to exist. It is also protected from free-flowing traffic.
- ❑ Tables and chairs are integrated into the centers and spaced appropriately around the room.
- ❑ Each computer has two chairs to encourage team work/cooperative learning opportunities.
- ❑ Large open pathways are avoided.
- ❑ Traffic patterns allow for free, convenient movement without encouraging running.
- ❑ Noisy areas are placed together and separate from the quiet areas
- ❑ The environment is arranged to accommodate individual, small group and large group activities.
- ❑ The large group also serves for several center opportunities.
- ❑ Sturdy materials are chosen that will not self-destruct when children use them
- ❑ Materials that reflect the diversity of your class/community are present.
- ❑ Materials and equipment are placed in their own place and appropriate containers
- ❑ Material containers are labeled, shelves are organized, and free of clutter.
- ❑ Materials are clearly visible and accessible.
- ❑ Materials are arranged and displayed so that they are inviting and suggest multiple possibilities for use.
- ❑ Materials are changed and combined to increase the levels of complexity, thus helping children become more self-directed and increasing their level of involvement.
- ❑ The outdoor environment is an enclosed area with immediate access from the indoor environment.
- ❑ The outdoor environment is an extension of the indoor environment.
- ❑ The outdoor environment provides opportunities for climbing, swinging, throwing, crawling, balancing, riding, and jumping.

Preschool and Kindergarten Sample Classroom Floor Plan 1



Preschool and Kindergarten Sample Classroom Floor Plan 2



Classroom Equipment and Materials (Early Childhood)

Essential Furniture

- 5-8 low storage shelf units and1-2 book display shelves
- Small plastic bins for storage
- Child-size tables and chairs
- Carpet/rug (large enough for the entire class to sit together in a semi-circle)
- Easel (for chart paper and big books)

Art Center

- 1-2 low storage shelf units
- Two-sided painting easel
- Clay and tools (cutters, garlic press, plastic knives)
- Clean-up supplies (buckets, dust pan set, sponges, liquid soap)
- Collectibles for collages and construction
- Finger paint, water colors
- Glue, crayons, markers, scissors, stapler
- Smocks/aprons
- Stitchery and weaving materials (beads, burlap, buttons, fabric scraps, feathers, frames, hole punch, large needles, weaving yarn)
- Paint brushes; paint (tempera)
- Painting paper (large)
- Painting trays (furniture coasters, muffin tins, old lunch trays)
- Paper (newsprint, manila drawing paper, colored construction paper of various sizes, shapes, and colors)

Block Center

- 2 low storage shelf units
- Complete set of hardwood unit blocks (1,200 to 1,500 pieces for a class of 20)
- Decorative props (colored cubes, carpet samples, cardboard tubes, lumber scraps, etc.)
- Props (multicultural people, vehicles, animals, signs)

Books and Listening

- 1-2 book display shelves allowing the front covers of books to be displayed
- Child size rocking chairs, soft chairs, and/or pillows
- Carpet/rug
- Alphabet materials (alphabet books, games, magnetic letters, stamps)
- Catalogs, cookbooks, magazines, maps, menus
- Flannel board and story cutouts
- Pocket chart
- Tape recorder that children can operate (with or without headsets)
- Variety of fiction/non-fiction books
- Writing tools (chalk, crayons, markets, pencils, etc.)

Dramatic Play Center

- Complete set of hollow blocks (about 20 blocks, 10 long and 10 square) and 10 boards
- AND/OR
- Housekeeping furniture (refrigerator, sink, stove)
- Props
  - — Baby dolls and clothes
  - — Briefcases
  - — Broom, mop
  - — Cash register
  - — Costume jewelry
  - — Dress-up clothes
  - — Full-length mirror
  - — Keyboards
  - — Magazines, menus, phonebooks
  - — Pocketbooks
  - — Pots, pans, utensils, dishes
  - — Telephone

Math/Manipulative Center

- 1-2 low storage shelf units
- Math manipulatives (3-D shapes, attribute blocks, color tiles, counters, dice [dot and numeral] double-six dominoes, geoboards and bands, number tile, pattern blocks, sorting trays, Unifix cubes)
- Construction Sets (Gears, Giant Stars, K'Nex, lacing cards, Lasy, Legos, links, Linking Flowers, Marbleworks, pegs and pegboards, Pop Toobs TM, rings, stringing beads, Thistle Blocks, Waffle Blocks)
- Balances, bucket and number
- Collectibles (buttons, jewels, keys, pompoms, rocks, screws, shells)
- Games
- Non-standard measurement tools (paper clips, popsicle sticks, ribbon, string, etc.) & tools to measure (cups, jugs, spoons)
- Puzzles
- Sorting materials (animal collections, frog counters, teddy bear counters, etc.)

Outdoor Area

- Swings, slides, climbers, balance beams
- Shade structures
- Balls (several sizes)
- Bird feeders & houses
- Jump ropes, hoops, scarves
- Magnifying glasses, collecting tubs & binoculars
- Outdoor center materials (musical instruments, blocks, art easels & materials, dramatic play materials)
- Sandbox area with sand, shovels, buckets, cups, molds, etc.
- Tricycles, wheelbarrows, wagons and paved paths

Sand and Water

- Sand/water table or basins
- Sand or water props
    - — Buckets, sponges, brooms, and mops for clean-up
- Cups and containers, plastic
- Funnels, plastic
- Magnifying glasses
- Measuring cups, plastic
    - — Shovels, plastic
    - — Smocks for water play

Science Center

- Animals: beetles, crickets, frogs, hamsters, grasshoppers, guinea pigs, turtles, and other animals from the everyday world; aquarium, bird feeder, bird house, terrarium, incubator,
- Balance Scale
- Funnels, tubes, cans, sieves, buckets, dishes
- Jars/containers for specimen collection
- Materials and tools to dismantle: old toys, clocks, pencil sharpeners, etc.; screwdrivers, safety goggles, pliers Microscope; large & small magnifying glasses
- Nature Collections (rocks, sea shells, nests, leaves)
- Plants, seeds, gardening tools

Writing Center

- (1-2 low storage shelf units)
- Table for small group seating
- Table for partner seating
- Variety of paper (chart paper, newsprint, drawing paper, construction paper, notepads, blank books, index cards, stationery, envelopes, greeting cards, adding machine tape, order forms)
- Writing tools (pencils, crayons, markets, chalk, etc.)
- Alphabet books, cards, games, magnetic letters
- Chalk/chalkboard; white board/markers; erasers
- Children's names and photos
- Fine Motor Materials (clothespins, hole punch, lacing cards, pipe cleaners, playdough, tongs, tracing shapes, tweezers)
- Basic Essentials

Sample Kindergarten Schedules

Kindergarten Schedule: Sample 1

Time	Description	Minutes
7:30 – 8:00	Arrival & Morning Choices	30 minutes
8:00 – 8:30	Morning Meeting	30 minutes
8:30 – 10:30	Morning Work Time & Small Groups (Snack) – *Integrated Centers: All Content Areas – Reading, Writing, Listening, Speaking, Math, Science, Social Studies, Arts, etc.* – Tidy Up	2 hours
10:30 – 10:45	Work Time Share & Review	15 minutes
10:45 – 11:15	Lunch	30 minutes
11:15 – 11:45	Recess	30 minutes
11:45 – 12:30	Story Time & Rest – *Quiet Reading; Individual Reading Instruction*	45 minutes
12:30 – 1:30	Afternoon Work Time & Small Groups – *Integrated Centers: All Content Areas – Reading, Writing, Listening, Speaking, Math, Science, Social Studies, Arts, etc.*	1 hour
1:30 – 2:00	Specials	30 minutes
2:00 – 2:30	Pack Up/ Afternoon Meeting/Home	30 minutes

Kindergarten Schedule: Sample 2

Time	Description	Minutes
7:30 – 8:15	Arrival and Morning Choices	45 minutes
8:15 – 8:45	Morning Meeting	30 minutes
8:45 – 10:15	Work Time (Snack) – *Integrated Centers: All Content Areas – Reading, Writing, Listening, Speaking, Math, Science, Social Studies, Arts, etc.*	1 1/2 hours
10:15 – 10:30	Work Time Share	15 minutes
10:30 – 10:40	Clean Up Teams	10 minutes
10:40 – 11:15	Lunch	35 minutes
11:15 – 11:45	Recess	30 minutes
11:45 – 12:30	Story Time & Rest – *Quiet Reading; Individual Reading Instruction*	45 minutes
12:30 – 1:20	Math: Monday, Wednesday, Fridays – *Whole group, small group and centers* *Writing Workshop: Tuesday, Thursdays* – Note: Math and Writing are integrated into Daily Centers and Morning Meeting Time	50 minutes
1:20 – 2:00	Specials	40 minutes
2:00 – 2:30	Pack Up/ Afternoon Meeting/ Dismissal	30 minutes

Kindergarten Schedule: Sample 3

Time	Description	Minutes
7:30 – 8:00	Arrival and Morning Choices	30 minutes
8:00 – 8:30	Morning Meeting	30 minutes
8:30 – 10:30	Center Time (Snack) – *Integrated Centers: All Content Areas – Reading, Writing, Listening, Speaking, Math, Science, Social Studies, Arts, etc.* – Clean Up	2 hours
10:30 – 11:00	Lunch	30 minutes
11:00 – 11:30	Recess	30 minutes
11:30 – 12:15	Math Workshop – Whole group, small group and centers – Note: Math and Writing are integrated into Daily Centers and Morning Meeting Time	45 minutes
12:15 – 1:00	Story Time & Rest – *Quiet Reading; Individual Reading Instruction*	45 minutes
1:00 – 1:30	Specials	30 minutes
1:30 – 2:00	Writing Workshop	30 minutes
2:00 – 2:30	Afternoon Meeting/ Pack Up/Dismissal	30 minutes

Kindergarten Schedule: Sample 4

Time	Description	Minutes
7:30 – 8:15	Arrival & Morning Choices	30 minutes
8:15 – 8:45	Morning Meeting	30 minutes
8:45 – 9:45	Literacy – *Whole Group, Small Group and Integrated Centers: All Areas – Reading, Writing, Listening, Speaking* – Tidy Up	1 hour
9:45 – 10:45	Work Time & Small Groups – (Snack) – *Integrated Centers: All Content Areas – Reading, Writing, Listening, Speaking, Math, Science, Social Studies, Arts, etc.*	1 hour
10:45 – 11:15	Lunch	30 minutes
11:15 – 11:45	Recess	30 minutes
11:45 – 12:45	Math – *Whole group, small group and centers*	1 hour
12:45 – 1:30	Story Time & Rest – *Quiet Reading; Individual Reading Instruction*	45 minutes
1:30 – 2:00	Specials	30 minutes
2:00 – 2:30	Pack Up/ Afternoon Meeting/Home	30 minutes

Kindergarten Schedule: Sample 1 (Second Semester)

Time	Description	Minutes
7:30 – 8:15	Arrival & Morning Choices	30 minutes
8:15 – 8:45	Whole Group Meeting – *Calendar/Weather, Shared Reading, Interactive Writing, Phonics Lesson, Planning of Center Choices/Activities*	30 minutes
8:45 – 10:00	Learning Centers – *Literacy, Science, Math, Social Studies, and Creative Arts Integrated into Centers* – Clean Up Time	1 hour 15 min.
10:05 – 10:50	Specials	45 minutes
11:00 – 11:30	Outdoors / Snack	30 minutes
11:30 – 11:50	Whole Group Meeting, Read Aloud *(Emergent Storybooks and other Literature)*	20 minutes
11:50 – 12:20	Writers' Workshop	30 minutes
12:20 – 1:00	Lunch	40 minutes
1:00 – 1:40	Rest / Independent Reading, Individual Reading Conferences (Emergent Storybooks and Leveled Books), One Guided Reading Group	40 minutes
1:40 – 2:10	Math Workshop, Whole Group Lesson, Math Centers	30 minutes
2:10 – 2:25	Afternoon Meeting, Reflections on the Day, Pack Up/Dismissal	15 minutes

Kindergarten Schedule: Sample 2 (Second Semester)

Time	Description	Minutes
7:30 – 8:15	Arrival & Morning Choices	30 minutes
8:15 – 8:45	Whole Group Meeting – *Calendar/Weather, Shared Reading, Interactive Writing, Phonics Lesson, Planning of Center Choices/Activities*	30 minutes
8:45 – 9:25	Math Workshop – Whole Group Lesson – Math Centers	1 hour 15 min.
9:25 – 9:55	Whole Group – Read Aloud *(Emergent Storybooks and other Literature)*	30 minutes
10:05 – 10:50	Specials	45 minutes
11:00 – 12:20	Learning Centers – *Literacy, Science, Math, Social Studies and Creative Arts Integrated in Centers (One Guided Reading Group during this time – second semester only)*	1 hour 20 min.
12:20 – 1:00	Lunch	20 minutes
1:00 – 1:40	Rest / Independent Reading, Individual Reading Conferences (Emergent Storybooks and Leveled Books), One Guided Reading Group	30 minutes
1:40 – 2:10	Writers' Workshop	40 minutes
1:40 – 2:10	Math Workshop, Whole Group Lesson, Math Centers	30 minutes
2:10 – 2:25	Whole Group Meeting, Reflections on the Day, Pack Up/Dismissal	15 minutes

Sample PreK Schedules

Sample PreK Schedule

Time	Description
7:50 – 8:05	Arrival and Free Choice Centers
8:05 – 8:25	Circle Time: Oral Language Development, Music & Movement
8:25 – 10:35	Free Choice Centers
10:35 – 10:50	Story Time
10:50 – 11:00	Transition to Lunch
11:00 – 11:30	Lunch
11:30 – 12:30	Outdoor Time – Large Motor Skills
12:30 – 1:30	Rest Time
1:30 – 2:15	Free Choice Centers/Snack
2:15 – 2:30	Clean up & Prepare for Dismissal
2:30	Dismissal
2:30 – 3:00	Planning/Parent-Teacher Conferences

Sample PreK Schedule – with specials

Time	Description
8:00 – 8:15	Arrival/Free Choice Centers (15 min.)
8:15 – 8:35	Circle Time: Oral Language Development, Music & Movement
8:35 – 9:35	Free Choice Centers & Individualized Instruction (60 min.)
9:35 – 10:05	Specials (Art, Music, Library, PE) – includes transitions to and from
10:05 – 11:05	Outdoor Time – Large Motor Skills
11:05 – 11:15	Transition to Lunch
11:15 – 11:45	Lunch
11:45 – 12:00	Story Time
12:00 – 1:00	Nap Time
1:00 – 2:00	Free Choice Centers & Individualized Instruction (60 min.)
2:00 – 2:30	Clean up, snack & Prepare for Dismissal
2:30 – 2:45	Dismissal

6.5 Hour Schedule

Time	Description
7:45-8:10	Arrival procedures/Interest Areas (25 min.)
8:10-8:40	Breakfast
8:45-9:05	Gathering time
9:05-10:35	Interest Areas - indoor and outdoor (85 min.)
10:45-11:15	Lunch
11:20-12:20	Interest Areas - indoor and outdoor (60min.)
12:20-12:30	Clean up
12:30-12:45	Story Time
12:45-1:45	Nap Time
1:45-2:15	Snack and prepare for dismissal
2:15	Dismissal

6.5 Hour Schedule (Meals in Cafeteria)

Time	Description
7:45-8:10	Arrival procedures/Interest Areas (25 min.)
8:10-8:20	Hand washing and transition to the cafeteria
8:20-8:55	Breakfast
8:55-9:10	Gathering time
9:10-10:50	Interest Areas - indoor and outdoor (100 min.)
10:50-11:00	Hand washing and transition to the cafeteria
11:00-11:30	Lunch
11:30-12:20	Interest Areas - indoor and outdoor (50min.)
12:20-12:30	Clean up
12:30-12:45	Story Time
12:45-1:45	Nap Time
1:45-2:15	Snack and prepare for dismissal
2:15	Dismissal

NORTH CAROLINA
KINDERGARTEN HEALTH ASSESSMENT REPORT

(Approved by North Carolina Department of Public Instruction and Department of Health and Human Services)

Personal Data **Please bring your child's shot records with you to this visit **

PARENT COMPLETE

Please Print Clearly - See other side for more required information. Please present completed form to your child's school.

Child's Name _____ _____ _____
(Last) (First) (Middle)

Birth Date: ____ /____ / 20 ____ (mm/dd/yyyy)

Address: _____ City: _____ State: _____ Zip: _____

Parent/Guardian Name: _____ Phone: _____

Yes	No	
☐	☐	Are you concerned about your child's health, weight, development or behavior?
☐	☐	Does anyone in your family have a condition that has affected their health, weight, development or behavior? **(Please explain in the comments section)**
☐	☐	Has your child been seen by a provider for any health, weight, development or behavior concern?
☐	☐	Has your child had a dental exam by a dentist in the last 12 months?
☐	☐	Has your child had a well-child visit or check-up in the last 12 months?

Comments: _____

Parental Consent: I agree to allow my child's health care provider and school personnel to discuss information on this form and allow the Department of Health and Human Services to collect and analyze information from this form to better understand health needs of children in NC. Signature: _____ Date:_____

HEALTH CARE PROVIDER COMPLETE

Recommendations to School Personnel Based on Health Assessment

☐ **No Recommendations, Concerns or Needs** ☐ **Requesting School Follow Up**

☐ **Medication**
- ☐ Child takes medicine for specific health conditions:
  List medication(s): 1. _____ 3. _____
  2. _____ 4. _____
- ☐ Medication must be given and/or available at school

☐ **Allergy**
- ☐ Food: _____ ☐ Insect: _____ ☐ Medicine: _____ ☐ Other: _____
- Type of allergic reaction: ☐ Anaphylaxis ☐ Local reaction
- Response required: ☐ Epinephrine Auto-injector ☐ Other: _____ ☐ None

☐ **Developmental Concerns Identified** (See comments below)
Child needs referral to school support team for further evaluation.

☐ **Special Diet**
Guidance: _____

☐ **Health-Related Recommendations to Enhance School Performance**
For example: sitting near the front of classroom, special equipment needs.
Please specify: _____

☐ **School Health Forms Attached**
- ☐ School Medication Authorization Form ☐ Diabetes Care Plan ☐ Asthma Action Plan
- ☐ Health Care Plan(s) List Condition _____

Comments: _____

Was this assessment completed in the child's regular health care provider's office? ☐ ***yes*** ☐ ***no***
If no , please provide a copy to the child's parent to give to the child's regular health care provider.

Health Care Professional's Certification - Attach a copy of the immunization record.

I certify that the information on this form is accurate and complete to the best of my knowledge.

Provider's Name: _____
Provider's Signature: _____ Date: _____
Practice/Clinic Name: _____
Practice/Clinic Address: _____
Practice/Clinic City, State & Zip: _____
Practice Phone: _____ Fax: _____

Provider Stamp Here

Personal Data

PPS-2K Rev. 1/08

PARENT COMPLETE

Child's Birthdate: _____ /_____ 20 _____ (mm/dd/yyyy)

Sex: ☐ 1 Male ☐ 2 Female

County of Residence: _____

Zip Code: _____

School your child will be attending:

_____

Place where your child gets regular health care:

☐ 1 Health Department
☐ 2 Hospital Clinic
☐ 3 Community Health Center
☐ 4 Private Doctor/HMO
☐ 5 Other _____
☐ 6 No regular place

Race:
☐ 1 Other Non-White
☐ 2 White
☐ 3 Black
☐ 4 American Indian
☐ 5 Chinese
☐ 6 Japanese
☐ 7 Hawaiian
☐ 8 Filipino
☐ 9 Other Asian
☐ 10 Unknown

Hispanic or Latino Origin: ☐ 1 Yes ☐ 2 No

Child has:
☐ 1 Medicaid
☐ 2 Private Insurance/HMO
☐ 3 No Insurance
☐ 4 Other: _____

***Doctor/Practice Name*:**

_____

HEALTH CARE PROVIDER COMPLETE

Date of Health Assessment: ____/____/____

The health assessment must be conducted by a physician licensed to practice medicine, a physician's assistant as defined in General Statute 90-18, a certified nurse practitioner, or a public health nurse meeting the state standards for Health Check Services.

Immunizations - Attach a copy of the immunization record.

Pertinent Illnesses, Risks or Developmental Problems: *(Please check all that apply)*

☐ Allergy
☐ Anemia ☐ At-Risk for Anemia
☐ Asthma
☐ Attention/Learning
☐ Bleeding Problems
☐ Cancer/Leukemia
☐ Cerebral Palsy
☐ Cystic Fibrosis
☐ Dental Problems
☐ Diabetes
☐ Emotional/Behavioral
☐ Encopresis
☐ Enuresis (Daytime)
☐ Genetic Disorders
☐ Heart Problems
☐ Hearing Problems
☐ Kidney Problems
☐ Lead (Hx of >10 mcg/dL) ☐ At-Risk ☐ Test done
☐ Obesity
☐ Orthopedic Problems
☐ Prematurity (<32 wks. EGA)
☐ Seizures/Convulsions
☐ Sickle Cell Anemia ☐ Trait
☐ Speech/Language
☐ Tuberculosis ☐ At-Risk for TB
☐ Vision Problems
☐ Other: _____
☐ None

Screening Results

Developmental

Screening Tool(s) Used:

☐ 1 PEDS ☐ 4 PSC
☐ 2 ASQ ☐ 5 ASQ-SE
☐ 3 CDI/CDR ☐ 6 Brigance

Developmental Domain Tested	Within Normal 1	Concern Identified 2	Referred to Specialist 3
Emotional/Social	☐	☐	☐
Problem Solving	☐	☐	☐
Language/Communication	☐	☐	☐
Fine Motor Skills	☐	☐	☐
Gross Motor Skills	☐	☐	☐

Comments:

_____
_____
_____

Hearing

Hearing	1000 Hz	2000 Hz	4000 Hz
Right			
Left			

Indicate Pass (P) or Refer (R) in each box. Refer means any failure at any frequency in either ear at >20dB.

Screening Tool Used:

☐ 1 OAE
☐ 2 Audiometry

☐ 1 Pass
☐ 2 Scheduled for re-screen due to middle ear fluid. Re-screen appt. in _____ weeks.
☐ 3 Referral to audiologist/ENT (check if yes)
☐ 4 Child has previously diagnosed hearing loss. Screening is not necessary.

Vision

Please remember that vision screening is not a substitute for a comprehensive eye examination.

	Right	Left	Stereopsis ☐ Pass ☐ Fail
Far:			Acuity Test Used:

Was test performed with corrective lenses? ☐ ***yes*** ☐ ***no***

☐ 1 Pass (Acuity, Stereopsis, & Symptoms)
☐ 2 Referral to eye doctor (check if YES) Refer if worse than 20/40 in either or both eyes, a two line difference between eyes, unable to test, failed stereopsis, or signs of disease.
☐ 3 Child has a diagnosed vision condition and has had an eye exam in the last 12 months. Screening is not necessary.

Physical Examination

Weight: _____ lbs. Height: ___ ft. ____ in.

Body Mass Index (BMI) - for age: _____

☐ 1 Normal (5%ile - <85%ile)
☐ 2 Underweight (<5%ile)
☐ 3 At-Risk (85%ile to <95%ile)
☐ 4 Overweight (95%ile)

Blood Pressure: _____ / _____

☐ 1 Within Normal Range
☐ 2 > 90th Percentile (_____ %ile)

	Normal 1	Abnormal 2
HEENT	☐	☐
Dental/Oral	☐	☐
Lungs	☐	☐
Cardiac	☐	☐
Abdomen	☐	☐
Neurological	☐	☐
Back/Extremities	☐	☐
Genital	☐	☐
Skin	☐	☐

Comments: _____

_____

-Back-

KINDERGARTEN HEALTH ASSESSMENT INSTRUCTION SHEET FOR PARENTS

There are two sections on the form that you will need to fill out. Please print clearly.

Front: "Parent Complete."

Please write in:

1. Your child's name with last name first, then first name, then middle name or initial.

2. Your child's date of birth, starting with month, day, and year.

3. Your child's entire address, including city, state, and zipcode.

4. Your name and the phone number at which you can be reached. This may be a home number, work number, or cell phone number.

5. There are some statements that are about your child. Please answer each one by filling in the box, either "Yes" or "No":

    - Does your child have a problem that bothers you about his or her general health, how much he or she weighs, how he or she is growing, or about the way your child acts?
    - Have you taken your child to the doctor for any of these problems?
    - Does anyone in your family have any of these problems? If so, please write about it on the lines below.
    - Has your child been to the dentist in the last year?
    - Has your child been to the doctor for a checkup, not because he or she was sick, in the last year?

There is a space on the form for you to sign that will allow the school nurse to talk to your doctor about your child's health. If this is ok with you, please write your name and the date in the space. If this is not ok with you, just leave it blank.

Back: "Parent Complete"

Please write in your child's date of birth, starting with month, day, and year.

Please check the right box for your child's race. If you are not sure, check "Unknown". If your child is Hispanic or Latino, please check the box.

Please write in the county you live in, and your zip code.

Please write in the school your child will be attending.

Please check the box for where your child usually sees the doctor.

Please check the box for what kind of health insurance your child has.

Please write in the name of your child's doctor or clinic.

Kindergarten Health Assessment Glossary of Terms

1. **Anaphylaxis:** Severe allergic reaction of the whole body that may include trouble breathing and itchy rash. It must be treated immediately or death may occur.
2. **Anemia:** Low red blood cell levels that slows oxygen flow to the body. Children with this disorder may become very tired or have low energy levels.
3. **At-Risk:** The provider will ask you some questions to see if your child may be at risk of having these problems.
4. **BMI (Body Mass Index):** A formula that relates weight to height for measuring over and under weight in children.
5. **Cardiac:** Pertaining to the heart and circulatory system.
6. **Cerebral Palsy:** Children born with this permanent disorder have trouble moving, standing, talking, listening and understanding.
7. **Cystic Fibrosis:** Children born with this permanent disorder have trouble breathing and digesting food.
8. **Diabetes:** Children who have this have trouble controlling their blood sugar. These children eat foods that are low in sugar or need medicine or shots to help control their blood sugar.
9. **EGA (Prematurity):** Baby born earlier than 8 weeks before the due date.
10. **ENT:** Ear, Nose and Throat Specialist
11. **Epinephrine auto-injector:** Automatic shot of medicine for severe allergic reactions prescribed by the doctor
12. **Encopresis:** Children with this have trouble controlling bowel movements.
13. **Enuresis:** Children with this have trouble controlling passage of their water.
14. **HEENT (Head, Eyes, Ears, Nose & Throat):** An examination of the head, eyes, ears, nose and throat done by the doctor.
15. **HMO (Health Maintenance Organization):** Type of medical provider group.
16. **Hx:** Abbreviation for "history." For example: Has your child ever had problems with high levels of lead in his/her blood?
17. **School Follow Up:** When this box is checked, the form should go to the School Nurse so he/she can follow up on any health concerns documented on the form.
18. **Sickle Cell Anemia:** Children born with this permanent disorder have blood problems that cause severe pain and trouble breathing that comes and goes.
19. **TB (Tuberculosis):** Children with this illness have trouble breathing and coughing. Children who have this condition are on medication to cure this illness.
20. **Test Done:** The provider will ask you if your child has ever been tested for high levels of lead in their blood.

Developmental Screening Tools: Tools used by the doctor to see if a child is developing normally.

- **ASQ:** Ages and Stages Questionnare
- **ASQ-SE:** Ages and Stages Questionnare for Social and Emotional Behavior
- **Brigance:** A developmental testing tool for doctors to use.
- **CDI:** Child Development Inventory or Communication Developmental Inventory
- **IDI:** Infant Developmental Inventory
- **PEDS:** Parent Evaluation of Developmental Status
- **PSC:** Pediatric Symptom checklist
- **OAE:** Otoacoustic Emissions Test (Sounds that are produced by healthy ears in response to acoustic stimulation.

Position Statements

Position Statements 1-13 originated in *The Primary Program: Growing and Learning in the Heartland,* Nebraska Department of Education, 1993, and are used with permission.

Position Statements

At one time or another every early education teacher, director, and administrator is called on to provide a rationale for what they do in their programs and classrooms. Parents and others may ask questions like:

- Why do the children play so much?
- Are they learning their letters?
- Will my child with a disability learn as much in this community program as in a special program?
- Why is teaming good for our program?
- Should we think about retaining my child?

Questions like these commonly arise from a lack of understanding about why programs that serve younger children look different and do things in a very different way from schooling for older children. Often, entrenched ideas about early education are resistant even to research and best practice evidence. This unfortunately has contributed to a downward drift of inappropriate practices such as the reduction and even the elimination of recess, reduction in attention to the arts, and increased use of grade retention.

This set of position statements will assist teachers and program leaders in answering questions about practices in preschool and kindergarten. They reflect current knowledge about what constitutes high-quality, developmentally appropriate early childhood education, and we encourage you to share them with parents, members of the community, and other interested parties. The statements can also form study topics for professional development within the programs.

NAEYC/SDE Position Papers

Position papers created by the National Association of Early Childhood Specialists in State Departments of Education are available online at http://naecs.crc.uiuc.edu. Content includes:

- Early Childhood Curriculum, Assessment, and Program Evaluation
- Promoting Positive Outcomes for Children with Disabilities
- Early Learning Standards: Creating the Conditions for Success
- Recess and the Importance of Play
- On the Road to Change – A National Policy for Children
- Early Childhood Teacher Certification
- Chapter 1 Services and Early Childhood Education: Problem or Promise?

- Guidelines for Appropriate Curriculum Content and Assessment in Programs Serving Children Ages 3 through 8
- The Role of State Departments of Education in Early Childhood Program Services Coordination
- Screening and Assessment of Young English-Language Learners

NAEYC Position Statements

Position statements, standards, and summaries adopted by the National Association for the Education of Young Children are available online at www.naeyc.org/about/positions.asp. Content includes:

Position Statements and Standards

- Anti-Discrimination
- Code of Ethical Conduct and Statement of Commitment
- Conceptual Framework for Professional Development
- Developmentally Appropriate Practice
- Developing and Implementing Policies to Promote Accreditation
- Early Childhood Curriculum, Assessment, and Program Evaluation
- Early Childhood Mathematics: Promoting Good Beginnings
- Early Learning Standards
- Guiding Principles for Development and Analysis of Early Childhood Public Policy
- Inclusion
- Learning to Read and Write
- Licensing and Public Regulation
- Media Violence in Children's Lives
- Prevention of Child Abuse
- Quality, Compensation, and Affordability
- Responding to Linguistic and Cultural Diversity
- Standards for Professional Preparation Programs
- Violence in the Lives of Children
- Technology and Young Children – ages 3 through 8

Where We Stand Summaries

- Curriculum, Assessment, and Program Evaluation
- Screening and Assessment of Young English-Language Learners
- Screening and Assessment of Young English-Language Learners (Spanish)
- Early Learning Standards
- Learning to Read and Write
- Learning to Read and Write (Spanish)
- Prevention of Child Abuse
- Respecting and Responding to Diversity
- School Readiness
- Standards for Professional Preparation

NASPE Position Statements

Position statements adopted by the National Association for Sport and Physical Education are available at www.aahperd.org/naspe. Content includes:

- Active Start: Physical Activity for Children Birth to 5 Years
- Appropriate Practices in Movement Programs for Young Children Ages 3-5

NASP Position Statements

Position statements adopted by the National Association of School Psychologists are available at www.nasp.org. Content includes:

- Early Childhood Assessment

National Kindergarten Alliance Position Statements

Position papers adopted by the National Kindergarten Alliance are available at www.nkateach.org. Content includes:

- Childhood: A Time for Play!
- Visual Learning is More Than Meets the Eye
- Connecting Children to Nature

Division of Early Childhood (www.dec-sped.org) Position Statements

- Inclusion
- Code of Ethics
- Research Priorities
- Challenging Behavior
- Developmental Delay
- Personnel Standards
- Promoting Positive Outcomes
- Prevention of Disabilities/Promotion of Health
- Family Culture, Values and Language

Our Program Serves ALL Children

Classrooms grounded in best-practice education, and modified to be responsive to students' differences, benefit virtually all students. Differentiation addresses the needs of struggling and advanced learners. It addresses the needs of students for whom English is a second language and students who have strong learning style preferences. It addresses gender differences and cultural differences. It pays homage to the truth that we are not born to become replicas of one another.

Tomlinson in *The Differentiated Classroom*, 1999

Effective preschool and kindergarten programs in North Carolina respond to the diversity of learners by helping children to understand, respect, and appreciate individual differences. The teacher fosters the belief that all individuals have strengths to share and things to learn from others' uniqueness.

Preschool or kindergarten settings may be the first places where children realize how they are like other children and how they are different from others. Children seem to accept these differences and similarities and to know they can succeed when they experience respect and a sense of purpose. This attitude of acceptance without competition fosters growth in ALL. It helps children to realize the benefits of appreciating each other, focusing on how they can work together to find solutions, finish projects, and set and complete goals.

Although external differences among people may be obvious, the need for safety, respect, caring, and equal opportunity for learning and growth is universal. By creating environments in which unique abilities and contributions are recognized and celebrated, the heritage, gender, culture, and talents of all members are respected.

Our program is designed to be child-centered and to recognize, value, and successfully accommodate the diversity of individual learners, including children of all ability levels. "The research evidence on these points is very strong; when children of all ability (or achievement) levels learn collaboratively, not only do those of lower and medium ability benefit substantially, but so do those of higher ability." This encompasses boys and girls who are gifted/talented and those identified as having special needs and those with challenging behaviors.

Using differentiated instruction, preschool and kindergarten teachers broaden classroom activities, objectives, and experiences to meet each child's social-emotional and academic needs.

"In differentiated classrooms, teachers provide specific ways for each individual to learn as deeply as possible and as quickly as possible without assuming one child's road map for learning is identical to anyone else's. The curriculum guide is a teacher source book that increases the number of learning opportunities available, rather than mandating identical experiences for each child."

This autonomous approach to learning in the early childhood setting allows all children the opportunity to reach their potential without the constraints of a narrow curriculum.

In the end, it is not standardization that makes a classroom work. It is a deep respect for the identity of the individual. A teacher in a differentiated classroom:

- Respects the learning level of each child.
- Expects all children to grow, and supports their continual growth.
- Offers all children the opportunity to explore essential understandings and skills at degrees of difficulty that escalate consistently as learners develop understanding and skill.
- Offers all children tasks that look – and are – equally interesting, equally important, and equally engaging.

A framework that addresses gender, culture, ability level, language, and learning style is essential. Every child who comes through the door of any classroom or center is entitled to support and guidance from adults who believe in developing that child's potential. There are characteristics that all children should expect from the teaching and learning in a healthy classroom. This begins when a teacher:

- Appreciates each child as an individual.
- Remembers to teach the whole child, considering individual, physical, social, and emotional needs.
- Continues to develop professional expertise.
- Links children and ideas.
- Strives for joyful learning.
- Offers high expectations and many opportunities for scaffolding.
- Helps children make their own sense of ideas.
- Shares the teaching with children.
- Strives clearly for child independence.
- Uses positive energy and humor.
- Knows that discipline is more covert than overt.

Educators can then plan for the child whose needs extend beyond the scope of daily practices.

"Young children with special needs are a tremendously diverse group. Two certain facts about children with special needs are they are all children and they all have unique needs. First, because children with special needs are children, they have needs shared by all children. These include physical needs for shelter, rest and nourishment, and psychological needs to be nurtured, safe, and accepted. Second, children (with special needs) have needs that are NOT shared by all other children. They need environments that are specifically organized and adjusted ... they need professionals who are competent in meeting the general needs of young children…who value working cooperatively with families to meet family needs and to help families promote their child's development."

The teacher can help children realize their areas of giftedness and can nurture those gifts. Children can also be taught to recognize the giftedness/uniqueness of others and not to be threatened by differences. When all children's gifts are nurtured, when strengths and differences are accepted and celebrated, and when learning with and leaning upon others helps individuals and the group to grow, then gender, cultural, and ability differences are addressed naturally. Teachers can expect all children to show progress toward a set of standards. When all teachers in every setting are meeting children's needs, progress is continuous and all children learn.

Achieving High Standards

To increase test scores or to be world-class in math and science without empowering students or affirming the dignity of human life is to lose the essence of what we and education are presumably all about. ... In the end, our goal must be not only to prepare students for careers, but also to enable them to live with dignity and purpose; not only to give knowledge to the child, but also to channel knowledge to humane end. ...

Boyer in *Goldberg*, 1995

It is only through the application of appropriate early childhood learning practices that rigorous early learning standards can be implemented and achieved.

Effective early childhood classrooms provide rich experiences that offer quality content and are appropriate for the learning capabilities of the children. A perception by some that the implementation of content standards is in conflict with established perspectives on early education reflects misunderstanding both of the intent of standards and how to provide effective early childhood programs.

Misunderstanding of good early childhood practices by educators can result in teaching practices that do not sufficiently challenge children to reach their highest potential.1 Preschool and kindergarten classrooms that are "experientially rich" but "content poor" are unacceptable. Likewise, learning standards must never be applied in ways that cause any young child to experience repeated failure. Failure is the antithesis of achieving high standards.

Appropriate practice is about how children learn, how highly competent teachers teach, and how family members and school personnel work cooperatively to support each child's learning and development. Standards are the target. One does not abandon good practice to lead children toward the achievement of high standards. Doing so results in the opposite outcome. Responsible practitioners ensure that expectations remain high, but that teaching practices adapt to the range of capacities of young learners, so that repeated success leads toward higher and higher achievement.

Practices that have been demonstrated to assist young children in meeting rigorous learning standards include:

- Providing high-quality and age-appropriate curriculum and instruction that emphasize direct interaction with materials, adults, and other children.
- Emphasizing early childhood literacy, including outreach by the school to children's families and the community's pre-kindergarten programs.
- Involving children in setting meaningful and accessible learning goals, selecting and managing their learning, and assessing their learning.
- Employing a wide variety of instructional approaches to assure that the learning levels and individual styles of children are accommodated.
- Reducing class sizes at the kindergarten level to below twenty.
- Keeping children and teachers together in heterogeneous groups for more than one year.
- Providing professional development that deepens teachers' content knowledge and improves instructional strategies to engage all children in learning.
- Setting explicit expectations for all stakeholders, including families and communities.
- Currently accepted practices for working with younger children are based on a newer synthesis of viewpoints about growth and learning and take into consideration what is generally understood about:
- How development and learning unfold in universal or normative patterns.
- How the patterns may differ for each individual.
- The influence of the family and of the community context, including the language and culture the child brings to school, as well as the expectations of the larger culture for what needs to be learned.

Some educators and members of the public think that setting standards and then only accepting children in school when they are "ready" to achieve these standards is the way to elevate achievement. In reality, young children are always ready to learn. They have been learning from birth, are eager to learn more and more, and can achieve quite spectacular things when caring adults (family members, caregivers, and teachers) interact in ways that help them move to that "just manageable" next level of accomplishment.

The establishment of standards is intended to increase children's opportunities to learn – not to punish them for failing to meet the standard at an arbitrarily determined point in their development. Educators and parents must work cooperatively to assure that every child receives the support and instruction needed to reach his or her highest potential.

Ethics in Early Childhood Education

Above all, we shall not harm children. We shall not participate in practices that are emotionally damaging, physically harmful, disrespectful, degrading, dangerous, exploitative, or intimidating to children.

NAEYC, *Code of Ethical Conduct,* 2005

Ethical behavior should guide the decision-making of early childhood professionals at all times.

Many things affect the decisions of teachers regarding young children in their care: family values, home culture and language, school or program policies, and society in general. Teachers are constantly making decisions about children.

Usually, decisions are made with the child's family or other professionals. But sometimes a situation will not lend itself to a clear answer and educators get caught making a decision between equally unfavorable alternatives. This kind of a dilemma is referred to as an "ethical dilemma." For example:

- Most teachers of young children know that the research related to retention suggests that it is not in the best interest of the child, educationally or emotionally. However, in some situations, grade retention is routinely practiced and encouraged for certain children. If the teacher knows of the research and is forced to practice something against her best judgment, the teacher is faced with a professional dilemma.
- A teacher may feel the employer is not following the state licensing standards for child-to-adult ratio. If he reports the situation, he may be fired, even though he is trying to improve the learning environment and he loves and needs his job. What does he do?
- A school district may require the use of punishments that conflict with an administrator/director's professional beliefs about positive discipline for children. What should she/he do?

In some cases, solving the problem is a matter of reversing what has been an unacceptable trend or practice. It may be a case of education, training, or communication with all parties. But often there is no simple answer. Often, "the right answer" doesn't surface or two values are in conf ict and the early childhood practitioner feels caught in the middle. We are forced into choosing an answer that doesn't feel right. But in every case, we must focus on doing the right thing, making an ethical decision.

The NAEYC Code of Ethical Conduct can be used to help make dif cult decisions. It is a reference to help clarify our thinking and prioritize our responsibilities. Divided into three parts, it is built upon Core Values that we hold about what we ought to do and to be with young children, the Principles that def ne practices, and Ideals, or exemplary practice. It is a professional compass for use in making a decision.

The Core Values are "deeply rooted in the history of our f eld," such as:

- Appreciating childhood as a unique and valuable stage of the human life cycle
- Basing our work with children on knowledge of child development
- Appreciating and supporting the close ties between the child and family
- Recognizing that children are best understood and supported in the context of family, culture, community, and society
- Respecting the dignity, worth, and uniqueness of each person (child, family member, and colleague)

The Ideals guide actions. Conscientious practitioners:

- Are familiar with the knowledge base of early childhood care and education and keep current through continuing education and in-service training.
- Recognize and respect the uniqueness and the potential of each child.
- Respect the dignity of each family and its culture, language, customs, and beliefs.
- Establish and maintain relationships of respect, trust, and cooperation with co-workers.
- Create a climate of trust and candor that will enable staff to speak and act in the best interest of children, families, and the field of early childhood care and education.

The Principles guide our responsibilities. The most important principle: Above all, we shall not harm children. We shall not participate in practices that are emotionally damaging, physically harmful, disrespectful, degrading, dangerous, exploitative, or intimidating to children. This principle has precedence over all others in the Code.

The Code of Ethics should guide our daily work with young children. It should be used when we make decisions and set policies. It def nes our responsibility to support children – without harm – to reach challenging and achievable goals. It can be used to open a dialogue when we face dif cult decisions. It can be used to help us "think aloud" and ref ect with colleagues who share our concern for children. As a profession, we must hold ourselves to the highest standards in order to provide safe, healthy, nurturing, and responsive settings for children when making decisions.

Home, School, and Community Partnerships that Work

The model of school, family, and community partnerships locates the child at the center.

J. Epstein, *A Comprehensive Framework for School, Family, and Community Partnerships,* 1997

Children learn best in schools that support academic excellence and encourage partnerships among school staff, families, and community members.

Effective partnerships are based on mutual collaboration and communication. Schools, families, and children want these home-school connections. Research has shown that, in most cases:

- Families want their children to do well in school and want to be involved in their child's education.
- Teachers and administrators/directors want family involvement.
- Children want their schools and families to communicate with one another.

School-family-community connections benefit everyone involved. Families give their children a clear message that learning is an important and respected endeavor. Schools give their children a clear message that the involvement of all families is valued. Administrators and directors demonstrate their respect for other viewpoints by implementing a partnership model in which staff, family members, and community members are offered genuine roles in important decision-making.

Family and community involvement in the schools has the added benefit of extending the boundaries of learning beyond the school building. Such involvement can lead to a better understanding of both school and community needs. School staff, family members, and community members are encouraged to become advocates for the schools and the community and to work together for school and community improvement.

Too often programs/schools fail to recognize and remove barriers that limit family and community involvement. The scheduling of meetings and events during the traditional school day, lack of child care for younger children, lack of transportation, language differences, and families' own educational experiences may interfere with greater involvement. Remedies can be as simple as scheduling meetings at times more convenient to families, providing child care, transportation, and translators, as needed, and creating family-friendly spaces within the schools.

Getting families more involved in schools will not necessarily lead directly to better child achievement but may have other positive effects. Epstein describes six types of involvement that may lead to changes in a child's achievement, attitudes, and behavior:

1. Parenting – To help all families establish home environments that support children's learning
2. Communicating – To design effective forms of school-to-home and home-to school communication about school programs and their children's progress
3. Volunteering – To recruit and organize parent help and support
4. Learning at Home – To provide information and ideas to families about how to help children at home with homework and other curriculum-related activities, decisions, and planning
5. Decision-making – To include parents in school decisions and develop parent leaders and representatives
6. Collaborating with the Community – To identify and integrate resources and services from the community to strengthen school programs, family practices, and child learning and development

After choosing a goal to focus on, school staff, family members, and community members can identify the type of family involvement and strategies that will help them reach that goal.

Rarely, if ever, can one person working alone create lasting, comprehensive change. Effective school-family-community partnerships require a committed team and a plan for action. The team is most likely to be successful if its membership is representative of all stakeholders. Successful teams also need access to resources and time to meet.

Before developing an action plan, school-family-community teams need to determine what is already working and what needs to be improved. The primary focus of action plans should be child success. Action plans should also contain connections to curricular and instructional reform.

Like rose gardens, school-family-community partnerships need to be nurtured. Partnerships are more likely to be successful when members trust one another, are committed to a common goal, communicate effectively, and share a commitment to the development of individual members' skills and abilities. Effective partnerships also take time. Short-term goals and planning should take place within the context of a multi-year plan.

School-family-community partnerships benefit families, schools, and the community. The primary beneficiary of these partnerships, however, is the child.

Building Effective Program/School Teams

The improvement process is sometimes easier than one thinks it is going to be. While change takes time and perseverance, if you have the patience and the will, you can be successful.

R.E. Quinn, et al, *Becoming a Master Manager,* 1996

The primary purpose of effective program/school teams is to create and maintain optimal learning environments for children. The team fosters a climate in which learning is viewed as a natural and joyful activity and all children are seen as learners, capable of working harmoniously, creatively, and productively.

What is a team? Teams are groups of individuals that share several characteristics:

- Connections among members and coordination of team functions
- Clear role expectations and responsibilities for team members
- Commitment to a common goal or purpose

To be effective, teams must include all of the adults who work with children, including teachers, specialists, non-certified staff, administrators/directors, and school board members.

While teams can be instantly created by an administrative order, building effective teams requires time, energy, and commitment. Team members need time and opportunities to build trust, to develop relationships with one another, and to establish roles and responsibilities within the team. Teams must also develop structures and strategies for effective communication among members and with other educational stakeholders including children, families, and other community members. In addition, teams need to be able to accept divergent opinions, resolve conflict, and make decisions in a timely manner. Team-building is a continuing effort as teams evaluate their own functioning and movement toward their primary purpose of program/school improvement.

Effective school teams are able to:

- Articulate the vision of the program/school and/or school district.
- Formulate a plan, set goals, and assess their progress as they work to achieve that vision.
- Communicate and collaborate effectively within the team and with children, families, and other members of the community.
- Work together to get necessary resources for themselves and their children.
- Evaluate their effectiveness.
- Accept accountability for their actions.

Effective teams function as a whole, and individual team members are both accountable to one another and to the team. "Success or failure is a team event. No outside obstacle is an excuse for team failure, and no individuals fail. Only the team can fail."

Common barriers to the creation of effective teams include:

- Administrations not fully committed to the organizational changes required to support a team environment
- Implementation of teams without first addressing the issue of trust
- Unrealistic expectations, including underestimating the time needed to build an effective team

Effective school teams benefit the staff involved, their school, and the community. Most important, effective teams create schools in which the primary focus is helping children learn.

Active Learning through Play

Play teaches the child, without his being aware of it, the habits most needed for intellectual growth, such as stick-to-itiveness, which is so important in all learning. Perseverance is easily acquired around enjoyable activities such as chosen play. But if it has not become a habit through what is enjoyable, it is not likely to become one through an endeavor like school work.

B. Bettelheim, in *Serious Players in the Primary Classroom* (Wasserman), 2000

Play is a natural and universal learning activity of children and adults. It is a lifelong need and pursuit vital to all human beings. Play is motivated by an inner drive to imagine, explore, experiment, discover, and learn.

Our program views play as a critical part of the growth and development of young children. Preschool- and kindergarten-age children learn through play, and it is the fundamental means children use to express themselves. Play is closely connected to a child's cognitive, social, emotional, and physical development. These experiences give children feedback that helps them to make sense of their world and gives adults insights into a child's development.

Play allows learners to project themselves into the realm of possibility while enabling them to develop, alter, and refine current understandings as they explore, imagine, imitate, construct, discuss, plan, manipulate, problem-solve, dramatize, create, and experiment. Through play, children demonstrate their knowledge, represent their experiences, and further explore their world.

Teachers prepare the active learning environment with time, space, and materials for play. Teachers facilitate play skills as an essential learning experience that supports the needs and abilities of all children. Children learn best when they can choose their own activities. Play is the work of children and should not be considered in conflict with academic learning for children through grade three. Adults provide opportunities for play and learning through the variety of materials and activities they provide. Children engage in the learning because it becomes an expressive activity that results from a desire to make sense of the world in which they live.

Teaching to the Ways Children Learn

There is no one best way to educate all children. We must discover a child's areas of strengths and characteristic approaches to learning. We must, as much as possible, bring the teaching to where the child is.

H. Gardner, *Frames of Mind*, 1983

Children deserve having materials and information presented in a way that engages them in their own learning. To ensure all children's success, educators must be knowledgeable about how they learn, be able to identify a child's strengths; and know how to develop strategies and techniques that encourage each child's learning.

Much has been discovered through the years about how a child learns. Our teaching practices have evolved in an additive fashion.

Piaget: A sequential flow occurs through stages of development at individual rates. Learning is based on relating new experiences to prior knowledge. Concrete, hands-on experiences and activities work best to develop a pattern of problem solving and logical thinking.

Vygotsky: Language and thought are interrelated and interdependent. An integral process of language as a means of structuring and representing knowledge is strongly supported. The "zone of proximal development" suggests the support and assistance needed for children to continue to stretch beyond what they can comfortably do.

Constructivists: Learning is an ongoing experience where children continually act upon and organize their experiences as they try to make sense of their world. The cycle of learning starts with awareness, moves to exploration, to inquiry, to utilization, and on to new awareness.

Brain Research: The neuroscientists are discovering individual uniqueness in how the brain takes in, sorts, stores, and uses information. Optimal age ranges for learning specific information have been suggested. Information must be meaningful and engage the child for learning to occur.

Multiple Intelligences: Each person has multiple types of intelligence and has more dominance in some areas of intelligence than in others. The areas of dominance suggest the preference for learning style and method of processing information.

Learning Styles: Children think and learn in many different ways. While all children can and do learn, there are variations in how they concentrate, absorb, process, and recall information.

The Value of Play: Play is the fundamental, natural, universal activity of children. Understanding the stages and development of play guides teachers in their program planning.

Active Learning: Learning occurs more easily for children who are fully engaged in meaningful activities.

- Children choose from available activities, materials, and experiences for a substantial portion of the day.
- Experiences are meaningful and learner-centered.
- Children have opportunities to ask questions, solve problems, and think independently.
- There is a range of expectations for all children.
- Children have opportunities to make decisions and to be creative.
- Learners are respected and trusted.
- Adults learn along with children.
- Mistakes present opportunities to learn.
- Content areas are integrated.
- Assessment is a part of the daily routine.

Research suggests that each child is born ready to learn, has his or her own rate of development, and has individual strengths and weaknesses. These findings continue to reinforce the uniqueness of each child. One of the greatest challenges of educators is ensuring the success of all children. Teaching must be based on how the child learns.

School Readiness

Reaching the school readiness goal will require a two-fold strategy: one part focused on supporting families in their efforts to help their children get ready for schoo, and the second on helping the schools to be responsive to the wide range of developmental levels, backgrounds, experiences, and needs children bring to school with them.

L. Katz, *Readiness, Children and Schools*, 1991

Schools must be organized around the belief that children are always ready to be nurtured and accepted, to learn, and to be successful.

Children's early success in preschool and kindergarten is the combined responsibility of parents, communities, and programs/schools. Neither schools alone, nor parents alone, nor communities alone can nurture and educate children who later will meet rigorous learning standards. Positive home and preschool environments and responsive program/schools are necessary to assure that all children enter school ready to learn and stay that way.

Concerns about school readiness in our country arise from a set of socially constructed notions about going to school, not about characteristics inherent in the child. In other words, perspectives about readiness have their sources in the particular belief systems parents and educators have about child development and the functions of schooling. Delayed entrance into kindergarten results when parents and educators worry that the program's increasing curricular expectations will compromise their child's prospects for success.

Inequities in the early experiences of children who are poor, who are learning English as a second language, and who otherwise lack the developmental support typically available to more affluent groups, are exaggerated when such children are the youngest in a class group. Bringing school entrance ages into harmony with compulsory attendance age would assist in reducing these differences and provide all children with more equitable opportunity for early success in school.

Parents tend to be more worried about school-readiness for their young sons. This may be explained by some studies that show girls are more likely than boys to demonstrate the literacy skills thought to lead to early achievement (knowing letter names) and the small motor skills (buttoning own clothes). Other research on both the social adjustment of younger children and on academic and physical skills do not show differences significant enough to warrant holding children back.

A more productive way to think about readiness is to shift thinking from "Are they ready to enter?" to "What must we do to make sure all children can be successful?" This perspective places responsibilities on adults – parents, educators, and policy-makers – to shape the early home and community environment to support children's development and learning.

The National Education Goals Panel has provided a comprehensive framework to think about the aspects of children's early development that must be in place to assure success in school. Specific academic skills often thought to be prerequisites for school success can easily be learned by children whose needs in areas have been met. The areas are health and physical well-being, emotional and social well-being, approaches to learning, language development, and general knowledge about the world around them.

Schools can play a major role in promoting learning readiness through policies and strategies designed to improve learning climates for young children from preschool through the primary grades. Ready schools:

- Smooth the transition between home and school.
- Strive for continuity between early care and education programs and elementary schools.
- Help children learn and make sense of their complex and exciting world.
- Are committed to the success of every child.
- Are committed to the success of every teacher and every adult who interacts with children during the school day.
- Introduce or expand approaches that have been shown to raise achievement.
- Alter practices and programs that do not benefit children.
- Serve children in communities.
- Take responsibilities for results.
- Have strong leadership.

Retention and Tracking

Attacking the very real problem of low achievement with retention makes for more compelling political rhetoric than advocating more complex and costly strategies for quality education. Denigrating promotion by calling it social might do something for political campaigns, but it surely does nothing to improve schooling for the children who need it most.

J. Oakes, in *Harvard Education Letter,* 1999

The fact is that neither social promotion nor retention alone can foster child success. Neither takes into consideration new insights regarding how children learn. Research on year-round schooling, ungraded primaries, and different uses of time in school suggest that the debate on social promotion is another example of how we are trying to make the practices of the early and mid-20th century work for the 21st century. Even more troubling are reports of the use of some form of retention as children move from preschool to kindergarten.

Retention should not be perpetuated on the basis of false assumptions as to its educational benef t to young children. Further, policies that delay children's entry into school and/or segregate them into extra-year classes label children as failures at the outset of their school experience and are simply more subtle forms of retention. Not only is there a preponderance of evidence that there is no academic benef t from retention or tracking in its many forms, especially for young children, but there are also worrisome threats to the social-emotional development of the child subjected to such practices.

Although research does not support grade retention, many educators and parents do. Sometimes it is true that teachers do see children who have been retained, placed in extra-year classes, or held out of school for a year making progress. It is also true that they have no opportunity to see how well the children might have progressed had they been promoted or moved along with their age-mates.

The vast majority of control-group studies that are structured to measure this comparison come down clearly on the side of promotion. Children recommended for retention but advanced to the next level end up doing as well as or better academically than comparable non-promoted peers. Children who have been retained demonstrate more social regression, display more behavior problems, suffer stress in connection with being retained, and more frequently leave high school without graduating.

Policies sanctioning retention should be highly suspect given the lack of demonstrated effectiveness and prevalent bias against certain groups of children (e.g., young-in-grade males, children of color, English language learners). The current methodology used in selecting children for retention or tracking makes it impossible to predict accurately or equitably who will benef t. Given the natural variability in children's developmental patterns in the early childhood years and the widely acknowledged unreliability of testing young children, it is unlikely that valid and reliable processes for determining who might benef t from being retained or otherwise held back can ever be applied with surety.

Pro-retention policies as a strategy for establishing rigorous learning standards are likely to be self-defeating. The lowered expectations parents and teachers develop toward retained children decrease the probability that such children will ever attain their potential. Rhetoric around the term "ending social promotion" (which has increased dramatically in the standards-based climate of today's schools) creates a climate that supports an increase in retention. The only circumstances under which it may be useful to urge the end of "social promotion" is when there is a clear understanding that we know many strategies for improving children's achievement that we are not using fully and which are less costly in both human and f nancial terms than retention. These include:

- Participation in a high-quality preschool at age three and four
- Improving the quality of infant/toddler child care settings

- Participation in full-day kindergarten
- Lowering class size
- Access to tutoring outside of class time
- Participation in summer programs and/or year-round schooling
- Participation in after- school programs
- Multiage grouping/looping/ungraded primary
- Professional development designed to institutionalize more effective teaching practices

The educational community can no longer afford to ignore the consequences of policies and practices that:

- Assign the burden of responsibility for failure to the child, rather than the program.
- Place the child at risk of further failure, apathy toward school, and demoralization.
- Fail to contribute to quality early childhood education.

Ending conditions that prevent all children from learning the most they can must be a priority for us all.

Assessment of Young Children

Young children are notoriously difficult to assess accurately, and well-intended testing efforts in the past have done unintended harm.

National Education Goals Panel, 1998

Good assessment is an important, integral part of good teaching. Assessment practices must be appropriate for young children and must be intended for the purpose of ultimately benef ting children's learning and well-being. High-stakes accountability testing of individual children is not appropriate before the end of third grade.

The current climate, which demands greater accountability and student achievement, presents teachers and program administrators/directors with decisions about how to use assessments that are appropriate for young children and, at the same time, responsive to the legitimate demands from parents and the public for clear and useful information. Knowledge about assessment and the unique development of young children is essential for making the right decisions.

Achievement Tests

As evaluation tools for young children, achievement tests are not adequate for showing how or what children are learning, the kinds of help they need, or the quality of teaching they receive. Group-administered, standardized achievement tests often measure little more than an individual's test-taking ability and should not be used to make important educational decisions about young children.

In order to help young children learn, assessment must be a part of the regular classroom program in which teachers who know the children are the primary assessors. Standardized, multiple-choice achievement tests are developed by large publishing companies that have no connection to local curricula and are not accountable to local communities. By eliminating the use of standardized tests for evaluating children and using appropriate methods instead, we can signif cantly improve the quality of education for young children (Fair Test, 1991).

Screening and Assessments

Diagnostic assessment screening and developmental assessments are used for referral and for identifying disabilities and special needs of children. The purpose of identif cation is to provide follow-up intervention with appropriate health, educational, and special services to ensure that children benef t from support for optimum growth and learning.

Assessment with screening instruments is intended to be used only for referral purposes. It should never be used for making instructional decisions, to identify children for special education, or to show growth across time. In-depth, diagnostic testing must be administered by trained specialists, and the results must always be considered within the context of multiple sources of evidence from multiple settings. Follow-up services and educational experiences must be carefully coordinated among teachers, parents, administrators/directors, and service providers.

High-Stakes Assessment

As a result of inappropriate uses of assessment instruments, or the use of a single test to make "high-stakes" decision, children are all too often tracked into high- or low-ability groups, retained at grade level, placed in extra-year classes, or screened out of "regular" classes and mislabeled or sorted into "special" classes. Such practices are not benef cial to children and, indeed, are more often harmful to them.

In some instances, high-stakes tests are being used to determine school rankings and merit pay for teachers. If tests play a signif cant role in grade advancement and are the primary basis for a school's "accountability," teachers feel compelled to spend considerable time preparing children to take tests. In such cases, the tests consume much of the school curriculum.

Valuable instructional time is lost in preparing for tests by reading isolated paragraphs and answering multiple-choice questions. Opportunities for higher-level thinking are lost when time is spent not on posing problems for which math might be used, and not in the process of coming to a natural understanding of math concepts, but on reviewing skills such as addition, subtraction, and division – all in isolation. Decisions about instruction and assessment must be made in the context of supporting the learning for all children.

Making Decisions about Testing and Other Assessments

Teachers must make instructional decisions based on their understanding of each child's learning needs and how to best support each child. This requires ongoing assessment and evaluation through:

- Observation of process.
- Observation of products.
- Communication and interaction among teachers, children, and families.

Good instructional decisions are dependent on teachers' knowledge and skills in assessment and evaluation to support optimum learning for every child.

Administrators and directors who consider using standardized tests in their early childhood programs must ask themselves how children will benef t from it.

- Why is testing to be done?
- Does an appropriate test exist?
- What other sources of information can be used to make decisions about how best to provide instruction and services for an individual child?
- How can information about a child's progress be best collected and most clearly reported to parents, the board, and the community?

In answering such questions, administrators/directors should apply principles of meaningful assessment and evaluation grounded in knowledge about how children develop and learn.

In order to avoid inappropriate interpretations and uses of assessment, a clear understanding about different types of assessment and their purposes is essential. Keeping in mind that "well-intended testing efforts in the past have done unintended harm," administrators/directors, teachers, and governing boards must not lose sight of considering the ultimate benef t to children's learning and well-being.

Technology and Young Children

Technology has …the power to help children obtain, organize, manipulate, and display information. ... Using technology for meaningful activities also helps integrate a variety of disciplines, more closely resembling activities that people undertake in the world beyond the classroom.

North Central Regional Education Laboratory, 1999

Technology can be defined as the use of a mechanical or electronic means to receive, send, or process information. It includes a broad range of tools – telephones, television, video, cameras, MP3 players, scanners, printers, computers, projection devices, laser disks, CDs, and even something as simple as a calculator. It might also include the Internet, e-mail, online discussion groups, video-conferencing, handheld devices, automobile communication systems, and cell phones.

In early education, technology should be used to enhance curriculum and first-hand experiences. Children require an integrated and well-balanced set of experiences to help them grow into capable adults who can handle social-emotional interactions as well as develop their intellectual abilities. They need real-life experiences with real people to benefit from available technologies.

In the classroom, technology can be used to:

- Prepare children for living in a dynamically changing society.
- Facilitate high standards and quality work.
- Provide all children with equity in the availability of information.
- Increase achievement by addressing children's various learning styles.
- Allow children to control selection, pace, and level of difficulty in processing information.
- Provide interactive experiences that develop curiosity, problem-solving, and independent thinking skills
- Help children develop multiple ways to communicate.
- Provide another way to communicate learning for assessment

These principles are relevant to best practice for young children:

- Early-childhood professionals use technology to facilitate child achievement.
- Software and hardware are chosen based on relevance to curriculum; software is free of violence and stereotyping.
- A technology-rich environment encourages higher-order thinking skills, problem-solving, and collaboration.
- Use of appropriate technology allows time for independent exploration and skill development.
- Equipment and materials are chosen based on the needs and interests of the children.
- Multi-sensory technology tools address individual learning styles and adaptive needs.
- Children using technology are involved in decision-making regarding the application to and assessment of their work.
- Teachers acquire in-depth professional development and support for implementing the use of technology.
- All learners have equal access to technology.
- Educational communities work together to promote the appropriate uses of technology.

Research and Best Practice

When technologies are integrated into the curriculum as a vital element of instruction to solve real problems dealing with important issues, children gain the ability to use them as natural tools for learning just as they would a pencil, chalk, or paint brush. To maximize the potential of all tools of technology, they need to be viewed on the same level with other instruments of instruction. As with all tools, adults must protect children from misuse or inappropriate use.

Computers and other equipment for learning need to be inside the classroom rather than isolated in a hallway or room away from everyday activities. Children need to be able to choose the use of such technological tools based on the work they have to accomplish. When these tools are isolated to laboratory settings for special purposes, the impact of their potential is minimized. Their use then becomes a separate unrelated subject called "Computer Literacy."

Interactive technologies become powerful tools when they are used to create multimedia presentations. Open-ended software can encourage children to articulate decision-making and planning, which leads to greater verbal interactions with others.

Interactive software enhances the decision-making process, extends math exploration and problem-solving, and supports social interactions with collaboration and perspective formation. Some software labeled "integrated learning" may be only a cluster of activities related to a subject area without consideration for development of concepts and goals.

Technology-powerful classrooms have been shown to have positive effects on the instructional process on basic and advanced skills. To be effective it must become part of the larger educational environment. Studies have shown the following gains by children:

- Children became socially aware and more conf dent.
- They communicated effectively about complex processes.
- They became independent learners and self-starters.
- They worked well collaboratively.
- They knew their areas of expertise and shared spontaneously.
- They used technology routinely and appropriately.
- Their writing skills increased.
- They gained a better understanding and a broader view of math.
- They learned how to teach others this new knowledge.
- They explored and represented information more dynamically and in many forms.
- The developed their problem-solving and critical thinking skills.

Appropriate use of technology involving young children looks like this:

- Sending an e-mail to a relative who lives overseas.
- Submitting one's story to a children's web site.
- Using the Internet as a source of news and weather reports.
- Using children's CD-ROM books for exploring and interacting.
- Taking a virtual visit to a museum or historical site.
- Interacting with a primary source of information (meteorologist, astronaut, member of Congress, librarian, historian, neighbor, or relative).
- Listening to a self-written story read back (especially useful for visually impaired children).
- Using the tools of technology for child-led conferences.
- Creating pieces of art, music, or literature using the tools of technology.
- Understanding there are quality sources of information and how to recognize them among the vast amounts of information available.
- Keeping a personal portfolio of work

Inappropriate use of technology involving young children looks like this:

- Expecting children to operate equipment without receiving adequate instruction.
- Using technology exclusively for learning concepts and skills, without teacher instruction.
- Not providing an environment for exploration that is free of violence and stereotyping.
- Expecting children to grasp concepts from skill and drill software.
- Not allowing children the use of technology for authentic work in problem-solving real issues.
- Using the computer as a reward or means of discipline.

Class/Group Size

Reducing class size to below 20 children leads to higher child achievement. This is particularly true in kindergarten, first, second, and third grades.

U.S. Department of Education, 1998

In 1998, the U.S. Department of Education released a very comprehensive research document called Reducing Class Size: What Do We Know? In its analysis of twenty years of research on class size, the study found:

- A consensus of research indicates that class-size reduction in the early grades (kindergarten through third) leads to higher child achievement.
- The most signif cant effects of class-size reduction on achievement appear when class size is reduced to between 15 and 20 children.
- Greatest results came when the teacher workload was reduced to under 20 rather than adding teacher assistants to larger classrooms.
- The related child achievement moves the average child from the 50th percentile to somewhere above the 60th percentile. For disadvantaged and minority children, the effects are somewhat greater.
- Children, teacher, and parents all report positive effects from the impact of class-size reduction on the quality of classroom activity.
- The focus on the early grades suggests that smaller classes represent a preventative, rather than a remedial, approach.
- Teachers need professional development opportunities to optimize the potential benef ts of smaller classes.

Tennessee's Project STAR is the most cited long-term research on class size. It found children in small classes outperformed children in larger classes in both reading and math on the Stanford Achievement Test. Children in small K-3 classes had better high school graduation rates, higher grade-point averages, and were more likely to enroll in post-secondary education.

Small classes in early primary grades benef t children and provide a basis for substantial education reform without necessarily requiring massive infusions of funds. Consider some potential cost saving from using small classes in grades K-3:

- Fewer retentions
- Less need for remediation and special education
- Improved behavior
- Increased achievement

How Children Benefit from Smaller Classes

- Each receives a larger portion of the educational resources represented by the teacher's instructional time.
- There is more time for each child to contribute while others listen.
- They develop better relationships with their classmates and their teacher.
- They receive more individualized attention.

How Teachers, Schools, and Parents Benefit:

- Improved classroom atmosphere
- Teachers have more f exibility to use different instructional approaches and assignments
- Enhanced instruction and assessment:
- More time to spend in small groups
- More time for individualized instruction
- More time for child-centered practices
- Greater opportunity to cover more material in greater depth

Grouping for Learning

As perhaps never before in world history, individuals are being valued for their ability to connect with other individuals and to help the groups to which they belong to be harmonious and productive.

R. Anderson and B. Pavan,
Nongradedness: Helping It to Happen, 1993

Children benefit from flexible grouping, which allows the teacher to instruct on the basis of interests and learning needs. When children are grouped by interests more frequently than by other characteristics (such as skill level), the opportunities to learn from each other are maximized. Children need chances to learn cooperatively and experience the value of collaboration. Ultimately, social interaction leads to better understanding and a consolidation of learning.

Children achieve best when groupings are varied and flexible, providing opportunities for each child to interact with a variety of children and adults. It must not involve tracking, extra-year programs, or retention.

The composition of groups affects not only how and what children learn but also the way they feel about themselves and how they relate to each other. Long-term, static ability grouping affects children negatively. Anderson & Pavan (1993) suggest that teachers:

- Assign children to heterogeneous classrooms.
- Regroup for homogeneity for teaching specific skills only and on a short-term basis.
- Assess children in skill groups frequently so those no longer needing such instruction will be assigned to different groups.

Tracking (the sorting of children by ability or prior performance for long periods of time) and retention (repeating the same grade or course) are harmful practices. "Well-documented examinations of tracking in the U.S. show conclusively that low-track children are systematically disadvantaged by low expectation, less opportunity to learn, less interesting materials, and less interesting teaching."

Tracking is unnecessary when the teacher accepts children's current levels of functioning and then focuses on helping them progress during each school term. Instruction is designed to meet the individual needs of each child instead of relying solely on grade/age-level objectives.

Extra-year programs are a form of tracking that isolates children from their peers based on external factors. This is especially true for boys and children of color. Saphier and Gower contend that "The damage to self-esteem and motivation that befalls elementary children labeled 'low-track' is deep and permanent and shows up later in secondary school performance. The cost is not only their self-esteem, but also their interest and motivation."

STILL Unacceptable Trends in Kindergarten Entry and Placement

In 1987 the first edition of this position statement was published; it has been widely cited and continues to influence thinking. Unfortunately, the practices that caused members to become alarmed in the 1980s continue – this in spite of a preponderance of evidence of their lack of benefit and even of harm to children.

NAECS/SDE, 2000

Dramatic changes in what children are expected to do upon entry and in kindergarten have resulted in well-intentioned interventions that are often inequitable, ineffective, and wasteful of limited public resources.

Classroom teachers continue to report that they have little or no part in decisions that determine curriculum and instructional methodology. Instead, those decisions are made by administrators who are influenced by public demand for more stringent educational standards and the increased availability of commercial, standardized tests.

Additional pressure on kindergarten programs sometimes comes from primary teachers, who themselves face requirements for more effective instruction and higher pupil achievement. They argue that the kindergarten program should do more. In addition, a growing number of states and localities have raised the age of kindergarten eligibility, providing further evidence of changed expectations for kindergarten education and kindergarten children.

A number of highly questionable practices have resulted from the trend to demand more of kindergarten children. These practices include:

- Inappropriate uses of screening and readiness tests.
- Discouragement or outright denial of entrance for eligible children.
- Development of segregated transitional classes for children deemed unready for the next traditional level of school.
- Increasing use of retention.

Two predominant considerations underlie these practices. The first is a drive to achieve homogeneity in instructional groupings. Some educators believe that instruction will be easier and more effective if variability within the class is reduced. There is, however, no compelling evidence that children learn more or better in homogeneous groupings. In fact, most of them learn more efficiently and achieve more satisfactory social/emotional development in mixed-ability groups.

The second is a well-intentioned effort to protect children from inappropriately high demands on their intellectual and affective abilities. When parents are counseled to delay a child's entry or when children are placed in "developmental" or "readiness" classes to prepare for kindergarten or "transitional" classes to prepare for first grade, it is often because the school program is perceived to be too difficult for some children. In this view, children must be made ready for the demands of the program, in contrast to tailoring the program to the strengths and needs of the children.

Delaying children's entry into school and/or segregating them into extra-year classes actually labels children as failures at the outset of their school experience. These practices are simply subtle forms of retention. Not only is there a preponderance of evidence that there is no academic benefit from retention in its many forms, but there also appear to be threats to the social-emotional development of the child subjected to such practices. The educational community can no longer afford to ignore the consequences of policies and practices that:

- Assign the burden of responsibility to the child, rather than the program.
- Place the child at risk of failure, apathy toward school, and demoralization.
- Fail to contribute to quality early childhood education.

Summary of Principles

The NAECS/SDE calls on policymakers, educators, and all concerned about young children to use these principles and discussions to guide and inform decisions about kindergarten entry and placement:

1. Kindergarten teachers and administrators guard the integrity of effective, developmentally appropriate programs for young children. They do not yield to pressure for acceleration of narrowly focused, skill-based curricula or the enforcement of academic standards derived without regard for what is known about young children's development and learning.

Most of the questionable entry and placement practices that have emerged in recent years have their genesis in concerns over children's capacities to cope with an increasingly inappropriate curriculum in kindergarten. External pressures have so changed the focus of the curriculum that it is often difficult to distinguish between curriculum and methodology in classrooms for young children and those of later elementary grades.

Several factors have interacted to bring about those changes. Research about the capabilities of young children has been misrepresented and misunderstood. A popular belief has developed that children are smarter now primarily because of exposure to television and because so many go to preschool. A rather large number of overzealous parents have also contributed to the problem by insisting that their children be "taught" more and by expecting these children to learn to read in kindergarten. This parental view of kindergarten has reinforced the notion that didactic methods of teaching (many of questionable value even for older elementary children) should be accepted practice in kindergarten.

Too often teachers are told, or they believe, that it is not enough to set the stage for learning by preparing a rich and varied environment and encouraging children to engage in activities that carry their development forward. In too many kindergartens, the core of rich creative experiences with real materials has now been replaced with abstract curriculum materials requiring pencil-and-paper responses. Often these are linked to tightly sequenced and often inappropriate grade-level lists of expected skill acquisition in each of the subject areas. Ironically, children who are ready to learn to read are more likely to advance as far as they are able in an active learning classroom.

2. Children are enrolled in kindergarten based on their legal right to enter. Families are not counseled or pressured to delay entrance of their children for a year by keeping them at home or enrolling them in other programs. Rather, families are strongly encouraged to enroll age-eligible children

Serious negative consequences accompany the rising trend to discourage parents from enrolling their age-eligible children in kindergarten. The dilemma is that the very children being counseled out of school are the ones who, if provided a flexible and appropriate kindergarten curriculum, could benefit the most. The "gift of time" that many parents have been persuaded to give children by delaying school entry can result instead in denying them opportunities for cognitive growth through social interaction with their age-mates. It also implies that children have failed at school even before they begin. By the end of the primary level, children whose kindergarten entry is delayed do not perform better than peers who enter on time. Further, children who enter late are disproportionately represented in referrals to special education. This means their access to special help is also delayed a year.

Public schools cannot ethically select some children who are eligible under the law and reject others. Children subjected to delayed entry disproportionately represent racial and linguistic minorities, low-income children, and males. Denial of entrance to school, blatant or subtle, increases the disparity between social classes and could be construed as a denial of a child's civil rights. It places the financial burden for alternative schooling on parents. This is an equity problem.

Curiously, states with quite different entry cutoff dates perceive the same problems. While there is some evidence that older children tend to do better initially, the differences due to age are small and disappear with time. The specific entry date is irrelevant and recent legislative action in several states to raise the entry age will not accomplish what is intended. The quality and appropriateness of the kindergarten curriculum should be the focus of the reform. Age is the only non-discriminatory entry criterion.

No matter where the kindergarten entry date is set, there will always be a younger group of children within a given classroom. It is both unfair and unreasonable to establish expectations for achievement on what the oldest children can do. Delaying entry has been shown to contribute to greater variation among

children in the same class – in chronological age, size, motor ability, experiential backgrounds, and other learning characteristics.

Educators should be sensitive to and respectful of the wishes of some parents to postpone their children's initiation into the larger world of school. However, school personnel also have the responsibility to assure that parents do not make this decision based on anxiety over the suitability of the kindergarten program for their child. Educators have an important role to play in educating parents about the myths associated with perceived benefits of holding children out of school.

3. Kindergarten teachers and administrators are informed about assessment strategies and techniques and are involved responsibly in their use. They do not defer assessment decisions solely to psychometricians and test publishers.

Assessment is a process of determining whether particular characteristics are present in an individual or a program and the amount or extent of them. Standardized tests are one form of measurement. Assessment can also be accomplished through teacher observation, checklists, rating scales, and questionnaires.

Because testing is so prevalent, many teachers are faced with challenges for which their training and experience have left them unprepared. Today's early childhood educators must be able to:

- Recommend appropriate measures to be used in the beginning of school years.
- Interpret and use the information the measures produce.
- Communicate to other educators and parents what test information means about student progress.
- Prevent and/or correct misuses of testing.

To fulfill these responsibilities, early childhood educators must become informed about the functions of tests and measures, their properties, and the legitimate uses of test data. Tests that fit one purpose adequately may be totally unsuited to another. Most important, early educators must know about the various forms of assessment that can supplement or replace test scores.

Further, as children enrolling in school represent more diverse languages and cultures, new assessment responsibilities are placed on educators at every level. "For the optimal development and learning of all children, educators must accept the legitimacy of children's home language, respect and value the home culture, and promote and encourage the active support of all families."

As tests have increased in popularity, instances of their abuse have increased. Abuses occur when:

- Assessment tools are used for purposes for which they were not designed (e.g., screening tests used to diagnose a child's development).
- Assessment tools do not meet acceptable levels of quality (e.g., no reliability or validity studies are available).
- An assessment tool is used as the sole basis for a decision about placing a child in a specific educational program.
- An assessment tool is used as the sole basis for a decision about placing a child in a specific educational program.
- An assessment tool or test determines curricular objectives.
- Test scores are used as a single measure of school and/or teacher effectiveness.
- Teachers lack sufficient training and experience in the use of assessments.

4. Retention is rejected as a viable option for young children. It is not perpetuated on the basis of false assumptions as to its educational benefit.

Retention policies should be highly suspect given the prevalent bias against certain groups of children and lack of demonstrated effectiveness. The current methodology used in selecting students for retention makes it impossible to predict accurately who will benefit. Pro-retention policies as a strategy for establishing rigorous academic standards are likely to be self-defeating.

Lowered expectations developed by parents and teachers actually decrease the probability that retained children will attain their potential. Although research does not support the practice of grade retention, many educators and parents do. It is true that teachers see children they have retained making progress. It is also true they have no opportunity to see how well the children might have progressed had they been promoted.

The vast majority of control-group studies, which are structured to measure this comparison, come down clearly on the side of promotion. Students recommended for retention but advanced to the next level end up doing as well as or better academically

than non-promoted peers. Children who have been retained demonstrate more social regression, display more behavior problems, suffer stress in connection with being retained, and more frequently leave high school without graduating.

The term "ending social promotion" creates a climate that supports an increase in the practice of retaining children. Most schools are not employing less-costly strategies that are proven to support children's achievement, thus avoiding social promotion. These include:

- High-quality preschool
- Improving the quality of child-care settings
- Full-time kindergarten
- Smaller class size
- Tutoring outside of class time
- Summer programs
- After-school programs
- Multiage grouping.

Ending conditions that prevent all children from maximum learning must be a priority for us all.

5. Tests used at kindergarten entrance are valid, reliable, and helpful in initial planning and information-sharing with parents. They are not used to create barriers to school entry or to sort children into what are perceived to be homogeneous groups.

Kindergarten testing is a common practice in today's public schools. Unfortunately, screening and readiness tests are being used interchangeably to determine the educational fate of many young children before they enter kindergarten. Developmental screening tests broadly and briefly tap developmental domains and are designed primarily to predict future school success – screening to find children who, after further assessment, appear to be good candidates for selective programs. As such, they must contain predictive validity as well as the accepted standards for all tests of reliability, validity, sensitivity, and specificity. Screening procedures should include vision, hearing, and health assessments.

Readiness tests, by definition and statistical design, do not predict outcomes and therefore cannot be substituted for such purposes. These tests assist teachers in making instructional decisions about individual children. Children who do poorly on readiness tests are likely to benefit the most from kindergarten.

The paradox is that if readiness tests are substituted for developmental screening measures, certain children are being channeled away from the regular classroom. Testing children who have home languages other than English creates unique challenges. Care must be taken to use instruments and processes that clearly identify what the child knows and is able to do, both in English and in the home language. It is not appropriate to make assumptions about proficiency in the home language based on level of proficiency in English. Careful assessment may reveal that the child could benefit from additional home-language development.

A major problem with kindergarten tests is that relatively few meet acceptable standards of reliability and validity. Based on several widely used tests, the probability of a child being misplaced is fifty percent – the same odds as flipping a coin. The burden of proof is on educational and testing professions to justify the decisions they make in the selection or creation of screening instruments. Otherwise, educators are left speculating about what the results mean. Flawed results lead to flawed decisions, wasted tax dollars, and misdiagnosed children.

Even when credible, appropriate tests are selected, kindergarten screening and developmental assessment are still uncertain undertakings because:

- Normal behavior of young children is highly variable.
- Young children are unsophisticated in generalizing from one situation to another and are novices in testing behaviors.
- Young children may not be able to demonstrate what they know and can do clearly because of difficulties in reading, writing, responding, and in using pencils or other markers, or certain abstract symbols.
- Young children may not be able to demonstrate what they know and can do clearly because of differences in language and culture.
- Separation anxiety, the time of day the test is administered, and rapport with the examiner can all distort results, especially with young children.

Parents have a unique perspective about their child's development and learning history. For this reason, their knowledge about the behavior and attainments of their children is invaluable to teachers. Any full assessment of a child's progress must take the parents' information into account. Moreover,

parents have a moral and legal right to be informed about the basis for educational decisions affecting their children.

Children entering school come from markedly different backgrounds. Assessment procedures must not penalize children at school entry for responses that have heretofore been appropriate for them or which they have not yet had a chance to develop. Screening and assessment does not substitute for an observant, competent, caring teacher and a responsive curriculum.

6. All children are welcomed – as they are – into heterogeneous kindergarten settings. They are not segregated into extra-year programs prior to or following regular kindergarten.

The responsibility of the school is to accept children with the language, aptitudes, skills, and interests they bring. The function of the schools is to support the child's development and learning in all areas. The expectation is not that all children enter with only specif c prerequisite skills.

The dramatic growth of extra-year programs represents an attempt by the educational system to cope with an escalating kindergarten curriculum and the varied backgrounds of entering children. However, these programs often increase the risk of failure for children who come to school with the educational odds against them. Selection and placement in "transitional," "developmental," or "readiness" classes often brand the children as failures in their own eyes and those of parents, peers, and teachers.

Children placed in segregated programs often encounter lowered expectations, have fewer positive peer role models for success and conf dence, and lack access to regular curriculum. For all of these reasons, their future progress tends to be more limited and many of them continue in the slow track throughout their schooling.

"Regardless of what language children speak, they still develop and learn. Educators recognize that linguistically and culturally diverse children come to early childhood programs with previously acquired knowledge and learning based on the language used in their home. For young children, the language of the home is the language they have used since birth, the language they use to make and establish meaningful communicative relationships, and the language they use to begin to construct their knowledge and test their learning."

Heterogeneous class groupings are more likely than homogeneous ones to encourage growth among children who come with home languages other than English or who are developing more slowly. Experiences within the regular classroom should be organized so that differences among children are valued rather than viewed as a barrier to effective instruction. Flexible peer groupings, multiage and ungraded structures, and cooperative learning are some alternatives that can foster learning and self-esteem by valuing the gifts and talents of all children.

A Call to Action

The primary consideration should be what is best for young children – not institutions, politicians, or professionals. Children do not benef t from retention or delayed entry or extra-year classes. The case has been made that children are placed in double jeopardy when they are denied, on highly questionable premises, the same educational opportunities as their peers.

Belief in the pure maturational viewpoint underlies many of the deleterious practices described in this paper. The belief that children unfold on an immutable timetable, however appealing, cannot be over-generalized to intellectual, social, linguistic, and emotional development. A responsive, success-oriented kindergarten curriculum and a well-trained teacher are bound to have a powerful effect on young children's learning. Children come to school as competent, naturally motivated learners. One of the school's critical responsibilities is to ensure that these characteristics are maintained and strengthened, not destroyed.

The issue is not whether to keep children with age-mates. (Heterogeneous multiage grouping can stimulate and support children's development.) It is whether we can continue to uphold practices and programs predicated on failure. Failure by any name does not foster success for any students.

What adjustments do schools need in order to make education more responsive to the needs of young children? Reducing class size; making the curriculum less abstract and therefore more related to children's conceptual development; insisting that only the most appropriately trained, competent, child-oriented teachers are placed in kindergarten programs; and assuring every child access to a high

quality pre-kindergarten program are among better means to achieving the educational goal of success for all students.

Limited federal, state, and local resources are being used inappropriately as a result of well-intentioned but misdirected policies. However, simply to stop retention and extra-year classes will not assure success for all children. NAECS/SDE recommends that attention and resources be diverted from ineffective policies and directed toward seeking long-term lasting cures for the ills of the kindergarten/primary curriculum.

A consensus is needed among the educational community and families that only those practices beneficial to young children will be permitted. We can have equitable, excellent, and economical public education for all of the nation's kindergarten children.

Recess for Elementary School Students

Council on Physical Education for Children

A Position Paper from the National Association for Sport and Physical Education

It is the position of the National Association for Sport and Physical Education (NASPE) that all elementary school children should be provided with at least one daily period of recess of at least 20 minutes in length.

Recess is an essential component of a comprehensive school physical activity program and of the total education experience for elementary school students. Various organizations including the United States Department of Health and Human Services and the United States Department of Education (USDHHS & USDE, 2000), Centers for Disease Control and Prevention (CDC, 1997), National Association for the Education of Young Children (NAEYC, 1998), and American Association for the Child's Right to Play (IPA/USA, n.d.) support school recess as an integral component of a child's physical, social, and academic development. Recess provides children with discretionary time to engage in physical activity that helps them develop healthy bodies and enjoyment of movement. It also allows children the opportunity to practice life skills such as cooperation, taking turns, following rules, sharing, communication, negotiation, problem solving, and conflict resolution. Furthermore, participation in physical activity may improve attention, focus, behavior, and learning in the classroom (California Department of Education, 2005; Hannaford, 1995; Jarrett, 1998; Jensen, 2000; Shephard, 1997; Symons, Cinelli, James, & Groff, 1997).

Currently 16 percent of our nation's children are overweight—a result of poor nutritional habits and a lack of physical activity (Hedley, et al., 2004). An increasing number of children are developing cardiovascular risk factors (e.g., high blood pressure) and type 2 diabetes (Kaufman, 2002). Daily physical activity is an important part of the solution to these health issues. National recommendations state that school-aged children and youth should participate in at least 60 minutes per day of moderate to vigorous physical activity (NASPE, 2004; Strong, et al., 2005; USDHHS & USDA, 2005). Participation in a regularly scheduled recess period can make an important contribution toward meeting this recommendation. In addition, extended periods of inactivity (two hours or more) are discouraged for elementary-age children (NASPE, 2004).

NASPE recommends that:

- All children in elementary schools should engage in at least one daily period of recess for at least 20 minutes per period.

National Association for Sport and Physical Education, an association of the American Alliance for Health, Physical Education, Recreation and Dance

- Recess does not replace physical education classes. Physical education provides sequential instruction to enhance the development of motor skills, movement concepts, and physical fitness. Recess provides unstructured play opportunities that allow children to engage in physical activity.
- Recess is not viewed as a reward but as a necessary educational support component for all children. Therefore, students should not be denied recess so they can complete class work or as a means of punishment.
- Adequate and safe spaces and facilities are provided for all students to be physically active at the same time. Outdoor spaces are used whenever the weather allows.
- Adequate, safe, and developmentally appropriate equipment is provided for students to engage in enjoyable physical activity.
- Physical education and classroom teachers teach children positive personal and social skills (e.g., cooperation, conflict resolution) for use during recess.
- Safety rules are taught and enforced.
- Recess is properly supervised by qualified adults.
- Bullying or aggressive behavior is not tolerated.
- Adults intervene when a child's physical or emotional safety is an issue.
- Recess is not scheduled immediately before or after physical education class.
- Recess does not interfere with physical education classes that are taking place in a common environment.

Quality physical education and daily recess are components of the elementary school educational experience that enable students to develop physical competence, health-related fitness, personal and social responsibility, and enjoyment of physical activity so that they will be physically active for a lifetime.

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Rest Time in Kindergarten

As teachers begin to make plans for the beginning of a new year, many struggle with whether to include a rest time for their kindergartners in their daily schedule.

Four- and five-year-olds today are very busy … moving from one activity to the next, in many cases with high amounts of pressure. Pediatricians recommend that kindergarten-age children receive a minimum of 10 hours sleep each night.

Many children do not get anywhere close to this appropriate amount of sleep. According to the book American Academy of Pediatrics Guide to Your Child's Sleep: Birth through Adolescence (1999)[1], children who chronically fail to get enough sleep do not learn as well as better-rested youngsters. They also have a higher rate of behavior problems.

In many cases, overtired children resort to hyperactivity and difficult behavior as a way of fighting off daytime drowsiness. The National Sleep Foundation states that sleep is a vital need, essential to a child's health and growth. Sleep promotes alertness, memory, and performance.

Children who get enough sleep are more likely to function better and are less prone to behavioral problems and moodiness. This organization recommends that children ages three to five get 11-13 hours of sleep, including naps for children five years old. (www.sleepforkids.org).

These recommendations, as well as the expectations we have placed on our young children today, have precipitated the Primary Team at the NC Department of Public Instruction to share our position regarding the need for a rest time for kindergarten children. There is not a state policy related to kindergarten rest time. However, the Primary Team recommends that kindergarten children do receive a quiet time each day to rest, nap, and/or read books quietly.

Some ideas for making rest time productive for everyone include

- giving everyone their own special resting place to lie down in the room
- setting the mood by turning off lights, lowering the shades, playing soft music
- reading a calming story before rest begins, maybe even a chapter book without pictures
- giving children time to gradually move into the silence of rest time
- allowing children to rest with a stuffed animal "rest buddy"
- allowing children to look at books or magazines quietly, especially the non-sleepers

We must remember that all children are unique and will need different amounts of rest. Some may sleep soundly during this time, while others may just rest their bodies and their brains to recharge for the remainder of the day. This quiet time may also change over the course of the school year as children grow and mature. Rest times may be longer at the beginning of the year for some children and decrease in time as the year progresses. Some children may need to sleep even at the end of the school year. This quiet time is also a good time for children to look at books, listen to music or stories, and/or spend some individual time with the teacher or assistant.

American Academy of Pediatrics Guide to Your Child's Sleep: Birth through Adolescence., 1999, George J. Cohen, M.C., F.A.A.P., Editor

1 George J. Cohen, M.C., F.A.A.P., editor

The Power of K

North Carolina Position Statement on Kindergartens of the 21st Century *June 2009*

The Mandate

The guiding mission of the North Carolina State Board of Education is that every public school student will graduate from high school, globally competitive for work and postsecondary education and prepared for life in the 21st Century" (N.C. State Board of Education, 2006)

Kindergarten professionals are charged with the responsibility of leading the journey of learning and growth for N.C. students by providing the social and educational foundations necessary to prepare students for life in the 21st Century. While fostering collaborative connections with families and communities, these educators also must develop positive relationships with each child; provide safe, supportive, and inviting environments; offer differentiated and rigorous curriculum and instruction; and deliver meaningful and authentic assessments of a child's potential. In order to ensure the success of this charge, kindergarten professionals must be empowered by a supportive and knowledgeable administration that provides the necessary infrastructure, essential resources, and on-going, high quality professional development.

The Power of K

The early childhood years, birth through age 8, are the most powerful years for learning, growth and development in the life of a child (Jensen, 1998). Currently, kindergarten holds a position in education as one of the starting points for attitudes about learning, teachers and schools that children and families will carry throughout the years of schooling and beyond.

It is critical that kindergarten programs:

- Utilize evidence-based practices.
- Help children achieve the knowledge, skills and dispositions that promote ongoing success.
- Provide indoor and outdoor environments and experiences that reflect appropriate practices for children of varying abilities.
- Represent a community of learners.
- Include families in meaningful ways.
- Value diverse cultures.

Kindergarten Today

In the 21st Century, educators must meet multiple demands from national, state and local levels. These expectations are based on federal No Child Left Behind regulations, guidelines from state and local boards of education and district mandates and expectations. Teachers at all grade levels feel the pressure of this increased accountability and stringent expectations for their students.

Kindergarten teachers are caught between what research supports as effective environments and experiences based on knowledge of how young children learn and develop, and the promotion of scripted programs and practices that typically do not respond to children's individual needs nor take into account the view of the whole child as a learner. Based on kindergarten's unique position in education, this critical grade level "suffers from the middle-child syndrome [and]

straddles the worlds of preschool and elementary school" (Graue, 2006). Because of this precarious place in education, many kindergarten teachers struggle with implementing federal, state and local standards while attempting to remain true to the learning styles and developmental needs of their increasingly diverse 5 year olds…a delicate balancing act for these dedicated educators.

Kindergarten Children Today

Kindergarten programs of the 21st Century must reflect both the experiences of 5 year olds and changes to society. Many young children today:

- Live in a fast-paced world.
- Are technologically savvy.
- Use television and the Internet as a primary means of communication.
- Are exposed to more dangers and threats than their parents were at their age.
- Spend more time inside than outside.
- Are more overweight than the generation before.
- Spend less time with their families than they do in child-care.
- Live in increasingly diverse communities.

Although the 21st Century brings many new experiences for young children in a technologically based world, their developmental patterns, rates and ways of learning have not changed. Recent brain research shows that children in their kindergarten year are still in a very sensitive period for brain development. As young children actively interact with the environment, "the synaptic connections of stimulated neurons become increasingly elaborate" and "the brain is especially responsive to stimulation" (Berk, 2006). Experts in neuroscience and child development agree that "young children need a wide variety of ordinary experiences during this phase" with opportunities to explore their world through their senses (Gullo, 2006; Jensen, 1998). Kindergarten children must be appropriately challenged to progress academically and socially; however, "when classroom experiences are not attuned to children's developmental needs and individual characteristics, they undermine rather than foster children's learning" (Berk, 2006).

Kindergarten classrooms of the 21st century must be places where children of all circumstances and all learning abilities can thrive. North Carolina must continue to prepare students for the future while honoring the original kindergarten program objectives of providing both "a garden *for* children, a location where they can observe and interact with nature, and also a garden *of* children, where they themselves can grow and develop" (www.froebelweb.org, 2006). Educators of young children must ask, How do the kindergartens of the 21st Century support the developmental needs of all children while providing challenging and meaningful educational experiences?

Kindergarten Programs of the 21st Century: Intentional Teaching and Learning

The North Carolina Department of Public Instruction and the N.C. Birth Through Kindergarten Higher Education Consortium support kindergarten programs in our state that respond to the complex needs of children by linking instructional practices, the physical environment, and learning opportunities to the unique characteristics of 5 year olds. In this age of accountability, kindergartens must be designed to address the academic, physical and social/

emotional domains of education for young children. According to Elizabeth Graue, former kindergarten teacher and professor of early childhood education at the University of Wisconsin-Madison, "It is absolutely reasonable to expect that kindergarten is about playful learning and learningful play, and about academic socialization and social academics. To make the most of the kindergarten experience, a teacher must be a master of knowledge about specific curriculum content, about children in general, and about her students in particular" (Graue, 2006).

Kindergarten classrooms in North Carolina must be appropriate places for young children to learn through engaging and interactive experiences guided by trusted and nurturing adults. These adults also must provide challenging, yet achievable learning experiences for each individual child. This is no easy task. It requires:

- A dedicated and knowledgeable teacher.
- A dedicated and knowledgeable full-time teacher's assistant.
- Support of the school administrator, who is knowledgeable about the education of young children.
- Purposeful planning based on the N.C. Standard Course of Study and children's interests and needs, all of which build upon a child's previous knowledge and experiences.
- Support for children with special needs.
- Intentional child and teacher interactions.
- A broad repertoire of instructional practices that strike a delicate balance across a continuum of child-initiated experiences and teacher-directed instruction;
- Child-initiated and teacher-supported play.
- A variety of learning contexts within an integrated day, including whole group, small groups, learning centers, outdoor experiences and daily routines.
- Partnerships with families and the community.
- Culturally relevant curriculum that is designed with learners' cultural values, knowledge, and ways of learning taken into account (Trumbull & Pacheco, 2005).
- Ongoing, authentic assessments that drive instruction.
- An inquiry approach to ongoing professional development for teachers.

The debate around the definition of play and its benefit to a young child's education remains ongoing and unresolved. Some say that play is compatible with and necessary to the young child's education. Others believe play is at odds with education. The N.C. Department of Public Instruction believes that play is at the core of a kindergartner's learning and development and that it is an essential element of a child's education in the 21st Century.

Play is "a dynamic, active and constructive behavior. It is an essential and integral part of all children's healthy growth, development and learning across all ages, domains, and cultures. … The absence of play is an obstacle to the development of healthy and creative individuals" (Isenberg & Quisenberry, 2002). Through an interactive, play-based curriculum, children develop cognitive skills as they "explore, imagine, imitate, construct, discuss, plan, manipulate, problem-solve,

dramatize, create, and experiment" (Nebraska Department of Education, 2001). All the while, teachers intentionally weave goals and objectives from the N.C. Standard Course of Study for kindergarten into each experience. According to the American Academy of Pediatrics, "Play is integral to the academic environment; … it has been shown to help children adjust to the school setting and even to enhance children's learning readiness, learning behaviors, and problem-solving skills" (AAP, 2006). Numerous studies have shown a direct link between play in young children and "memory, school adjustment, oral language development, improved social skills, and self-regulation" (Bodrova & Leong, 2003). Researchers believe that play provides a strong foundation for intellectual growth, problem solving and creativity. These are necessary skills for the 21st Century where "creative problem solvers, independent thinkers, and people with expert social acumen will inevitably surpass those who have simply learned to be efficient at getting the right answers" (Hirsh-Pasek & Golinkoff, 2003).

North Carolina's Charge

The N.C. State Board of Education has charged that "all students will graduate from a rigorous, relevant academic program that equips them with the knowledge, skills, and dispositions necessary to succeed in both postsecondary education and 21st Century careers and to be participating, engaged citizens. Instruction and learning must include commitment to a knowledge core and the application of that knowledge core to solve complex, real-world problems. Schools must ensure rigor and relevance and guarantee supportive relationships for each student in the public school setting" (North Carolina School Board policy HSP-F-016).

Kindergarten students are innately curious and natural problem solvers. Recognizing these qualities, effective kindergarten teachers provide a rigorous and relevant curriculum. They intentionally create opportunities for:

- Interactive, challenging, and relevant learning experiences.
- Inquiry-based learning.
- Construction of knowledge.
- Solving of real life problems.
- Emotional/social growth and development.
- Physical growth and development.
- Language growth and development
- Collaboration.
- Creativity, imagination and innovation.
- Decision-making.

It is through these types of experiences that kindergarten students develop and demonstrate the 21st Century life skills of critical thinking, communication, leadership, collaboration, contextual learning, global awareness, information and media literacy and citizenship.

Recognizing that experiences in the early childhood years can have a powerful impact on the children of North Carolina, the importance of high quality kindergarten programs and practices becomes apparent. North Carolina has been a leading proponent of public school reform for many years, especially in the field of early childhood education. Continuing this tradition of innovation, North

Carolina has the opportunity to once again take the lead in supporting excellence in the kindergarten programs for the young children of our state. Through a culturally respectful, inclusive and appropriately challenging curriculum, coupled with a broad repertoire of instructional approaches, kindergarten children will grow and develop into independent, critical thinkers empowered to succeed in their future school endeavors and to become productive citizens in the global world of the 21st Century.

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The Importance of Play in Promoting Healthy Child Development and Maintaining Strong Parent-Child Bonds

American Academy of Pediatrics

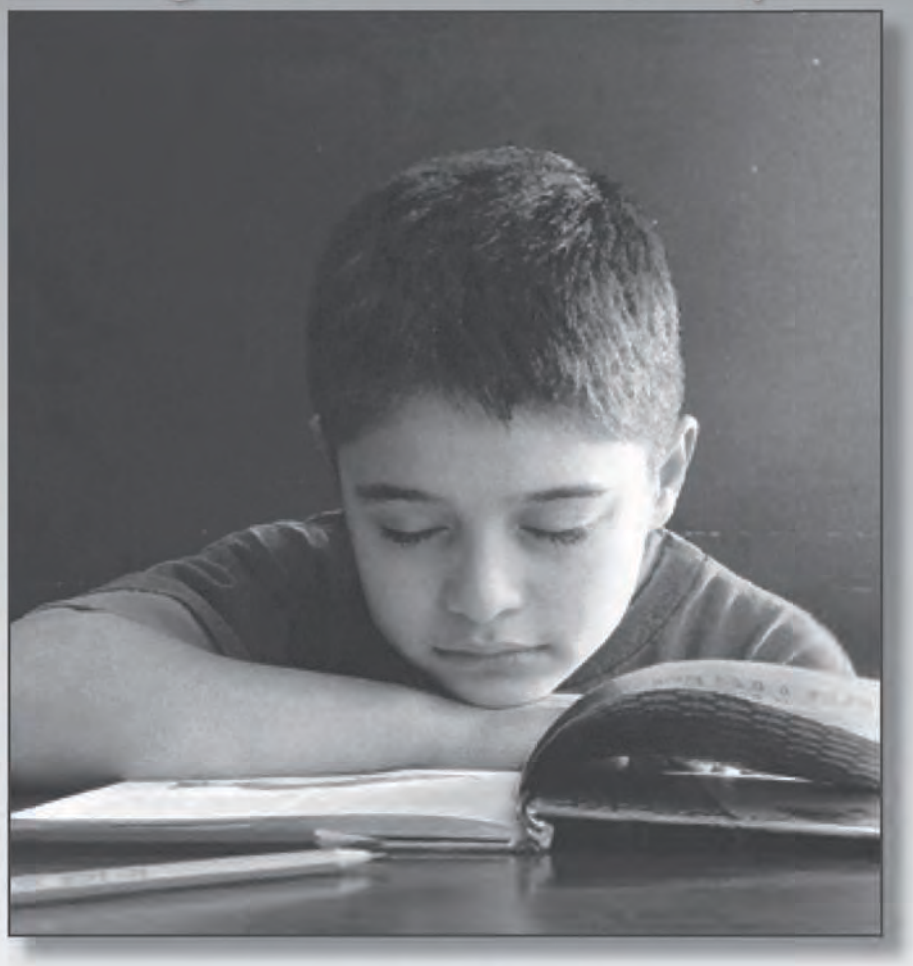
Kenneth R. Ginsburg MD, MS Ed, and the Committee on Communications and Committee on Psychosocial Aspects of Child and Family Health

October 9, 2006

Play is essential to development as it contributes to the cognitive, physical, social, and emotional well-being of children and youth. Play also offers an ideal opportunity for parents to engage fully with their children. Despite the benefits derived from play for both children and parents, time for free play has been markedly reduced for some children. This report addresses a variety of factors that have reduced play, including a hurried lifestyle, changes in family structure, and increased attention to academics and enrichment activities at the expense of recess or free child-centered play. This report offers guidelines on how pediatricians can advocate for children by helping families, school systems, and communities consider how best to ensure play is protected as they seek the balance in children's lives to create the optical developmental milieu.

Full text available at www.aap.org/pressroom/playFINAL.pdf.

North Carolina Early Grade Retention in the Age of Accountability



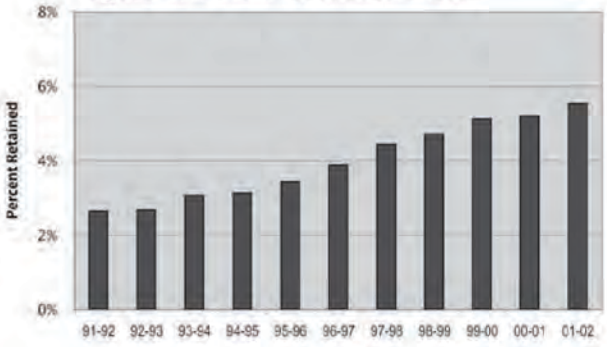
A report by the
Kindergarten Readiness Issues Group
of the
Partners in Research Forum
This report is a collaborative effort by members of the FPG Child Development Institute, the NC Child Care Resource & Referral Network, and the NC Department of Public Instruction

With increased accountability pressures, early childhood leaders across North Carolina are concerned with grade retention in early elementary school. Often, the choice seems to be between retaining children who are not succeeding or passing them on to the next grade with their peers. The purposes of this brief are to highlight trends in retention in kindergarten through third grade in North Carolina and to discuss the implications of and alternatives to this practice.

Retention Over Time

Rates of retention in the early grades in North Carolina have been rising steadily during the past decade. As seen in Figure 1, the retention rate for children in kindergarten through third grade (K-3) has more than doubled since 1992, from 2.7% in 1991–1992 to 5.5% in 2001–2002. This means that 22,343 children were retained in kindergarten, first, second or third grade in 2001–2002. To see 2001–2002 K-3 retention rates for each North Carolina school district by grade, go to: www.fpg.unc.edu/~pir.

Figure 1. NC K–3 Retention Rates

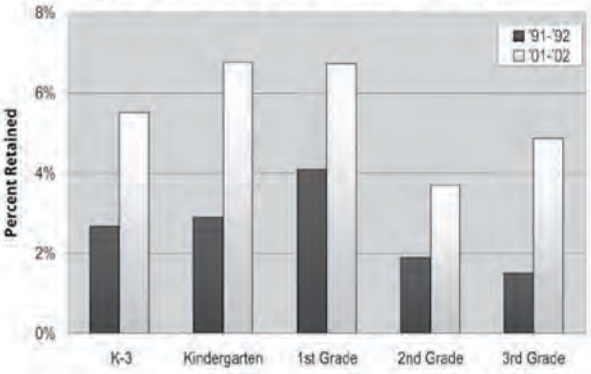


Who Is Retained?

As seen in Figure 2, during the early years of schooling, kindergarten and first graders in North Carolina are most likely to be retained. Retention rates have increased dramatically for all grades during the past 10 years. To see 2001–2002 K-3 retention rates for each North Carolina school district by grade, go to: www.fpg.unc.edu/~pir.

As seen in Figure 3, in 2001–2002, boys in North Carolina were more likely to be retained than girls. Across K-3, 4.7% of girls were retained, whereas 6.3% of boys were retained. Asian and White children had lower rates of retention than African American, Hispanic, or Native American children.

Figure 2. Percent Retained in NC by Grade

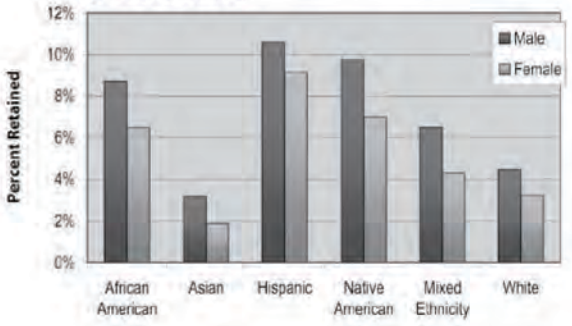


Retention rates among special education students were higher than among non-special education students. In 2001–02, 7.6% of special education students in K-3 were retained, whereas 5.0% of non-special education students were retained.

How much does retention cost?

It is easy to think that retention has no costs since special appropriations are not required and there is generally no mention of the impact of retention on costs in the discussion of per child appropriations during budget deliberations. But, in fact, there are large costs associated with retaining children. A retention decision obligates the state and local governments to an additional year of education for each retained child, and each year of education costs over $7,500.

Figure 3. Percent Retained in NC by Ethnicity and Gender (K–3) in 2001–2002



So, what are the costs of retention? The costs can be estimated by multiplying the total average cost for educating a child in the state by the number of children retained. There were 22,343 children retained in K-3 in the year 2001–02 (the latest for which data are available). To put this in perspective, only 10 of the 117 school districts in the entire state had a total membership larger than this number. As shown in Table 1, the average expenditures per child for a year of education was $7,616 in 2001–02. As shown in Table 2, when the annual expenditures are multiplied by the number of children retained, this works out to more than **$170 million**. This is a huge expense—an expense that is often made without discussion of alternatives that might cost less or be more effective. It is important for policy makers to understand the fiscal implications of retention policies in order to make informed decisions about allocating scarce resources to education. To see the cost of retention for each North Carolina school district by grade, go to www.fpg.unc.edu/~pir.

What Does Research Say about Grade Retention?

In 1999, the North Carolina Education Research Council (NCERC) produced a synthesis of research on retention and social promotion.[2] Some of the key points from that synthesis and from other research are highlighted below. (See the NCERC policy brief for a more detailed description of the research.)

- **Retention in the early elementary grades, especially before second grade, is harmful.** Students retained in first grade have been found to do worse academically and socially compared to other low-performing students who were not retained.[3] Negative effects have also been found for kindergartners who were retained.[4, 5]
- **Much of the research on retention across all grades suggests that retention is not helpful.** In one major review of the research, Holmes[6] reviewed 63 controlled studies that compared the progress of retained students to those of low-achieving students who were not retained. Eighty-six percent (54 of 63) of the studies showed lower achievement for the retained students than for comparable non-retained students. Although studies generally do not adequately describe what happens during the year in which students are retained, in most schools retention does not necessarily entail an intervention. Students simply receive more of the same. Without specific interventions targeted towards a student's weaknesses, it is not surprising that research has shown that retention in itself does not positively affect achievement.
- **Retention is associated with school dropout.** In several studies, students who were retained in school were more likely to drop out of school compared to similar low-performing students who were not retained.[2, 3, 7] Students who are retained tend to continue their low academic performance, dislike school, and be older than their classmates. Together, these factors may alienate students and lead to school dropout.

Research Conclusion: Retention in the early elementary grades generally does not have long-term benefits for students and may have unintended negative consequences.

Alternatives to Retention

If schools do not retain, what alternatives are there? This section highlights some effective interventions reported in the literature and used by local school districts to help low-achieving students. We spoke with representatives from seven school districts across North Carolina that have succeeded in keeping retention rates low and student achievement high.

- **Interventions start early.** Successful districts use the K–2 Assessment and other instructional assessments to identify children who need extra support as soon as possible so that interventions are in place early, usually within the first quarter of the school year. To paraphrase one instructional coordinator, we work to put effective interventions in place and then have very little need for retention.
- **Interventions occur in the context of the regular classroom setting.** Successful districts create teams of regular education teachers, special education teachers, and other specialists to develop interventions that work in the child's regular classroom. Team members use the child's Personalized Education Plans [P.E.P.] to guide and coordinate their work.

Table 1. Average Expenditures per Child

Local	$1,645
State	$4,472
Federal	$578
Capital*	$920
Total/Child	**$7,616**

*Per pupil capital expense, 5-year average

Table 2. Retention Costs in North Carolina for 2001–2002

Grade	Number of Children Retained	Retention Costs
K	6,758	$51,468,928
1	6,860	$52,245,760
2	3,756	$28,605,696
3	4,969	$37,843,904
K-3 Total	**22,343**	**$170,164,288**

. . . we work to put effective interventions in place and then have very little need for retention.

- **Coordination is key.** Successful districts have established procedures for regular communication among team members and in some instances have a staff person dedicated to coordinating regular and special education staff to support student achievement. Coordination does not happen by itself. Planning and resources are required for effective coordination.
- **Parents are involved.** Successful districts work closely with parents, telling them as soon as problems are identified. Parents are actively involved in designing the child's P.E.P., especially in identifying strategies that they can implement at home. Many schools have family nights that focus on reading and math strategies that can be used at home. A variety of strategies are used to communicate with parents who have different schedules and needs.
- **After school support is offered.** Successful districts offer extra support to low-achieving students after the regular school day by using volunteers as well as regular school personnel.
- **Enriched summer experiences are offered.** Many successful districts offer summer school as a way for students to catch up and have concentrated instruction in a smaller setting. A key to successful summer programs is presenting material in new ways to maintain student interest and meet the needs of children with various learning styles.
- **Literacy is emphasized.** Successful districts provide intensive early literacy experiences for all children, with a special emphasis on those who begin school with few literacy experiences.
- **Professional development is critical.** Successful districts recognize the importance of educating all staff members about interventions for low-achieving students. Schools often provide intensive training on a particular intervention, such as Reading Recovery or Math Grade Strategies. Districts reported choosing intervention packages because they present information in a way that is different from the approach used in the regular classroom.
- **Connections are made with community resources.** Successful districts use resources available from area community colleges and universities to help them support low-achieving students. When volunteers from the community are involved, they are trained so that they approach instruction in a way that is consistent with the philosophy of the school.
- **Staff have a "can-do" attitude.** Successful districts view their mission as trying to do everything possible to avoid student failure. Staff members never give up on children who are struggling to succeed. ■

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Endnotes

[1] All figures reported in this brief come from data provided by the North Carolina Department of Public Instruction. All figures exclude charter schools.

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Available online at www.fpg.unc.edu/~pir

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North Carolina
Office of School Readiness

Effective Practices Brief #2
July 2006

Assessment of 3,4, & Pre-K 5-Year-Old Children

Purpose of this Brief

"Ethical, appropriate, valid, and reliable assessment of children's strengths, progress, and needs should be a part of all early childhood programs," according to the 2003 Joint Position Statement of the National Association for the Education of Young Children (NAEYC) and the National Association of Early Childhood Specialists in State Departments of Education (NAECS/SDE). Further, the National Institute for Early Education Research (NIEER) reports that "child assessment is a vital and growing component of high-quality early childhood programs" (Epstein, Schweinart, DeBruin-Parecki, Robin, 2004). This brief provides North Carolina's definition and description of appropriate assessment of young children reflective of these and other current early childhood resources.

Assessment Defined

Child assessment is the systematic process of observing, recording, and documenting what children do and how they do it. The major purpose of child assessment in pre-kindergarten is to make ongoing educational decisions such as:

- Informing and supporting learning, curriculum, and instruction of each and every child;
- Showing child progress; and
- Identifying children who may need additional services and supports.

Child assessment is often thought of as formal testing with standardized measures, but it actually requires many components, measures, and procedures. Effective practices in early childhood education support the use of **"authentic, ongoing assessment"** with young children. Authentic, ongoing assessment is "a form of assessment in which children are observed while working, playing and performing real-world tasks that demonstrate meaningful application of essential knowledge and skills" (Mueller, 2003). Early childhood educators obtain information about children in multiple ways (e.g., through observation, children's work samples, rating scales) and on a consistent, on-going basis (e.g., throughout the day while children are playing indoors and outdoors). Authentic, on-going assessment provides information about what children **CAN DO** in settings where they are most comfortable, whether home, classroom, or community — in other words, in real-life settings and during daily routines.

Early childhood educators using authentic, ongoing assessment gather facts about all aspects of the child's individual development, growth, strengths, needs, and interests and about his or her family's culture, language, and priorities. Information is gathered through multiple sources, using formal and informal procedures such as:

- Family interviews during home visits, meetings and conferences;
- Observation of children during play, projects and other learning activities and experiences;
- Documentation of children's work represented through photos, dictation, anecdotal notes and other artifacts;
- Checklists and rating scales for monitoring children's ongoing learning, growth and development;
- Portfolios illustrating children's progress in all domains of development; and
- Normative and criterion-referenced tests used in conjunction with other measures and strategies.

Through authentic, ongoing assessment, educators gather useful information about young children, including stages of development, interests and temperament, social relationships, how they learn, responses to new situations, and changes in behavior.

Recommended Practices

Authentic, ongoing assessment methods are developmentally appropriate, culturally and linguistically responsive, tied to children's daily activities, supported by professional development, inclusive of families, and connected to specific, bene-

Uses of Assessments (cont.)

ficial purposes (NAEYC, NAECS/SDE, 2003; Epstein et al., 2004, DEC Recommended Practices, 2005). Successful implementation of authentic, ongoing assessment of young children requires:

- Training adults to observe and know what to look for in all areas of development and how to clearly and objectively write factual notes about what they have observed and heard children do and say;
- Sampling children's behavior, art work, scribbles, writing and other creations on a regular basis;
- Reflecting thoughtfully about observations of children and their work by organizing information in chronological order, by areas of development, and objectively analyzing the meaning of this information for children's progress, needs, interests, and temperament.

Early childhood educators need to know the children, child development and their curriculum in order to know what to look for and how to effectively use the information for making ongoing educational decisions.

Ethical and professional standards related to child assessment require that:

- Assessments, both data and procedures, must be used for the purpose for which they were validated;
- Assessment should always be used by trained personnel who closely adhere to their professional code of ethics;
- Assessments must include multiple sources and methods; and
- Normative and criterion-referenced results on young children should **not** be used **in isolation** for high-stakes decision making such as program and teacher performance rating and child promotion, placement or labeling purposes.

Uses of Assessment Results

Data gathered from authentic, ongoing assessment help early childhood educators know how each child is progressing and effectively plan for each child's learning. All assessment information should be shared with the child's family. Assessment data is especially helpful to:

- Identify children who may need to be referred for specialized services;
- Document behaviors that a child may exhibit in order to implement specialized learning and/or behavioral supports to help him or her to be successful in a particular classroom setting;
- Plan instruction for individuals and groups of children;
- Guide and promote engagement of each child based on individual abilities, interests and temperament;
- Track children's progress and generate individual and classroom reports;
- Determine program effectiveness and personnel development needs.

Inappropriate Uses of Assessment Results

In general, caution should be used when interpreting and using normative and criterion-referenced tests of young children's learning, especially if other sources and methods of gathering developmental information have not been used. It is difficult to assess children's cognitive abilities before age 6 and only 25 percent of early academic performance is predicted from preschool and kindergarten tests (Shepard, Kagan, Wurtz, 1998; Meisels, 2003).

For more information and assistance, call the North Carolina Office of School Readiness at (919) 981-5300.

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North Carolina Approved Early Childhood Curricula

Division of Child Development, NC Department of Health and Human Services | Office of School Readiness, NC Department of Public Instruction

The North Carolina Division of Child Development and the North Carolina Office of School Readiness are pleased to announce a list of approved curricula for use in early childhood programs. The list is the result of a comprehensive and rigorous curriculum review process conducted by a panel of experts.

The list of infant-toddler and preschool curricula, approved by the Division of Child Development, will apply to the curriculum quality point for the NC Star Rated License effective November 2008. Any program that received a quality point using a previously approved curriculum will have until November 2009 to either use one of the curricula noted below, or to earn a quality point in a different area.

The list of preschool curricula, approved by the State Board of Education, will be required for the More at Four Pre-Kindergarten Program beginning the 2009-10 school year. The list will also apply to the Pre-K Standards Classroom Recognition Program. Other preschool programs are encouraged to consider this list when making curriculum choices.

INFANT – TODDLER CURRICULA *Approved by the Division of Child Development*

- **The Creative Curriculum® for Infants, Toddlers and Twos, 2nd Edition**
  Teaching Strategies, Copyright 2006 | http://www.teachingstrategies.com
- **High/Scope Infant-Toddler Curriculum** | High/Scope Press, Copyright 2000 | http://www.highscope.org |
  Approved with the stipulation that programs use the supplemental books titled *Multicultural Programs* and *I Belong*.
- **The Program for Infant/Toddler Care (PITC)** | Developed by the California Department of Education and WestEd
  http://www.pitc.org | Approved with the stipulation that providers must complete PITC modules I – IV with a certified trainer as required by WestEd.

PRESCHOOL CURRICULA *Approved by the State Board of Education and the Division of Child Development*

- **The Creative Curriculum® for Preschool, 4th Edition** | Teaching Strategies, Copyright 2002
  http://www.teachingstrategies.com
- **The Empowered Child™, Childtime, 2nd Edition** | Copyright 2007 | http://www.childtime.com/education.aspx
  Approved for use in Childtime programs.
- **Explorations with Young Children: A Curriculum Guide from the Bank Street College of Education**
  Gryphon House, Copyright 1992 | http://www.gryphonhouse.com
- **High/Scope Preschool Curriculum |** High/Scope Press, Copyright 2002 | http://www.highscope.org
- **Opening the World of Learning™ (OWL)** | Pearson Early Learning, Copyright 2005 | http://www.pearsonschool.com
  Approved with the stipulation that full-year programs have a plan to supplement or extend the curriculum, since OWL is designed to cover a school year.
- **Passports: Experiences for Pre-K Success** | HighReach Learning, Copyright 2007 | http://www.highreach.com
  Approved with the stipulation that programs purchase the *Compass* and at least one set of study/theme materials.
- **Tutor Time LifeSmart™** | Copyright 2005 | http://www.tutortime.com/curriculum.aspx
  Approved for use in Tutor Time programs.

This list does not constitute an endorsement of any program using the curriculum.

Issued November 2008

CURRICULUM APPROVAL

DEFINITION OF CURRICULUM

A curriculum is a written set of materials that provides an integrated framework to guide decisions adults make about experiences provided for children and includes the following:

- a theoretical, philosophical and/or research basis to guide the approach to nurturing and facilitating children's development
- goals and objectives for children's learning and development that the curriculum seeks to foster
- experiences that will be provided to support diverse learners and facilitate each child's progress toward the expressed goals and objectives (including features of the physical environment, scheduling, specific experiences, and adult-child interactions)
- a process through which adults will plan and implement experiences to facilitate each child's progress toward the goals and objectives, including avenues for collaboration with families and members of the larger community to guide decisions made about children's experiences
- a means to assure that the environment, activities and interactions children experience are appropriate for individual children by collecting on-going information on individual children that is used to gauge how each child is making progress toward the curriculum's stated goals and objectives for children's development and learning, and to plan experiences that facilitate individual children's growth and development.

CRITERIA FOR CURRICULUM APPROVAL

1) EVIDENCE BASED: The curriculum must articulate a theoretical and/or research-base for the approach and clearly demonstrate how the curriculum utilizes the theory and/or research as a basis for making decisions about experiences provided for children. The curriculum may also have empirical evidence regarding the effectiveness of the curriculum collected with sound research methodology.

2) PLANNING PROCESS: The curriculum must have a process to guide adults in making decisions about experiences provided for children. The curriculum describes the intent or developmental goals of given experiences and the environment. The curriculum includes an on-going process for observing and documenting information related to individual children's level of development, current skills, and interests, and using that information to develop plans. Experiences provided for children should be derived from each child's needs, abilities and interests with appropriate teacher/caregiver input and facilitation. The curriculum should include plans for a variety of types of experiences and activities, including large group, small group, individual, child-initiated, and teacher-initiated activities.

3) AREAS OF CHILDREN'S DEVELOPMENT AND LEARNING: The curriculum must include a balance of experiences that address all areas of children's development and learning – physical, social and emotional, approaches toward learning, language and communication, and cognitive development and general knowledge, integrating content areas such as early literacy, mathematics, social studies, science, creative arts, and technology as appropriate for the age of children in the group. Preschool curricula must provide opportunities for children to develop the knowledge, behaviors, and competencies defined in North Carolina's early learning standards.

4) SCHEDULING AND ROUTINES: The curriculum must include a schedule that is age appropriate, predictable but flexible, and responsive to the needs of individual children. The schedule must include an appropriate balance of teacher/caregiver initiated and child-initiated experiences, and large blocks of time for play and exploration with appropriate facilitation from the adult. Routines such as feeding and toileting should be age appropriate and included as an integral part of children's experiences.

5) PHYSICAL ENVIRONMENT: The curriculum must provide appropriate guidance for teachers and caregivers on the physical environment, including guidance on room/home space arrangement, furnishings, equipment, and other aspects of the physical environment that reflects an understanding of child development and supports children's learning and development.

6) SOCIAL ENVIRONMENT: The curriculum must provide appropriate guidance on how teachers/caregivers can facilitate children's social-emotional development, including guidance on adult-child interactions, promoting children's peer relationships, and managing children's behavior.

7) MATERIALS AND EXPERIENCES: The materials and experiences used in the curriculum must be appropriate for the age and developmental level of children targeted and should include both child-directed and teacher/caregiver-directed activities. They should be engaging for children, play-based, and present concepts that are concrete and relevant to children's everyday experiences. The materials and experiences should be flexible enough to promote each child's development and learning in both indoor and outdoor settings, and provide a variety of experiences that support children in making choices, exploring and demonstrating independence. Materials and experiences must be free of bias, violent and otherwise unacceptable content.

8) DIVERSITY: The curriculum should support the development and learning of children from diverse backgrounds and explicitly address how adults can provide experiences that are culturally relevant and sensitive for children and families who reflect a variety of cultures, languages, socio-economic status, and structures.

9) INCLUSION OF CHILDREN WITH DIVERSE DEVELOPMENTAL/ABILITY LEVELS: The curriculum should include provisions for modifications/adaptations as appropriate to include children with varying developmental/ability levels, including children with disabilities, children who speak languages other than English, gifted children, etc.

10) FAMILY INVOLVEMENT: The curriculum must include a plan for how teachers/caregivers will collaborate with families in a shared decision-making process and promote two-way communication between teachers/caregivers and families. Collaboration with families should be an integral part of the curriculum at the classroom/group level, and families should be included as collaborators in planning individualized experiences for their own children.

11) IMPLEMENTATION GUIDES: Curricula must provide adequate and appropriate explanatory materials for adults to support implementation of the curriculum. The materials should include guidance on how to set up the environment, how to plan individualized and group instruction, how to implement activities, and how to interact with children. The curriculum may include resources or tools that facilitate teacher/caregivers' ability to assess the extent to which they are implementing the curriculum as it is designed.

North Carolina
Office of School Readiness
Department of Public Instruction

Foundations

Early Learning Standards for North Carolina Preschoolers

What is *Foundations*?

Foundations: Early Learning Standards for North Carolina Preschoolers and Strategies for Guiding Their Success is an important book that provides early learning standards for children ages three, four and pre-k five. *Foundations* is a guide for teachers, administrators, families or any adult working with preschool children in North Carolina.

The book contains:

- Guiding principles that state the values, beliefs and knowledge base that informed the creation of *Foundations*.
- A set of early learning standards that are "widely held expectations" for the learning and development of three-, four- and pre-k five-year-old children. The expectations define ***what children should have the opportunity to learn.***
- Strategies for early childhood educators and families for fostering children's experiences needed to achieve the widely held expectations.

The early learning standards and strategies cover all five developmental domains: approaches to learning, emotional and social development, health and physical development, language development and communication, and cognitive development.

Over fifty of North Carolina's early care and education leaders worked together from 2002 through 2004 to research and agree upon early learning standards for our state and to develop the *Foundations* book. *Foundations* was reviewed by local focus groups and by state and national experts in each developmental domain and across all domains, to ensure that the early learning standards reflect the most current child development knowledge. *Foundations* was endorsed by the State Board of Education, the Division of Child Development and the Governor's Office in 2004.

Why did North Carolina create *Foundations*?

While North Carolina has long been a leader in quality early care and education, the development of *Foundations* marks the first time our state defined common developmental priorities for preschoolers that are directly aligned to benchmarks in the NC Standard Course of Study for Kindergarten. These leaders developed *Foundations* to:

- Promote development of the whole child across all developmental domains
- Provide a common set of expectations for preschool children's development and, at the same time, validate individual differences
- Promote shared responsibility for children's care and education, encouraging family and community participation
- Emphasize the importance of hands-on learning
- Support clean, safe and caring indoor and outdoor early learning environments
- Reflect and value the cultural, linguistic and ability diversity of our state's preschool children.

How to use *Foundations* to promote quality

First, adults need to understand "convergent abilities" and "divergent abilities" when implementing developmentally appropriate practice to help all children learn, grow and develop. We know from child development research that convergent abilities are the general developmental milestones children often reach and demonstrate. The widely held expectations in *Foundations* are convergent abilities. Divergent abilities, on the other hand, are the individual differences each child might demonstrate on any given day based on experiences, temperament, interests, culture, family priorities and individual variation in development. All children typically show divergence from widely held expectations or general developmental outcomes in some areas.

Since child development is an ongoing journey, *Foundations* should be used as a guidebook to what is developmentally

appropriate and expected for three-, four-, and pre-k five-year-old children. The widely held expectations listed in *Foundations* are broad descriptions of expected behaviors that will emerge and be observed with increasing consistency during the preschool period. Each widely held expectation, however, begins with the words "children begin to" to honor the variability in the development of each preschool child.

Early childhood educators should also use *Foundations* as a lens to examine curricula, everyday activities, experiences, projects and the indoor and outdoor learning environments to ensure that their program is:

- Addressing the whole child
- Expecting children to behave in ways that are developmentally appropriate
- Helping a child to be ready for kindergarten by following *Foundations*, which leads to the NC Standard Course of Study for Kindergarten.

Connections with other tools to support quality

Foundations gives us the starting point – the child – so that we, as early childhood educators, can effectively use tools that promote quality early childhood programs. These tools include: facility licensure requirements, the Early Childhood Environment Rating Scale – Revised (ECERS-R) and curricula. How does *Foundations* connect with these tools to support quality in the indoor and outdoor learning environments? A preschool teacher, for example, may have concerns about behavior among the children in her class. She often observes children hitting one another to get what they want. To help with this situation, the teacher considers:

- ***Foundations***. There are 24 widely held expectations in the emotional and social domain in *Foundations* that help the teacher know he is "on track" with his expectations and gives him ideas for targeting behaviors and skills to help children behave appropriately.
- **Environment**. The ECERS-R helps the teacher assess how the indoor and outdoor learning environments (space, time and materials) support the children in developing social and emotional skills. The teacher can look around the indoor and outdoor learning environments to determine if there are enough interesting choices for children, adequate materials, and adequate time for children to use the materials. The teacher can also evaluate the quality of her supportive presence to help children learn to negotiate disputes during play.
- **Curriculum**. Through the curriculum, the teacher discovers in more detail the developmental stages children go through in developing appropriate emotional and social abilities. The curriculum provides ideas for materials, strategies, interactions and information to share with families to help children increase their emotional and social skills.

Remember the "Cs" in using *Foundations*

- Know the **Content** to be familiar with North Carolina's priorities for child outcomes, teaching strategies, values and beliefs for early care and education
- Use as a **Curricular** support to determine if a curriculum is addressing all of North Carolina's priorities and to link to the NC Standard Course of Study for Kindergarten
- **Connect** curricula, environmental assessments, and licensure standards to create high-quality indoor and outdoor learning environments to help children achieve the widely held expectations
- **Communicate** the widely held expectations to everyone, including families, elementary school personnel and community members helping children to learn and develop.

To download or order a copy, go to www.osr.nc.gov and click on *Foundations*.
For more information and assistance in implementing Foundations, call the North Carolina Office of School Readiness at (919) 981-5300.

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