



2021 District Sustainability Award Nominee Presentation Form

CERTIFICATIONS

District's Certifications

The signatures of the district superintendent on the next page certify that each of the statements below concerning the district's eligibility and compliance with the following requirements is true and correct to the best of the superintendent's knowledge.

1. The district has been evaluated and selected from among districts within the Nominating Authority's jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
2. The district is providing the U.S. Department of Education Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district wide compliance review.
3. OCR has not issued a violation letter of findings to the school district concluding that the nominated school district has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
4. The U.S. Department of Justice does not have a pending suit alleging that the school district has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
5. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the school district in question; or if there are such findings, the state or school district has corrected, or agreed to correct, the findings.
6. The district meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

U.S. Department of Education Green Ribbon Schools District Sustainability Award 2019-2021

Name of Superintendent: Cathy Q. Moore

District Name: Wake County Public School System

Address: 5625 Dillard Drive, Cary, North Carolina 27518

Telephone: 919-533-7769 Fax: 919-589-6199

Web site/URL: <https://www.wcpss.net/> E-mail: cqmoore@wcpss.net

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.

A handwritten signature in blue ink that reads "Cathy Q. Moore".

Date: 2-5-2021

(Superintendent's Signature)



Nominating Authority's Certifications

The signature by the Nominating Authority on this page certifies that each of the statements below concerning the district's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

1. The district is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental education.
2. The district meets all applicable federal civil rights and federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

Name of Nominating Agency: North Carolina Department of Public Instruction

Name of Nominating Authority: Mr. Jon Long, Architect, School Planning

I have reviewed the information in this application and certify to the best of my knowledge that the school meets the provisions above.

A handwritten signature in blue ink, appearing to be "JL", written over a light-colored background.

Date: 2-9-2021

(Nominating Authority's Signature)

SUBMISSION

The nomination package, including the signed certifications, narrative summary, documentation of evaluation in the three Pillars, and photos should be submitted online according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509

Expiration Date: March 31, 2021

Public Burden Statement

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1860-0509. Public reporting burden for this collection of information is estimated to average 37 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit P.L. 107-110, Sec. 501, Innovative Programs and Parental Choice Provisions. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4536 or email ICDocketMgr@ed.gov and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.



North Carolina Department of Public Instruction
2021 Green Ribbon District Application

District Contact Information:

District Name: Wake County Public School System
Address: 5625 Dillard Drive
City: Cary
State: North Carolina
Zip: 27518

School Website: <https://www.wcpss.net/>
Facebook Page: <https://facebook.com/WCPSS/>
Superintendent Name: Cathy Moore
Superintendent Email: cqmoore@wcpss.net
District Phone Number: 919-431-7400
Lead Applicant Name: Krista Brinchek
Lead Applicant Email: kbrinchek@wcpss.net
Phone Number: 978-835-4052

School Information:

School Type: Public
Grades Served: Pre-K-12th
District Type: Urban & Suburban
Number of Schools:
 Early Learning: 111
 K-5: 120
 K-8: 3
 Middle: 37
 High: 29
 other: 6

Total Enrollment: 161,907
Attendance Rate: 84%
Graduation Rate: 86.2%

Does your school serve 40% or more students from disadvantaged households? No

% Receiving FRPL: 31.4%
% Limited English Proficient: 11%
Other Measures: N/A

Is your school in one of the largest 50 districts in the nation? Yes, it is the 15th largest school district in the nation.



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Summary Narrative:

Provide a 2 – 3 page summary narrative describing your district’s efforts to reduce environmental impact and costs; improve student and staff health; and provide effective environmental and sustainability education. Focus on unique and innovative practices and partnerships.

Opening Statement:

Every student deserves to be challenged in meaningful learning each day - the primary statement of Wake County Public School System’s (WCPSS) core beliefs serves as a driver for our Strategic Plan. We believe that all of our students should graduate as collaborative, creative, critical thinkers, and effective communicators. We want our students to have an open mind, show empathy, be resilient, and display cultural sensitivity. Our students’ learning experiences need to occur in progressive learning environments that should be adaptive to their ever-changing needs. Experiences focused on environmental sciences and sustainability are integrated throughout our PreK through 12 curriculum. Located in the Research Triangle Park, our student experiences are influenced by organizations that exist in our region that are innovative, environmentally conscientious, and focus on scientific research. WCPSS also enhances student learning opportunities through the magnet and early colleges offerings and career academies that exist at most of our high schools.

With 191 total schools, WCPSS serves over 161,000 students and employs over 19,000 people. K-12 science education focuses on the North Carolina State Essential Standards, Science and Engineering Practices, Crosscutting Concepts, and integration of concepts across the curriculum. Teachers integrate and facilitate learning through frameworks such as Project-Based Learning and Understanding by Design. Several of our WCPSS schools enhance student learning opportunities through Magnet programs, Early Colleges, and Career Academies. Our integrated school and community projects focus on maintaining a healthy campus ecosystem, solving issues of food insecurity within the community, and tackling global topics that push our learners to be empathetic. Not only do our schools model best practices in environmental sciences, the many departments that comprise the district’s central services also promote healthy ecosystems, conservation, and reducing our carbon footprint. WCPSS also enhances student learning opportunities through the magnet and early colleges offerings and career academies that exist at most of our high schools.

Pillar I:

Our Facilities, Design, & Construction; Maintenance & Operations; Child Nutritional Services (CNS); and Transportation Departments all promote efficiency, conservation, and environmentally sound processes. WCPSS facilities include over 26 million square feet and are tracked for environmental impact and greenhouse gas (GHG) emissions. Our district partnered with the Wake County Government to develop the “Guidelines for Design and Construction of Energy-Efficient County Government Facilities and Schools” in order to design more energy efficient schools. This framework has been utilized by other school districts as a model in design, architecture and construction. Furthermore, WCPSS developed a Sustainability Strategy Guideline based on LEED practices to influence the design effort in areas such as geothermal HVAC mechanical design and rainwater harvesting.



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Landscaping for our new schools include native plants and the necessary vegetation to offset the need for an irrigation system. Partnering with the NC Department of Soil & Water Conservation, many of our older schools have implemented features like rain barrels and cisterns on-site. Oftentimes, these conservation projects engage our students; teachers have developed project-based units to facilitate the development and sustainability of these environmentally sound additions to the campus. Additionally, students are engaged through eco-friendly clubs such as Feed the Bin (recycling) and Student Water Audit Teams (S.W.A.T) to embolden learners to be leaders in these efforts.

In 2018, our CNS team implemented a district-wide plan to replace all styrofoam trays with compostable ones. A number of our schools then partnered with local organizations to both appropriately dispose of the compostable trays and create food waste diversion programs through on-site composting. In the shortened 2019-20 school year, over 83,000 pounds of food waste was diverted from landfills with over 19,000 pounds of compost created/used for local farms.

Water and air quality at all of our schools/facilities are a top priority for our school system. A dedicated Water Quality Management Team monitors wastewater collection, treatment, and disposal from individual sites. This team also reviews stormwater practices at schools which has led to student-designed rain gardens as a feature at many schools. Our schools intentionally plan carpool loading to be more efficient which leads to less car idling and emissions. The Water Quality Management Team works collaboratively with the Department of Environmental Quality to educate students and families about air quality and how to improve it in the schools.

Pillar II:

WCPSS is committed to student health and nutrition. Outside of the traditional health and physical education courses our students take throughout the year, WCPSS takes advantage of programs designed along with community partners to promote healthy lifestyles. Through events such as First in Fitness and Jump Rope/Hoops for Heart with the American Heart Association, students in grades K-8 engage in additional exercise outside of the daily thirty minutes facilitated by our teachers. Partnerships have also been forged with First Tee golf, Girls on the Run, and the Carolina Hurricanes to provide other avenues for our students to develop life habits that will benefit their health in the long-term. To align learning with healthful living standards, the district has also leveraged community partnerships to support student engagement. Working with the Alice Aycock Poe Center for Health Education, over 21,000 students K-12 learn about healthy lifestyle choices with an authentic health professional.

Proper nutrition is more than simply providing appropriate selections in the school during breakfast and lunch. WCPSS supports our families beyond the school day to ensure students' needs are met. Meaningful engagements with organizations such as the Interfaith Food Shuttle and local faith-based groups have helped in our efforts to provide students with healthy meal options outside of school hours. District efforts to continue this have increased during our COVID-19 response. Over 1 million meals have been distributed to students during the pandemic. Pivoting to full-remote learning presented an obstacle in these efforts, but the district found ways to establish hubs where students of need could acquire meals.



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These efforts demonstrate what our district does for all schools. It is equally important to note the innovative community collaboration that has targeted a specific area in our county. Southeast Raleigh Elementary School is a unique marriage between WCPSS and the YMCA of the Triangle where one building serves as both a PK-5 school and a YMCA for the Southeast Raleigh community. Working with Southeast Raleigh Promise, this school is the hub for the cradle to career vision outlined for this area. Community service, food insecurity, and unique elementary courses such as swimming are all experienced by the students here in partnership with the YMCA. This serves as a model elementary school for our region and state in supporting a community.

Pillar III:

Meaningful learning experiences that focus on the environmental sciences and sustainability are mapped out intentionally for our students. WCPSS has 39 dedicated elementary science specialists who ensure the environmental lens is integrated into the K-5 school day. Instructional frameworks that support content integration, authentic student outcomes, and soft skills development are essential to our curriculum and professional development for all elementary and secondary educators. WCPSS teachers seek out opportunities like Citizen Science to enhance classroom instruction and to provide students with real-world science investigations outside of the traditional school building. These engagements also lead to student connections with scientists in our region, as they learn from the experts in the field who are using the Citizen Science data to support their work.

WCPSS also values authentic teacher field experiences to support professional growth in the areas of environmental science and sustainability. Working with Wake Ed Partnership, K-12 teachers attend the professional development - SummerSTEM - focusing on project-based learning and real-world engagement. 105 of our 191 schools have sent teachers to SummerSTEM where teachers have field immersions with organizations such as the National Institute of Environmental Health Sciences, Duke Energy, the US Environmental Protection Agency, and the NC Department of Environmental Quality. Teachers create learning units that focus on topics such as water quality, reducing our carbon footprint, and how scientific research is critical to our personal and global health. Additional professional developments that have enhanced teacher knowledge in the sciences include working with the NC Museum of Natural Sciences and the Kenan Fellows program. Both of these organizations support teacher growth in the field that have led to student learning units focused on renewable energy sources, air pollution, and healthy ecosystems.

WCPSS is also well-known for having innovative school choices for families. Through our magnet-themed schools, early colleges, and career academies at our comprehensive high schools; parents have choices to meet their child's unique needs. Through these robust offerings, there are many school models that focus on the environmental sciences. Two elementary schools share the designation of Center for Environmental Connections where all K-5 learning has a "green" emphasis. Athens Drive Magnet High School Center for Medical Science and Global Health Initiatives and Wake STEM Early College High School both use the Grand Challenges of Engineering to tackle topics such as food insecurity, renewable and sustainable energy sources, and access to clean water within their school day. Additionally, Athens Drive has a 9-12 STEM Academy where students are cohorted to attend integrated high school courses with an engineering emphasis. Other career academies similar to the one at Athens exist at seventeen other high schools in our district. A variety of themes



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exist including Biomedical Sciences, Sustainable Energy Engineering, Environmental Studies, and Agribusiness Leaders. It is essential that students are college and career ready and that this readiness has a solid foundation in the sciences and engineering.

In 2020, the Wake Green Schools Partnership hosted its first conference for WCPSS. The conference emphasized our schools for their innovative sustainability and environmental-based initiatives. This partnership was created in 2019 from the Green Schools symposium at UNC’s Environmental Finance Center. The organizations present at the symposium are committed to bring sustainable and green initiatives to our school district. A steering committee was formed from this opportunity that included organizational, school, and district leaders.

1. Is your district participating in a local, state or national school program, such as EPA ENERGY STAR Portfolio Manager, EcoSchools, Project Learning Tree, or others, which asks you to benchmark progress in some fashion in any or all of the Pillars? Yes No

Year	Award Received
2013-Present	EPA Energy Star Award
2018-Present	EcoSchools Bronze Award (Millbrook ES)
	Project Learning Tree- Individual schools/teachers attend classes and apply for grants

2. Has your school, staff or student body received any awards for facilities, health or environment?
 Yes No

Year	Award Received
2020	North Carolina Environmental Educator of the Year (Krista Brinchek-Abbotts Creek ES)
2020	NC Green School of Excellence (Lincoln Heights Environmental Connections Magnet ES)
2020	Engineering Excellence in Wastewater and Stormwater to Alpha and Omega Group for the renovations project at Lincoln Heights
2020	U.S. Department of Education Green Ribbon Recognition (Millbrook ES & Lincoln Heights ES)
2018	U.S. Department of Education Green Ribbon Recognition (Abbotts Creek ES)
2016	U.S. Department of Education Green Ribbon Recognition (Wiley ES)
2013	EPA Energy Star Award
2010	EPAct Certification for Enhanced Energy & Power Use (Panther Creek HS)
2009	District of the Year for NC - Awarded by the NEED Project Youth Awards for Energy Achievement
2008	EPA/s National Leadership Award- Senior Level Commitment to Establish & Maintain Sustainable IAQ Program
2008	Natural Resource Conservation Award
2008	Facilities Masters Award- For Excellence in School Facilities Operations Program



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2007	The School Integrated Pest Management Leadership Award
2005	Sustainable Energy Leadership Award

Pillar I: Reduced Environmental Impact and Costs

Describe how your district is reducing environmental impact and costs by reducing or eliminating greenhouse gas emissions; improving water quality, efficiency, and conservation; reducing waste production; and using alternative transportation. Identify your district's energy-efficient facilities and practices, ecologically beneficial uses of grounds, and methods of disposal for solid and hazardous wastes.

Wake County is one of the fastest growing urban areas in the nation and is recognized as a leader in innovation and technology. Our challenge is to keep pace with growing areas while delivering quality learning environments that are inviting to students, conducive to teaching/learning, and are ecologically responsible. We work hard to model for our students a commitment toward respecting our environment, and recognize that student achievement is enhanced in schools where the physical learning environment is comfortable, quiet, well-ventilated, and well-lit.

Our district promotes conservation of resources and fostering shared responsibility for the environment through educational programs and initiatives. We help to build the ethic and practice of Environmental Stewardship by educating students and adults about the importance of clean and usable air, land, and water.

Energy Conservation: Wake County Public School System (WCPSS) facilities span over 26 million square feet. Each building's energy usage is monitored and tracked for environmental impact and GHG emission utilizing Portfolio Manager. Utilization of building automation allows performance to be monitored and can quickly identify potential maintenance issues. Maintenance and Operations of our schools includes multiple departments to create an efficient system in optimization of our buildings and maintaining our school grounds. The Facilities Department has a staff dedicated to reviewing, maintaining, and managing energy conservation efforts which helps to identify and address problems and/or low optimization promptly.

WCPSS not only implements environmental and energy conservation initiatives, we are paving the way for other districts. For example, in 2004 we jointly developed "Guidelines for Design and Construction of Energy-Efficient County Government Facilities and Schools" with the Wake County Government. The guidelines provide a detailed framework that can be used in developing energy efficient school designs.

Our building designers evaluate window alternatives to achieve best value while optimizing the use of natural daylighting in the classroom. Indirect lighting is typically designed into classrooms in our Green Schools to improve the learning environment. Occupancy sensors and LED lighting technology are components of our lighting strategy to reduce energy consumption in our schools. Our district has developed a Sustainability Strategy Guideline, based upon LEED best practices. All HVAC systems are programmed to operate in setback mode when buildings are unoccupied to reduce energy consumption.

Water Conservation: New school construction is designed with water conservation best management practices in mind. Many designs include stormwater runoff wet detention basins to help settle sediments and pollutants prior to entering nearby streams. One hundred percent of new construction landscaping is designed to feature



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native plants and other vegetation adapted to our climate and annual rainfall eliminating the need for irrigation systems. In addition to intentionally creating opportunities for water conservation in the new construction process, many older school buildings throughout the district have installed sustainable water features on campus such as rain gardens, bioswales, rain barrels, cisterns, etc. Teachers and students take advantage of water conservation efforts by creating real world and hands-on instructional opportunities for students. Understanding hydrosphere and conservation concepts are part of the NC Standard Course of Study for elementary, middle and high school. WCPSS schools have student-driven programs such as the Student Water Audit Team (S.W.A.T.) to monitor and report leaks to custodians and maintenance departments in order to be on top of leaking toilets and faucets. Many of our schools partner with the NC Department Environmental Quality Water Resources for water conservation outreach programs and resources, teacher professional development, and water conservation citizen science programs.

Waste Reduction: WCPSS is inclusive of extensive recycling efforts. Our partnership programs with Wake County Solid Waste Management helps schools recycle paper, light tubes/ballasts, cardboard, printer cartridges, burnt oil, tires, batteries, and scrap metal. Our Child Nutrition Services recycle utensils, beverage cans, and frying oils used in our schools. The plan diverts a minimum of 50% of non-hazardous construction and demolition debris from disposal in landfills, as defined by LEED guidelines.

In 2018, WCPSS invested in a district wide sustainability initiative to replace styrofoam cafeteria trays with compostable ones. Along with community partners such as the Environmental Research & Education Foundation, Every Tray Counts, and CompostNow numerous schools across the district are performing waste analyses and creating food waste diversion programs engaging in composting and responsible consumption. For the shortened 2019-2020 school year, over 83,000 pounds of food waste was diverted from the landfills, and over 19,000 pounds of compost created was used by local farms. Numerous schools in the district are employing additional waste reduction innovative programs such as vermicomposting, onsite compost bins, purchasing compostable utensils, and hosting family educational outreach programs to support waste reduction in the community.

COVID-19 Response: The COVID-19 pandemic accelerated our waste reduction efforts by eliminating and/or significantly reducing the amount of paper used within schools. During remote learning, teachers pivoted to the use of online classroom platforms such as Google classroom and Canvas. With Google suite and Office 365 becoming the primary source for instructional assignments and assessments throughout our schools, our use of paper has decreased significantly, leading to increased cost savings for the district.

Transportation Alternatives: Wake County significantly uses alternative transportation methods and carpool procedures to both reduce environmental impact and increase the overall health of our students and citizens. WCPSS offers school bus service to over 160,000 students daily, providing to and from school transportation as well as transit for after school activities. In addition to the regular bus services, WCPSS supports transportation for over 4,527 McKinney-Vento (homeless) students. Many of our schools are located within walking/biking friendly communities. In collaboration with the PTA, WCPSS actively promotes National Walk to School Days to encourage families to utilize that mode of getting to school. Our temperate climate in North Carolina allows families year-round walking and biking opportunities.



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Pillar 2: Improve the health and wellness of students and staff

Describe how your district improves the health and wellness of students and staff by integrating a school environmental health program and promoting sound nutritional and fitness practices. You should discuss integrated pest management, contaminant controls and ventilation, asthma controls, indoor air quality, moisture control, and chemical management. Address the amount and type of outdoor time that your students and staff have, as well as the types of fresh, local, and organic food that they eat. Other components you may want to include are health education, health services, counseling, psychological and social services, staff health promotion and family and community involvement.

2A Environmental Health:

Integrated Pest Management: The Wake County Public School System adopted an Integrated Pest Management (IPM) Policy for managing insect and rodent intruders in our schools and district offices. IPM minimizes pesticide use in our schools and on school grounds. For the last ten years, WCPSS has concentrated on removing pest habitats from schools rather than using pesticides for pest management. As of July 1, 2007, "nonexempt" pesticides are NOT used inside any WCPSS building. We are the first school system in North Carolina to achieve this level of "green" pest management.

Hazardous Waste: WCPSS oversees the regulated management and removal of hazardous waste products and spill remediation. The Environmental and Grounds department manages hazardous waste by ensuring the waste is properly collected from our schools and facilities by an environmental contractor. In addition, the Environmental and Grounds department has a contract with an environmental company to remediate any type of spill that may occur at our schools and facilities that has a threat to human health or the environment. All chemicals used for teaching purposes are inventoried and there are protocols in place for accounting and safe storage. Elementary schools in the district follow the National Science Teaching Association and state of North Carolina safety guidelines.

Water Quality: WCPSS ensures safe drinking water for all school facilities. The Water Quality Management (WQM) team monitors school water quality, manages wastewater collection, treatment, and disposal from individual schools, and intervenes in activities that might create school water quality problems. The WQM staff are first responders in regard to regulatory compliance, water sampling, and any reporting involving water quantity and water quality enforcement programs. Many schools throughout the district have installed student designed rain gardens, cisterns, and swales to help with stormwater management improving water quality in their communities. We also partner with local agencies such as the Wake Soil and Water Conservation and Department of Water Quality to engage teachers and students in learning about water quality.

Indoor/Outdoor Air Quality: Many WCPSS schools have innovative carpool loading devices that utilize technology to que students for a quicker more efficient process, while reducing idling. As part of the district wide environmental mindset, our science departments and schools work with the NC Department of Air Quality to provide programs educating students and families about air quality and idling during carpooling. WCPSS also utilizes the nationally recognized Environmental Protection Agency (EPA) AQ program Tools for Schools. The program is led by school staff to identify and address potential indoor air quality issues.



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COVID 19 Response: Prior to students returning to classrooms, the WCPSS Board of Education partnered with the Duke University School of Medicine ABC Science Collaborative to help make informed decisions on returning safely to the classroom in response to COVID-19. Funded by the National Institutes of Health, the Duke-led ABC Science Collaborative pairs scientists and physicians with school and community leaders to help communicate the most current and relevant data about COVID-19. The ultimate goal of the collaboration is to keep teachers, children, and their local communities healthy and safe. WCPSS put together a series of return-to-campus guidelines and resources to help staff and students understand the safety protocols for returning to campus. WCPSS integrated informative videos, apps, webinars, and a COVID-19 metrics dashboard to keep both families and staff involved with safety for all. Enhanced cleaning procedures, air filter replacements/upgrades, PPE for both staff and students, and new social distancing protocols were all part of the return-to-campus guidelines.

2B Nutrition and Fitness:

Fitness and Outdoor Activity: WCPSS organizes several creative fitness challenges throughout the year that involve inter-school competitions, family challenges, and community outings. A yearly event called First in Fitness is a program where 3rd-6th grade students across the district are evaluated in four core areas of physical fitness (speed, strength, flexibility, agility) at the beginning of the year. Each grade level then designates a male and female representative for each event who participates in the county wide First in Fitness event in the Spring. WCPSS schools participate in Jump Rope for Heart and Hoops for Heart fundraising events to support the American Heart Association to encourage and support heart healthy activities. A minimum of 30 minutes per day of moderate to vigorous physical activity is required in every WCPSS school for kindergarten through eighth-grade students. Mandatory CPR instruction for 8th graders, and completion of the Healthful Living I course is required for high school to help foster life-long healthy habits. Numerous schools offer physical activity after school programs and clubs such as Girls on the Run, First Tee Golf in collaboration with the Triangle Golf Foundation, and students are offered opportunities to join and engage in school supported athletic programs. An innovative local partnership between WCPSS and the Carolina Hurricanes from the National Hockey League, created the Power Play program. The program educates middle school students on the importance of leading healthy and active lifestyles through physical activity. Over 36,000 students participate in the challenge to exercise 60 minutes a day during a 5-week time frame. Once students reach the 20-hour exercise goal, students receive complimentary tickets to an upcoming Hurricanes game.

COVID Response: To help reduce the spread of COVID many schools have transitioned lunch and class time to outside natural space areas when weather permits. WCPSS students are also given the opportunity to take "green" breaks during remote/online learning.

Nutrition: Across the district, schools participate in a Backpack Buddies program which brings together local organizations, corporations, civic/faith-based groups, and individuals to provide students from food-insecure homes with healthy weekend meals during the school year. WCPSS also partners with organizations such as the Inter-faith Food Shuttle, and the Food Bank of Central & Eastern NC, in order to identify high need school communities and provide materials to create an in-school food pantry. Through our partners, the food pantries continually receive food supplies including shelf stable items, fresh produce, and meats. Several WCPSS schools with edible gardens work with community partners to donate produce to local emergency food pantries.



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School menus are aligned with state and federal standards and our WCPSS wellness policy. We oven-bake, rather than fry foods in our district and serve items made with reduced fats, sodium, and sugars. We offer fresh locally grown produce, whole grain, lower-calorie, and right-sized snacks.

WCPSS partnered with the YMCA and other local organizations to open a new Community Responsive elementary school in 2019. The school program is focused on serving the entire community and to help contribute to the need for revitalization in the local area. The school partners with a FoodCorp Service member to maintain two on-site gardens with over 40 garden beds, including a rooftop garden for growing healthy foods. Students sow, maintain, harvest, and prepare the produce grown at the school in the school/community kitchen.

COVID 19 Response: Since the pandemic began, WCPSS has used funding to provide free meals at school sites and at over 185 distribution sites around the community making meals accessible to all on a daily basis. Over 1 million meals were served/distributed to students even throughout the summer months. WCPSS provided a winter break meal bundles in 2020 to help those with food insecurities during time away from school.

2C Health Services

Nursing services are provided based on an acuity model for each WCPSS school. Nursing services provide oversight for policies and procedures as outlined by WCPSS and Wake County Health and Human Services. WCPSS has partnered with the Alice Aycock Poe Center for Health Education to provide many fun and highly interactive health educational programs for our PreK-12 students. WCPSS preschoolers through twelfth graders learn the North Carolina Essential Standards for Healthful Living Education on a variety of health topics, including nutrition, dental health, general health, family life and substance use prevention during their visits. The partnership services over 21,000 students each year.

WCPSS has formed a School Health Advisory Council which includes representatives from the school system, the local health department, and the community abroad. The goals of the council is to provide information and recommendations to the Board of Education in regards to physical education, physical activity, health education, employee wellness, health services, social/emotional climates, nutrition environments/services, counseling, psychological, social services, physical environment, family engagement, and community involvement.

2D Mental Health and School Climate

Elementary schools across the district participate in the Raleigh Police Department program called LEADER. The LEADER program tackles bullying, peer pressure, family relationships, decision-making, and goal-setting.

WCPSS has 118 employees who work in the School Social Work department (social workers and support staff). These staff are certified and licensed professionals who provide a link between the home, school, and community. Through these support services many students' lives are positively impacted as we work toward the development of the whole child creating positive change and eliminating barriers to learning.

WCPSS has 491 school counselors. In elementary schools, our School Counselors engage students in social/emotional learning lessons as they delve into topics such as self-awareness, self-management, relationship skills, responsible decision making, and social awareness. WCPSS first grade students learn Safe



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Child “funny tummy” lessons aimed at reducing child abuse. In middle and high schools, suicide prevention and lessons about human trafficking are taught at specific grade levels. Our WCPSS students also learn about coping skills, conflict resolution, and healthy relationships as part of social/emotional awareness. Small groups and individual counseling sessions are held for students at every level based on needs assessments. All counselors participate in Crisis Team training and suicide prevention training. Each high school has a SAP (Student Assistance Program) counselor that works closely with our most at risk students such as pregnant students, teenage parents, those experiencing homelessness, students with chronic attendance issues and those dealing with such other barriers to student success. When mental health services are needed beyond the level of support that WCPSS staff can provide, parents may seek mental health services on their own or WCPSS staff can pursue mental health services for students via the Alliance Bridge to Success program which has multiple agencies/groups to support our district’s students/families.

As part of school improvement plans, all WCPSS schools are expected to implement best practices and programs for behavioral health schoolwide. Many of our schools use the Positive Behavioral Intervention and Supports (PBIS) programs and other curriculum such as the Positivity Project to support mental health and well being.

WCPSS utilizes restorative practices to create healthy relationships and foster student connection. Restorative practices reduce, prevent, and improve harmful behavior, allow offenders to take full responsibility for their actions, and give victims a voice in the restorative process. Restorative processes are one way the district addresses the disproportionate out of school suspensions for students of color. Restorative practices are currently being implemented in 140 schools across the district. Close to 600 staff have been trained as “circle keepers” or facilitators and many high school students are now being trained in peer mediation. WCPSS is committed to restorative practices and has included such programs in the district-wide strategic plan and budget. New facilitators train additional staff in both Restorative Practice and the Community Resiliency Model (CRM)[®]. WCPSS is using the CRM to strengthen adult social and emotional learning (SEL) by understanding trauma informed techniques that strengthen self-awareness. According to the Collaborative for Social and Emotional Learning (CASEL) mission, in order to fully implement systemic SEL across the district, work must begin by supporting staff through training opportunities.

In 2013, WCPSS created and funded the Office of Equity Affairs (OEA). This department is “committed to working to eliminate racial or socioeconomic inequities within our school system by eliminating achievement gaps and disparities in student discipline.” Recently, WCPSS has added a Director of Equitable Discipline Practices who monitors fairness, equity, and consistency of student suspension recommendations across the district. The OEA provides training for staff on cultural proficiency and equity coaching. To achieve equity in school discipline, the OEA adopted a multi-year and district-wide plan for equitable discipline practices including restorative justice, criminal court diversion, and school resource officer agreements. Many individual schools in WCPSS have created their own Equity Teams as part of school improvement plans to work specifically at the school level on issues of equity.

Staff Health & School Climate: Various individual schools have staff programs that include staff restorative circles, weight loss programs, and exercising goals. The WCPSS has an Employee Assistance Program (EAP) that provides wellness resources and short-term counseling services to employees and family members. This



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confidential service provides 24/7 by telephone and crisis counseling, as well as online resources for up to 3 free visits. The WCPSS intranet (accessible only by employees) maintains a spreadsheet of discounts, including health and wellness programs and providers.

COVID 19 Response: The Office of Professional Development (OPL) has developed and implemented a series of self-paced Social and Emotional professional development sessions for employees. The sessions were created to support all employees in strengthening their self-awareness, relationship skills, and responsible decision making skills. WCPSS believes that by engaging in their own social and emotional learning, individuals enhance their own efficacy and job satisfaction while creating models for students' SEL.

Pillar 3: Effective Environmental and Sustainability Education

Describe how your district provides effective environmental and sustainability education by incorporating STEM, civic skills, and green career pathways. Provide examples of interdisciplinary learning about the key relationships between dynamic environmental, energy, and human systems. Demonstrate how your district uses the environment and sustainability to develop STEM content, knowledge, and thinking skills. You should also discuss how your district develops and applies civic knowledge and skills to environmental and sustainability education.

3A Integrated Environmental and Sustainability Education

Our WCPSS teachers and science administrators develop standards based curriculums that are infused with learning experiences to help students make sense of the world around them. Curriculum materials provide methods for teachers to partner with community organizations, ways to engage students in the utilization of school campus resources, and to learn content through use of neighboring community resources. The district's approach to learning exposes students to the world around them which enables them to be critical thinkers and ultimately be able to apply their "green" knowledge in and out of school. Our district's 8th Grade End Of Grade (EOG) science scores have continually increased over the last three years, bringing over 10,000 (more than half) 8th grade students at or above science proficiency levels. Based on the End of Course (EOC) Biology exams, high school summative evaluation scores have had an increase in proficiency percentages over the last three years as well.

Throughout the district, there are 39 elementary schools that dedicate funding for the position of the Science/STEM/STEAM Specialists. Teachers in this role enhance the robust science curriculum and dive deeper into concepts that are covered in regular education classrooms. The majority of Specialists bring an environmental and sustainability education lens into the classroom. The WCPSS K-12 Vision for Science Education incorporates the components of equity, the NC Essential Standards for Science, the Science and Engineering Practices, Crosscutting Concepts, evidence based pedagogy, and positive classroom cultures to help all WCPSS become scientifically literate. Moreover, our district's goal is to provide equitable opportunities to learn and grow in scientific content and understanding. The NC Essential Standards for Science include an Environmental strand in grades K-12 and the NC Essential Standards for Social Studies includes an Environmental Literacy strand as well. The district has adopted an elementary and middle school English Language Arts (ELA) curriculum inclusive of learning experiences where students have a direct and respectful relationship with the



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natural world. Through the ELA curriculum students learn to become stewards of the earth and of future generations. For example, in 3rd grade students explore the environmental challenges that pollinators face due to human impact. ELA is integrated with 3rd grade Science standards focused on plant growth, environmental conditions, and human impact on plants. Together, such explorations have led to student driven projects such as installation of pollinator gardens and citizen science tagging of Monarch butterflies in the district.

Our district is proud of our integration of Green Initiatives both within and outside the classroom. Outside of the classroom, schools provide opportunities for students to become involved in projects such as student Green Teams, Envirothon Academic Teams, Big Sweep participation, STEM nights, Zoology clubs, Family Environmental Events, Garden clubs, and many other opportunities for students to connect with the natural world. Currently, WCPSS has four schools that have received the U.S. Department of Education Green Ribbon recognition, along with many other individual teacher, school, and district awards and certifications for Environmental Literacy and Sustainability.

WCPSS has a robust offering of magnet themes as part of the district's school choice effort. Included in these offerings are programs that support environmental and sustainability education. The environmental and sustainability offerings demonstrate our district's commitment to environmental education, and to the development of green leaders in STEM fields. Two of our magnet elementary schools have an Environmental Connections theme where the focus is nature-based learning. Such programs help learners understand how natural systems and human social systems work and interrelate; make responsible decisions based on scientific, economic, aesthetic, political, cultural and ethical considerations; recognize their personal connection to the environment for greater awareness and insight into their impact on nature; and become good stewards of the Earth that they are inheriting. In our Environmental Connections magnet schools, students engage in environmental challenge inquiry units throughout the year. For example, the school community participates in the National Wildlife Federation's Eco-Schools program, managing and observing campus beehives, the creation of school gardens, and participation in food waste diversion programs. The WCPSS environmental connections magnet approach has proven success in enhancing student scientific knowledge and growth through its integrated environmental and sustainable education programs. Over the past two years, one of the schools had a positive increase of 23% proficiency on the state's 5th Grade Science End Of Grade test.

Two of our high schools have a focus on energy conservation and sustainability. At Athens Drive High School, their Medical Sciences and Global Health Initiatives integrate the UN Sustainable Development Goals into classroom experiences for students. They have established a 9-12 STEM Academy where students can apply and matriculate through Athens as learning cohorts. Students learn through project-based units that are integrated and driven by the 14 Grand Challenges of Engineering. Providing access to clean water, making solar power economical, and developing carbon sequestration methods are some of the focal points afforded through the grand challenges. Students apply their learning from these topics to the local, state, and global level challenges. Grants have allowed many WCPSS student visions to come to fruition. For example, a solar array was recently installed at a school (in 2020) from an award through the NC Green Power grant. Similar to the STEM Academy at Athens, Wake STEM Early College High School is a 9th-13th Grade institution that partners with North Carolina State University with a program focused on the aforementioned grand challenges. Throughout high



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school courses students learn through the lens of the challenges, and present their solutions to university and business professionals to further develop their ideas.

Citizen Science plays a large role in many of our WCPSS schools across the district and intrinsically connects with our STEM programs. Students are trusted with meaningful work that allows them to use the Science and Engineering Practices while they collect and transmit data to various scientists around the world. Citizen Science projects are incorporated in all levels from Kindergarten through twelfth grade. Some of our district's current projects include Nestwatch, CoCoRaHS, Critter Cams, Tomatosphere, Shad in the Classroom, The Lost Ladybug, Purple Air Monitoring, and Ants Picnic.

3B Teacher Professional Development and Curriculum Development

Providing teacher professional development is critical when it comes to learning about and increasing sustainability and environmental literacy. Our district offers a plethora of face to face and online professional learning opportunities for teachers. WCPSS partners with diverse organizations in our community to provide learning experiences for teachers embedded in STEM, environmental literacy and sustainability. For example, we have collaborated with Project Learning Tree to offer professional learning opportunities and have worked with NCSU to offer learning focused on Citizen Science and sustainable energy. Many of our teachers have attained or are in the process of obtaining the NC Environmental Educator Certification and National Geographic Certification. Numerous WCPSS teachers and administrators also plan/attend/present at STEM, Environmental, and National Science Teaching Association conferences each year. Our district encourages schools to bring professional development onto their campus' to implement initiatives and support instruction of standards such as place-based learning, Using the Outdoors to Teach Experiential Sciences (UTOTES: a programs through the NC Museum of Natural Sciences), and Using Your School Grounds (UYSG). Our K-12 WCPSS district and schools are very supportive for helping teachers find innovative ways for authentic professional learning focused on environmental and sustainability literacy.

Our district provides intentional learning opportunities that leverage the many local resources that exist in our area and supports applications into instruction and student learning. For example, collaborations with Wake Ed Partnership (a unique, strategic, education nonprofit focused exclusively on transforming teaching and leadership modeling in WCPSS) have led to an annual professional development called SummerSTEM. This learning opportunity is focused on supporting teachers in building Project Based Learning (PBL) instructional units that focus on active student participation by solving authentic problems. Various Triangle organizations also collaborate and are a part of the SummerSTEM professional learning experience. For example, over the past six years, teachers have spent a significant time engaged in new learning from organizations such as he ABB, BASF, Duke Energy, National Institute of Environmental Health Sciences, the NC Department of Environmental Quality, the NC Department of Transportation, and the US Environmental Protection Agency as they create PBL units focused on sustainable energy, clean water solutions, research in environmental quality, and reducing carbon footprints. We have had staff from 105 of our WCPSS schools have participated so far.

WCPSS teachers take full advantage of professional development that is available locally. Through the Kenan Fellows program, many WCPSS educators take part in a summer internship where they work with professionals



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in the field to develop an integrated project unit to execute with their students. Over the past five years, WCPSS teachers have participated in fellowships that have led to units such as: *Relationship among Extreme Weather; Air Pollution; Human Mortality; Fueling the Future of Renewable Energy; Symbiosis in the Soil* (Citizen Science focused on healthy ecosystems); and *Ants Picnic* (Citizen Science focused on healthy ecosystems). Our educators have found similar success partnering with the NC Museum of Natural Sciences to engage in their Project Based Learning Fellowship program by creating units such as: *Supporting Birds in our Community; Service and Advocacy for Environmental Protection; Conservation Exploration; Air Quality; Reduce and Recycle;* and *Water conservation*. Such partnerships with our local organizations and companies have led to teacher and student learning opportunities.

In 2019, the Wake Green Schools Partnership was created. The Wake Green Schools Partnership was a concept formulated from the Green Schools symposium, hosted by the University of North Carolina Environmental Finance Center. A multitude of environmentally conscientious community organizations were present focused on a vision to bring more sustainable and green initiatives into WCPSS by utilizing our local community partners. A steering committee was created with community organizations, WCPSS teachers, administrators, and staff. In 2020, the Wake Green Schools Partnership hosted its first conference for WCPSSs staff. The conference spotlighted schools who demonstrate innovative sustainability and environmental based initiatives and programs. In addition to spotlight schools, over 40 local community partner organizations shared table presentations focus on sustainable and environmental resources. Wake Green Schools periodically hosts informative webinars for WCPSS stakeholders and provides instructional tips/discussions/resources focused on *green* initiatives.

Curriculum development is a large part of our WCPSS K-12 Science programs. Over the past four and a half years, our K-12 Science teams have focused on designing and developing an integrated science curriculum using the Understanding by Design (UbD) framework. The units focus on standards and science Disciplinary Core Ideas (DCIs), but they are also embedded with resources focused on engaging students in learning about real world connections and relationships among environmental, energy, and human systems by using the Crosscutting Concepts (CCCs). Our district curriculum units are embedded with student learning opportunities so that students can engage in the eight Science and Engineering Practices (SEPs) in order to make sense of the world around them. Our curriculum is culturally responsive, embedded with environmental and sustainability education field trips and guest speaker resources, and incorporates real world connections to the 17 Sustainable Development Goals. The district often offers professional development for teachers so that they can learn how to navigate and utilize the curriculum. Many of our magnet schools write elective and expedition curriculum that spans across grades and standards and is focused on environmental literacy and sustainability as well. Some examples of the elective units include *Take me to our National Parks, Water! Oh Precious Water, Coastal Ecology,* and *Exploring Seeds, Leaves, and Plants*. WCPSS is rich in curriculum that engages students in learning about the world around them and focused on helping ALL students become scientifically literate.

3C: Environmental Career Connected Learning & Civic Engagement

As demonstrated in other sections, our district believes in connecting our community partners with students to collaboratively prepare students for making knowledgeable career choices using experiential experiences and



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applications of current environmental issues. Across the district, we work with community and partner agencies to give students a chance to connect their work to the real world. Partnerships with organizations, bring conservation and environmental issues to life through citizen science programs and stewardship opportunities with a place-based focus. Guest speakers from North Carolina State University, Wake County Solid Waste, Center for Human-Earth Restoration, the NC Audubon Society, Wake County NC Cooperative Extension, Farm Bureau North Carolina Agriculture in the Classroom, and many additional community environmental agencies frequent our classrooms and provide educational outreach and learning opportunities for students (and teachers).

Throughout the district, WCPSS students participate in project-based learning and design for change projects. Each of these frameworks requires students to share their learning with stakeholders. For example, fifth grade students from Abbotts Creek ES explored and researched Air Quality within their school and neighboring community. Students used their voice and shared their choices to become environmental change makers. Utilizing data collected from the Purple Air Monitor Citizen Science Program, students created posters and flyers to display at the local community center in order to educate others about the danger in car idling. The posters and displays were presented at the same time that the City Advisory Council Meeting took place to implore city representatives to take a closer look at our community air quality data. Another example of students creating a ripple effect within their community can be seen at Millbrook ES. The school community participated in the Eco-schools USA program. Eco-schools combine environment-based learning with hands-on experiences to create more eco-friendly school environments. Eco-Schools sparks action in the classroom that ripples out into the greater community. Utilizing a Seven Step Framework, students are engaged in making their school, community, and the world a more sustainable place to live. The school has received the Bronze award thus far and is still working towards this prestigious certification.

In 2019, four WCPSS schools were selected for the expansion of the Bionomic Education Training Centers (BETC). The WCPSS schools that were selected received week-long rain garden training and certification. Students worked on identifying water quality concerns on campus then co-designed, installed, and maintained stormwater best management practices as a living laboratory. Our district provided technical assistance in partnership with BETC staff, Piedmont Conservation Council, and NCSU CES.

Five schools within the district have been designated as Watershed Stewardship Schools (WSS). Wake District Soil & Water Conservation is a community partner that works closely with teachers and students to take 10 positive actions in learning about and improving the school's local watershed. Actions are hands-on, student-directed and conducted so that young learners can apply their environmental science knowledge to real-world projects.

Several high schools contain designated Career Academies with a focus on STEM, Environmental Connections and Sustainability. The Mission of WCPSS High School Career Academies is to empower a diverse group of students to become collaborative leaders in a global community. The schools are inclusive of high-tech classrooms and collaborative workspaces with cutting edge technology that expose students to real world situations. Local, state, national, and worldwide business, industry, and government agencies commit, support, and sponsor career academies through consistent partnerships that provide the foundation of our programs.



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The local business community helped plan and deliver the ideas for the curriculum with the goal of preparing an agile and competitive workforce. STEM skills are vital for success in the 21st Century and critical to our collective future. The "Critical C's" of Collaboration, Creativity, Critical Thinking, and Communication are emphasized through project-based learning, usually through transdisciplinary learning activities. Each Career Academy student participates in several work-based learning experiences such as job shadowing, career fairs, career themed industry tours, and internships. Three of our Career Academy High Schools (Knightdale Academy of Environmental Studies, Middle Creek High School is part of Wake County's STEM Schools Collaborative and the Institute of Agribusiness Leaders within Heritage High School) focus on *green career pathways* connections.

To further promote Environmental Career connections, WCPSS students participate in the Skype a Scientist program. This program is a database inclusive of thousands of scientists that helps connect scientists (especially historically underrepresented minority scientists) with teachers globally. Participating in the program gives students the opportunity to get to know real scientists, learn about their careers, and the paths they took to become a scientist. The program allows students to ask their own questions to the scientists in order to learn more about their careers and areas of interest.