



## **NORTH CAROLINA CHARTER SCHOOL APPLICATION**

# **Queen City STEM School**

**Public charter schools opening the fall of 2015**

**Due by 5:00 pm, December 6, 2013**

North Carolina Department of Public Instruction  
NCDPI/Office of Charter Schools  
301 N. Wilmington Street  
Raleigh NC 27601-2825  
919-807-3491

Mailing Address:  
6303 Mail Service Center  
Raleigh, NC 27699-6303

## CHARTER SCHOOL

### 2013 Application Process

To open a charter school in the 2015-2016 school year

#### APPLICATION DUE DATE/TIME

- September 6, 2013** A letter of intent to apply for the 2015-2016 school year **must** be received electronically to Deanna Townsend-Smith in the Office of Charter Schools **no later than 12:00 noon at deanna.townsend-smith@dpi.nc.gov**. If the Letter of Intent is not submitted, an application from this group will not be accepted. You can find the Letter of Intent requirements on the NC Office of Charter School web site.
- December 6, 2013** A complete online application package, in the Office of Charter Schools **by 5:00 pm**.
- December 13, 2013** A copy of the application due to the Local Education Agency in which the proposed charter school will reside in. Applicant must provide an attached PDF version as evidence to the Office of Charter Schools (i.e. signed letter).

#### APPLICATION SPECIFICATIONS

Applicants can submit applications prior to the deadline December 6, 2013 at 5:00 pm. **All applicants must be submitted using the online portal** and applicants are to use the following specifications:

1. All required Appendices should be clearly titled, include page numbers (i.e. Appendix A and page numbers as- A1, A2, B1...), and submitted as a FULL PDF document.
2. Review all elements of your application for completeness before submitting. **An incomplete application will result in the elimination of the application.**
3. Late submissions **will not** be accepted. No exceptions.
4. Provide confirmation electronically to the Office of Charter Schools to [deanna.townsend-smith@dpi.nc.gov](mailto:deanna.townsend-smith@dpi.nc.gov) that within seven (7) days the applicant has provided one full copy of the application to the LEA in which the proposed charter school will be located.

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**I. APPLICATION CONTACT INFORMATION**

Name of proposed charter school: Queen City STEM School

Has the organization applied for 501(c)(3) non-profit status: Yes No X

Name of non-profit organization under which charter will be organized or operated: *Charlotte Education Foundation*

Provide the name of the person who will serve as the primary contact for this Application. The primary contact should serve as the contact for follow-up, interviews, and notices regarding this Application.

Name of contact person: *Ali Tombak*

Title/Relationship to nonprofit: *Board Member*

Mailing address: 3529 Park Hill Crossing Dr.  
High Point NC 27265

Primary telephone: 336-601-1740 Alternative telephone: 336-678-5223

E-Mail address: *atombak@gmail.com*

Name of county and local education agency (LEA) in which charter school will reside:

County: MECKLENBURG

LEA: 600-Charlotte-Mecklenburg Schools

Is this application a Conversion from a traditional public school or private school?

No: X

Yes:

Is this application being submitted as a replication of a current charter school model?

No:

Yes: X

If replication, please provide the name of the charter school and the state that charter school has been authorized to operate in. *Triad Math and Science Academy NC*

What is the name of the nonprofit organization that governs this charter school? *Charlotte Education Foundation*

Is this application for Virtual charter school: Yes: No: X

**Grade Levels Served and Total Student Enrollment:**

Projected School Opening: Year 2015 Month August

Will this school operate on a year round schedule?

No: X

Yes:

Proposed Grade Levels Served and Total Student Enrollment (10

Years)

Academic School Year	Grade Levels	Total Projected Student Enrollment
First Year	K,01,02,03,04,05,06	292
Second Year	K,01,02,03,04,05,06,07	358
Third Year	K,01,02,03,04,05,06,07,08	424
Fourth Year	K,01,02,03,04,05,06,07,08,09	490
Fifth Year	K,01,02,03,04,05,06,07,08,09,10	556
Sixth Year	K,01,02,03,04,05,06,07,08,09,10,11	622
Seventh Year	K,01,02,03,04,05,06,07,08,09,10,11,12	688
Eight Year	K,01,02,03,04,05,06,07,08,09,10,11,12	688
Ninth Year	K,01,02,03,04,05,06,07,08,09,10,11,12	688
Tenth Year	K,01,02,03,04,05,06,07,08,09,10,11,12	688

*The State Board of Education provides funds to charter schools, approves the original members of the boards of directors of the charter schools, has the authority to grant, supervise, and revoke charters, and demands full accountability from charter schools for school finances and student performance.*

*I certify that I have the authority to submit this application and that the initial board members and I were regularly involved in the development of this application. All information contained herein is complete and accurate. I realize that any misrepresentation will result in disqualification from the application process or revocation after award. I understand that incomplete applications will not be considered. The person named as the contact person for the application is so authorized to serve as the primary contact for this application on behalf of the non-profit organization.*

qcstem  
Signature

Ali Tombak  
Title

qcstem  
Printed Name

12/06/2013  
Date

## II. MISSION and PURPOSES

(No more than three total pages in this section)

### **Mission:**

*State the Mission of the proposed charter school in **one hundred words or less**. The mission statement defines the organization's purpose and primary objectives, describing why it exists. The mission statement provides the foundation for the entire proposal.*

*The mission statement of the proposed charter school is as follows:*

The mission of Queen City STEM School (QC-STEMS) is to prepare students to become competent, responsible and successful individuals in our globalized and technology-based society through a strong academic program, school-family-community partnerships, and strong teacher-student relationships. Our purpose is to provide a high-quality and enriching educational experience targeting 21st century outcomes for K-12 students. Our core values are responsibility, respect, resilience, diversity, courage, and industriousness. Fundamental to our mission is commitment to active involvement of students, competent and caring staff and leadership, innovative and effective teaching strategies, and striving for academic excellence for all students.

### **Educational need and Targeted Student Population of the Proposed Charter School:**

- 1. Provide a description of Targeted Population in terms of demographics. In your description, include how this population will reflect the racial and ethnic composition of the school system in which it is located. Describe the rationale for selecting the location and student body.*

QC-STEMS will attract students from all parts of Mecklenburg County and serve an economically and ethnically diverse student population. Low-achieving students from especially low income and socio-economically disadvantaged families will be attracted and helped using free after-school tutoring. High-achieving students will be offered personalized educational plans and advanced curriculum opportunities, and will have a chance to prepare for nationwide and international competitions.

The overall profile of the prospective student population will likely represent the demographics of Charlotte-Mecklenburg Schools:

- \* 67 % Students of color
- \* 53 % Economically disadvantaged student ratio
- \* 33 % Limited English proficiency

- 2. What will be the total projected enrollment at the charter school and what percentage of the Average Daily Membership (ADM) does that reflect when compared to the Local Education Agency (LEA) of the same offered grade levels? (i.e. If the proposed school will be grades 9-12, only compare the total enrollment to the total enrollment of the LEA is grades 9-12).*

Total projected enrollment of Queen City STEM School will be 688 when there is enrollment in all the K-12 grades. In the first year there will only be grades K-6, every year one more grade will be added. 688 is 0.45 percent of the ADM of the Charlotte/Mecklenburg School System.

3. *Explain how the charter school's education plan will compare to or differ from that of the local LEA(s).*

QC-STEMS is modeled after two previously established successful charter schools in North Carolina. Triad Math and Science Academy (TMSA) of Greensboro, established in 2009, was recently designated as the "School of Distinction" based on the percentage of students performing at grade level and whether students have learned as much as they are expected to learn in one year. Based on this success, Triangle Math and Science Academy of Raleigh was established in 2012. Now we are aiming to replicate this successful model emphasizing STEM education, technology integration, parent involvement, and extended programs both for over- and underachievers in Charlotte-Mecklenburg District.

4. *In the appendices (Appendix A), you must provide evidence through a narrative or visual of this educational need through survey data, or times and locations of public meetings discussing this proposed charter school. (Please do not provide more than one sample survey form).*

**Purposes of the Proposed Charter School:** *In one page or less, describe how the proposed charter school will achieve one or more of the six legislated purposes, as specifically addressed in the NC charter school statute GS 115C-238.29A, and the proposed school's operations.*

*The Six Legislative Purposes of a Charter School are:*

1. *Create new professional opportunities for teachers, including the opportunities to be responsible for the learning program at the school site.*
2. *Hold schools accountable for meeting measurable student achievement results.*
3. *Provide parents and students with expanded choices in the types of educational opportunities that are available within the public school system.*
4. *Improving student learning.*
5. *Increasing learning opportunities for all students, with a special emphasis on at-risk or gifted students.*
6. *Encourage the use of different and innovative teaching methods.*

The Six Legislative Purposes of a Charter School are:

1. Create new professional opportunities for teachers, including the opportunities to be responsible for the learning program at the school site.

QC-STEMS will facilitate collaboration and teamwork among the school personnel including teachers, administrators and staff to maximize the continuing professional development. It will be encouraged to translate research into practice through membership and attendance to professional organizations and subscription to professional journals. Staff will be required to meet regularly as a department and grade level team while using

data to drive decisions; meanwhile, instruction can provide opportunities for teachers to be responsible for learning programs. Professional development opportunities including on-site and off-site trainings will be provided for teachers and other staff to keep up with the emerging standards, particularly in mathematics, science, and technology. Teachers will train on how the students assessment results could be used to inform educational decisions. Additional professional development opportunities will be provided about multicultural learning environments, diverse learners, classroom management and guiding positive behavior, English Language Learners, child and adolescent development, and various technology tools.

2. Hold schools accountable for meeting measurable student achievement results.

QC-STEMS, by law, is subject to performance-based accountability through state-mandated tests. Similar to other charter schools, QC-STEMS is also subject to performance-based accountability before the parents and students by being a school of choice. Additionally, QC-STEMS is subject to financial accountability through use of the allocated funds for its programs.

3. Provide parents and students with expanded choices in the types of educational opportunities that are available within the public school system.

The following educational opportunities will be available for parents and students: strong mathematics and science focused curriculum; open enrollment that accepts all students around the district; small class size and low teacher-to-student ratio; compliance with federal and state regulations (e.g., Title 1); facilities such as science lab, biology lab, computer lab, gymnasium, auditorium, and designated spaces for specialized professionals; miscellaneous community projects such as field trips, guest speakers from institutions, and site visits; college credits and advanced programs; extended weekend and summer programs; before and after school programs; project-based programs with dedicated staff; student clubs (e.g., chess clubs, table tennis clubs, language clubs); home visits, parent volunteering, newsletters; free tutoring. QC STEMs students will also participate in academic competitions such as Science Olympiad, Math Counts, Science Fair, and First Lego League Robotics.

4. Improving student learning.

QC-STEMS will employ active learning methods that aim to enhance learning process by shifting the focus of teaching from teacher to learners. In its active learning structure, QC-STEMS will also apply the following techniques to improve student learning: 1) Curriculum-led improvement focusing on improving the quality, pattern and structure of day-by-day learning activities in the classroom. 2) Technology-integrated instruction for inquiry of communication, construction, and expression. Classrooms will be equipped with smart boards, document cameras, iPads and other instructional

technology. 3) Family-school-community partnership facilitated through classroom and school newsletters, parent-teacher conferences, home visits, parent volunteering, family nights, collaboration with the local colleges and universities, and field trips. 4) Extended programs before and after school and on the weekends including, but not limited to homework help, tutoring, foreign language learning, sports, music and art. 5) A community-centered learning environment will be created to help students build confidence and believe that "they can do well, find the meaning and value in the material learned and feel that they are valued members of the learning community". 6) Small class sizes targeting a teacher-to-student ratio of 1:16 with a maximum class size of 24. 7) Assessment-driven instruction employing online Progress Monitoring System 8) Cognitively oriented instruction to promote the use of metacognitive skills such as reflecting students own thinking process and developing effective learning strategies.

5. Increasing learning opportunities for all students, with a special emphasis on at-risk or gifted students.

Our approach to students at risk of academic failure is "catch them before they fall" through on-going observation and assessment. Increasing students self-efficacy and motivation to learn, providing supplemental and extended instruction, and if necessary, an intense and individualized intervention are among our key approaches in addition to individualized student instruction, tutoring, small group instruction, family involvement, and extended programs. Instruction designed to enhance language acquisition as well as content comprehension of English Language Learner students will be provided.

Academically or Intellectually Gifted (AIG) Students will be identified by Test of Cognitive Skills (TCS) and will be offered personalized educational plans (PEP). Highly qualified teachers will be recruited. Collaboration with higher education institutions, participation in academic competitions, summer camps, and advanced curriculum opportunities will also be offered for AIG students.

6. Encourage the use of different and innovative teaching methods.

Problem-based learning, based on using the knowledge as a means to apply and solve the problem, will be used both as a pedagogical approach and curriculum design methodology. Technology integration is the primary signature of QC-STEMS. Technology will be simultaneously incorporated in teaching and curriculum, as the integration of technology will serve for inquiry, communication, construction and expression as well as for assessment. Action research will be employed as a practical, yet systematic research method to help teachers investigate their own teaching and their students learning in and outside the classroom.

### **Goals for the Proposed Charter School:**

1. *Provide specific and measurable student achievement performance goals for the school's educational program and the method of demonstrating that students have attained the skills and knowledge specified for those goals. Address how often and when the information will be*

*communicated to the governing board and other stakeholders. These goals should include specific and measurable performance objectives over the first five years of the schools existence.*

(Student Performance Goals//Annual Performance Objectives//Method of Demonstration)

1-Subject Level Competency

Objective: Students should score higher than county and state averages at every level on EOG tests every year.

Method of Demonstration: EOG Test Results

2-Academic progress via national Norm Test

Objective: All students should increase performance/knowledge in core subjects indicating their academic progress by a national norm test in every year.

Method of Demonstration: MAP Testing Analysis (Administered 3 times a year (Fall/Winter/Spring)

3-STEM Attainment/Participation

Objective: More than 90 percent of students school-wide should actively participate in STEM fair with a project in ever year.

Method of Demonstration: Annual School STEM Fair

4-Character/Behavioral Development

Objective: Campus violence and other disruptive behaviors should decrease every year in order to maintain safe and healthy learning environment.

Method of Demonstration: Number of discipline referrals and online demerit system to track student behavior.

5-Full-time Matriculation

Objective: Maintaining no less than 90 percent monthly average attendance.

Method of Demonstration: Monthly PMR reports

6- Graduation

Objective: We will maintain a graduation percentage that is equal to or higher than the state average in every year.

Method of Demonstration: Number of diplomas each year.

*2. How will the governing board know that the proposed public charter school is working toward attaining their mission statement?*

Consistent with our mission statement, the governing board will utilize the following metrics to ensure that QC STEM is preparing students to become competent, responsible and successful individuals in our globalized and technology-based society. The governing board will meet monthly in school building and know whether the proposed school has been attaining our mission during its periodic review as shown below.

Metric 1 "Growing Enrollment": Board will annually review targeted enrollment numbers and actual enrollment.

Metric 2 "Academic Performance": Board will review EOG exam results and annually. School aims to achieve higher than state and county averages in

EOG exams.

Metric 3 "Staff Retention": Board will review staff turnover rate every quarter. QCSTEM aims to have better staff retention rate than county and state averages.

Metric 4 "Fiscal Performance": Board will review budget projections every month to ensure balanced budget every year.

Metric 5 "College Prep": Board will annually review number of graduates accepted into colleges annually (once 12 grades graduate).

Metric 6 "STEM Attainment": More than half of our students will pursue a degree in STEM field. Board will annually review the graduates college placement.

### III. EDUCATION PLAN

(No more than ten total pages in this section)

**NOTE:** *All sections of the Education Plan should align with all other sections of this application. The State Board of Education shall give priority consideration to the applicants who demonstrate potential for significant, meaningful innovation in education. Provide precise and clear explanations. Lack of response to any question or proper documentation will deem the application incomplete.*

#### **Instructional Program:**

Provide a detailed description of the overall instructional program of the proposed charter school, including major instructional methods, assessment strategies, and explain how this instructional program and model meet the needs of the targeted student population.

Queen City STEMs curriculum has been adopted from the Triad Math and Science Academy model, a charter school in Guilford County under NC Charter School Law. This model employs an inquiry-based curriculum, which is research-based and has been proven through extensive field studies across the nation. These studies showed that the curriculum has improved student learning and has been found appropriate for all student populations, including at-risk of academic failure and academically-gifted students. Our average class size is 20. We departmentalize starting in 4th Grade.

Using the Triad Math and Science Academy model, Queen City STEM will ensure students make expected progress towards successful high school graduation and college acceptance. The instructional approach and school environment will sharpen students skills and prepare them to pursue a high profile career, preferably a STEM career through our Technology Integrated Education and Advanced Studies Programs.

Queen City STEMs teaching approach includes culturally responsive teaching by (1) acknowledging the cultural differences as they affect students' dispositions, attitudes, and approaches to learning, (2) incorporating cultural differences as a content to be taught in the formal curriculum and (3) using instructional strategies that meet the needs of students with different learning styles. Thus, the learning environment will be positive and encouraging, and based on mutual respect, responsibility, and caring. It will operate based on the respect for the differences in beliefs, values and cultural variations. A sense of belonging will be created among the students.

Teachers meet the students at where they are. Learning activities will be built to meet students existing needs, and take the student to a higher level as high and reasonable expectations will be held for all students. To accomplish this goal, differentiated instruction and assessment will be used in the classroom to reach each student at their academic performance level, like using appropriate technology to build small projects, presenting their projects, and communicating with experts, classmates, teachers about their projects.

Active engagement of students is also critical. Every student will be provided with opportunities to develop and learn. Students will be actively involved in their learning, by doing, writing, making, debating, role

playing, brainstorming, discussing, designing, problem solving, creating, and demonstrating.

Problem-based learning: As opposed to rote memorization of the knowledge through problem-based learning, students will apply the knowledge in real-life situations and solve the problem. Using problem-based learning prepares students to be effective communicators, effective collaborators, critical and creative thinkers and active learners.

### **K-5 Curriculum and Instructional Design:**

*Describe the basic learning environment (e.g., classroom-based, independent study), including class size and structure.*

Queen City STEMs curriculum has been adopted from the Triad Math and Science Academy model, a charter school in Guilford County under NC Charter School Law. This model employs an inquiry-based curriculum, which is research-based and has been proven through extensive field studies across the nation. These studies showed that the curriculum has improved student learning and has been found appropriate for all student populations, including at-risk of academic failure and academically-gifted students. Focus of the classes is predominantly literacy starting with Kindergarten classes and STEM focus follows literacy. As students move up from kindergarten toward 5th grade this balance of focus gradually shifts from literacy to STEM.

Grades K-3 students are in traditional elementary classroom settings where they receive instruction from their homeroom teachers except for specials such as, art, physical education, music, and computer. Starting in 4th grade we departmentalize where math, science, and technology courses are taught by subject teachers. 4th and 5th grade students will be switching classes to receive instruction from their subject teachers. Average class size in QC STEM elementary school will be 20 students per class.

Using the Triad Math and Science Academy model, Queen City STEM will ensure students make expected progress towards successful high school graduation and college acceptance. The instructional approach and school environment will sharpen students skills and prepare them to pursue a high profile career, preferably a STEM career through our Technology Integrated Education and Advanced Studies Programs.

Queen City STEMs teaching approach includes culturally responsive teaching by (1) acknowledging the cultural differences as they affect students' dispositions, attitudes, and approaches to learning, (2) incorporating cultural differences as a content to be taught in the formal curriculum and (3) using instructional strategies that meet the needs of students with different learning styles. Thus, the learning environment will be positive and encouraging, and based on mutual respect, responsibility, and caring. It will operate based on the respect for the differences in beliefs, values and cultural variations. A sense of belonging will be created among the students.

Teachers meet the students according to where they are in their learning. Learning activities will be built to meet students existing needs, and take the student to a higher level as high and reasonable expectations will be

held for all students. To accomplish this goal, differentiated instruction and assessment will be used in the classroom to reach each student at their academic performance level, like using appropriate technology to build small projects, presenting their projects, and communicating with experts, classmates, teachers about their projects.

Active engagement of students is also critical. Every student will be provided with opportunities to develop and learn. Students will be actively involved in their learning, by doing, writing, making, debating, role playing, brainstorming, discussing, designing, problem solving, creating, and demonstrating.

**Problem-based learning:** As opposed to rote memorization of the knowledge through problem-based learning, students will apply the knowledge in real-life situations and solve the problem. Using problem-based learning prepares students to be effective communicators, effective collaborators, critical and creative thinkers and active learners.

Please see Appendix B for sample course scope and sequence for K-5 grades.

Provide a synopsis of the planned curriculum, including:

1. *One sample course scope and sequence (preferably in graph form) in the Appendices (Appendix B) for one core subject (specific to the school's purpose) for the elementary division the school would ultimately serve.*
2. *Identify how this curriculum aligns with the proposed charter school's mission, targeted student population, and North Carolina Accountability Model.*

Queen City STEM is proposing a Science, Technology, Engineering, and Math (STEM) program which will customize TMSAs academic program with a specific focus on Mathematics & Science. Our mission includes developing students capacity to succeed in college. The STEM program that we are proposing will prepare Mecklenburg County students for higher education especially in the field of technology as the U.S. demand for scientists and engineers is expected to increase four times the rate for all other occupations during the next decade. At Queen City STEM, the curricula for all subject areas are rigorous and aligned with the NC Standard Course of Study. In addition, early years are important for building strong mathematics skills. Students with stronger mathematics skills at early grades perform better on mathematics and reading tests in upper grades. Thus, the focus of the: Grades K-3 is to build a strong language, literacy, and mathematics skills. Science and social studies are naturally integrated through themes. All instruction will be supported by the technology. Grades 4-5: Focus starts shifting from general elementary education towards more science related classroom activities and advanced mathematics while NC Standard Course of Study are followed.

Triangle Math and Science Academy's curriculum explores such an education system in which all the students are required to be fully active. It aims to graduate students whom will take learning as a lifelong activity in order to meet the needs of this 21st century. All students from different socioeconomic levels, including low-income and underrepresented minority students, are welcome to Queen City STEM education program. For the economy and society, we should be encouraging more students to study STEM. While 40 percent of the worlds scientists and engineers resided in the U.S. about 30

years ago, today that number has shrunk to about 15 percent. According to Rodney C.

Adkins, senior vice president of IBMs Systems & Technology Group we need to increase the size of the STEM education pipeline by motivating students for science, technology, engineering and math throughout high school and college; and to improve the composition of the STEM education to include more women and underrepresented minorities. Mecklenburg County is the second-largest school district in North Carolina with over 135,600 students enrolled in Charlotte-Mecklenburg Schools, where 67 percent are underrepresented minorities. Queen City STEM will participate in NC ABCs Accountability Model and conduct the statewide testing required as in all NC public schools; hence achievement goals will be based on the results obtained from the assessments in the ABCs Accountability Model.

Specific achievement goals are given below for each academic school year: The percentage of Queen City STEM students who score at Level 3 or above in reading tested in End of Grade (EOG) at any grade will exceed the same of 85 percent of non-charter public schools with similar demographics in Charlotte- Mecklenburg Schools.

The percentage of Queen City STEM students who score at Level 3 or above in mathematics tested in End of Grade (EOG) at any grade will exceed the same of 85 percent of non-charter public schools with similar demographics in Charlotte- Mecklenburg Schools.

The percentage of Queen City STEM students who score at Level 3 or above in any subject tested in End of Course (EOC) at any grade will exceed the same of 85 percent of non-charter public schools with similar demographics in Charlotte- Mecklenburg Schools.

*3. Describe the primary instructional strategies that the school will expect teachers to master and explain why these strategies will result in increased academic achievement for the targeted student population.*

Our educational model begins with a firm belief that all students can learn and more students will learn if material is presented in a variety of engaging ways. One method does not work for all students all the time. A variety of learning styles and instructional strategies need to be incorporated and students need to be motivated to achieve a productive learning environment. We strongly believe in a student-centered experiential learning environment where students will have the opportunity to work collaboratively on reflective, hands-on assignments. Queen City STEMs learning environment will be designed to meet a wide range of academic levels and learning styles within the multi-age classroom setting. Low pupil-to-teacher ratio, individualized and group instruction, instructional technology such as Smartboards, and multi-sensory teaching approaches and child-centered learning will be classroom features that will help students meet their academic potential in the least restrictive educational environment. Recognizing that educational success will be realized only when the essential student-teacher-parent triad functions in school, Queen City STEM will provide our youth with the support necessary to reach their highest intellectual, social, emotional, and physical potential. Queen City STEMs teaching philosophy finds its roots primarily in constructivism. Constructivist theory focuses on each students unique way of learning and

creating their own knowledge by integrating their existing knowledge with the new knowledge. To support students to form their personal understanding, Queen City STEM will use teaching approaches that allow students to get involved in effective learning experiences such as indirect instruction, project-based learning, discovery learning, and student-based learning that will be explained in detail later in this document. We believe that our teachers will, imply data-driven instruction and inquiry as one of most essential factors in helping all students achieve success including assessment, analysis, and action. Thus, they will be able to sustain a high quality teaching and learning atmosphere in the classroom. Additionally, data-driven instruction is an important part of our instructional model. Turning data into usable information is a challenging task and professional development is critical to implement a data-driven instruction. Unfortunately, most teachers are not prepared to transfer the student data into usable information. Therefore, teachers will be training on how the students assessment results could be used to inform educational decisions.

Queen City STEM believes in the value and importance of integrating multimedia learning & teaching approaches and computer assisted instruction in all the learning and teaching approaches presented above. Both multimedia learning principles and computer assisted instruction facilitate students learning. Mayer and Moreno (2007) state that students, who acquire any information through multimedia whether it is verbal, image-base, text-base, or visual, learn more because information presented in this way employs multiple cognitive processes that support enhanced learning. Queen City STEM specifically believes that computer-assisted instruction improves education of all students due to the immediate feedback in the process. Computers also provide opportunities for a wide range of exploration, especially for academically gifted students. In conclusion, multimedia learning and computer assisted instruction in Queen City STEM lesson plans will result in better educational environments for both the students as well as the teachers.

4. *Provide a school academic calendar in Appendix C (minimum of 185 instructional days or 1,025 hours).*
5. *Describe in a brief narrative below on how the calendar coincides with the tenets of the proposed mission and education plan.*

Queen City STEM will offer instruction for at least 185 days by following Charlotte-Mecklenburg Schools calendar. However, the school reserves the right to make any necessary change in the calendar as long as said change(s) is/are in compliance with NCGS 115C-238.29F(d)(1).

### **6-8 Curriculum and Instructional Design:**

*Describe the basic learning environment (e.g., classroom-based, independent study), including class size and structure.*

Queen City STEMs curriculum has been adopted from the Triad Math and Science Academy model, a charter school in Guilford County under NC Charter School Law. This model employs an inquiry-based curriculum, which is research-based and has been proven through extensive field studies across the nation. These studies showed that the curriculum has improved student learning and has been found appropriate for all student populations, including at-risk of academic failure and academically-gifted students. Our average class size is

20. All courses will be taught by subject teachers.

Using the Triad Math and Science Academy model, Queen City STEM will ensure students make expected progress towards successful high school graduation and college acceptance. The instructional approach and school environment will sharpen students skills and prepare them to pursue a high profile career, preferably a STEM career through our Technology Integrated Education and Advanced Studies Programs.

Queen City STEMs teaching approach includes culturally responsive teaching by (1) acknowledging the cultural differences as they affect students' dispositions, attitudes, and approaches to learning, (2) incorporating cultural differences as a content to be taught in the formal curriculum and (3) using instructional strategies that meet the needs of students with different learning styles . Thus, the learning environment will be positive and encouraging, and based on mutual respect, responsibility, and caring. It will operate based on the respect for the differences in beliefs, values and cultural variations. A sense of belonging will be created among the students.

Teachers meet the students at where they are. Learning activities will be built to meet students existing needs, and take the student to a higher level as high and reasonable expectations will be held for all students. To accomplish this goal, differentiated instruction and assessment will be used in the classroom to reach each student at their academic performance level, like using appropriate technology to build small projects, presenting their projects, and communicating with experts, classmates, teachers about their projects.

Active engagement of students is also critical. Every student will be provided with opportunities to develop and learn. Students will be actively involved in their learning, by doing, writing, making, debating, role playing, brainstorming, discussing, designing, problem solving, creating, and demonstrating.

Problem-based learning: As opposed to rote memorization of the knowledge through problem-based learning, students will apply the knowledge in real-life situations and solve the problem . Using problem-based learning prepares students to be effective communicators, effective collaborators, critical and creative thinkers and active learners.

Provide a synopsis of the planned curriculum, including:

1. **One** sample course scope and sequence (preferably in graph form) in the Appendices (Appendix B1) for one core subject (specific to the school's purpose) for the middle school division the school would ultimately serve.
2. Identify how this curriculum aligns with the proposed charter school's mission, targeted student population, and North Carolina Accountability Model.

Queen City STEM is proposing a Science, Technology, Engineering, and Math (STEM) program which will customize TMSAs academic program with a specific focus on Mathematics & Science. Our mission includes developing students capacity to succeed in college. The STEM program that we are proposing will

prepare Mecklenburg County students for higher education especially in the field of technology as the U.S. demand for scientists and engineers is expected to increase four times the rate for all other occupations during the next decade . At Queen City STEM, the curricula for all subject areas are rigorous and aligned with the NC Standard Course of Study. In addition, early years are important for building strong mathematics skills. Students with stronger mathematics skills at early grades perform better on mathematics and reading tests in upper grades. Thus, the focus of the: Grades K-3 is to build a strong language, literacy, and mathematics skills. Science and social studies are naturally integrated through themes. All instruction will be supported by the technology. Grades 6-8, besides all core subject areas (Common Core State Standards and N.C. Essential Standards), will have a strong focus on science and mathematics skills through integrated technology. Students will be exposed to high school math in middle school. For example, 8th grade students can take Common Core Math I, or Math II if they have met the prerequisites.

Triangle Math and Science Academys curriculum explores such an education system in which all the students are required to be fully active. It aims to graduate students whom will take learning as a lifelong activity in order to meet the needs of this 21st century. All students from different socioeconomic levels, including low-income and underrepresented minority students, are welcome to Queen City STEM education program. For the economy and society, we should be encouraging more students to study STEM. While 40 percent of the worlds scientists and engineers resided in the U.S. about 30 years ago, today that number has shrunk to about 15 percent . According to Rodney C. Adkins, senior vice president of IBMs Systems & Technology Group, we need to increase the size of the STEM education pipeline by motivating students for science, technology, engineering and math throughout high school and college; and to improve the composition of the STEM education to include more women and underrepresented minorities. Mecklenburg County is the second-largest school district in North Carolina with over 135,600 students enrolled in Charlotte-Mecklenburg Schools, where 67 percent are underrepresented minorities. Queen City STEM will participate in NC ABCs Accountability Model and conduct the statewide testing required as in all NC public schools; achievement goals will be based on the results obtained from the assessments in the ABCs Accountability Model.

Specific achievement goals are given below for each academic school year:  
The percentage of Queen CitySTEM students who score at Level 3 or above in reading tested in End of Grade (EOG) at any grade will exceed the same of 85 percent of non-charter public schools with similar demographics in Charlotte-Mecklenburg Schools.

The percentage of Queen City STEM students who score at Level 3 or above in mathematics tested in End of Grade (EOG) at any grade will exceed the same of 85 percent of non-charter public schools with similar demographics in Charlotte- Mecklenburg Schools.

The percentage of Queen City STEM students who are eligible for free and reduced lunch and who score at Level 3 and above in subjects tested in EOC or EOG will exceed the same of 85 percent of non-charter public schools with similar demographics in Charlotte-Mecklenburg Schools.

3. *Describe the primary instructional strategies that the school will expect teachers to master and explain why these strategies will result in increased academic achievement for the targeted student population.*

Our educational model begins with a firm belief that all students can learn and more students will learn if material is presented in a variety of engaging ways. One method does not work for all students all the time. A variety of learning styles instructional strategies need to be incorporated and students need to be motivated to achieve a productive learning environment. We strongly believe in a student-centered experiential learning environment where students will have the opportunity to work collaboratively on reflective, hands-on assignments. Queen City STEMs learning environment will be designed to meet a wide range of academic levels and learning styles within the multi-age classroom setting. Low pupil-to-teacher ratio, individualized and group instruction, instructional technology such as Smartboards, and multi-sensory teaching approaches and child-centered learning will be classroom features that will help students meet their academic potential in the least restrictive educational environment. Recognizing that educational success will be realized only when the essential student-teacher-parent triad functions in school, Queen City STEM will provide our youth with the support necessary to reach their highest intellectual, social, emotional, and physical potential. Queen City STEMs teaching philosophy finds its roots primarily in constructivism. Constructivist theory focuses on each students unique way of learning and creating their own knowledge by integrating their existing knowledge with the new knowledge. To support students to form their personal understanding, Queen City STEM will use teaching approaches that allow students to get involved in effective learning experiences such as indirect instruction; project-based learning, discovery learning, and student-based learning that will be explained in detail later in this document. We believe that our teachers will, imply data-driven instruction and inquiry as one of most essential factors in helping all students achieve success including assessment, analysis, and action. Thus, they will be able to sustain a high quality teaching and learning atmosphere in the classroom. Additionally, data-driven instruction is an important part of our instructional model. Turning data into usable information is a challenging task and professional development is critical to implement a data-driven instruction. Unfortunately, most teachers are not prepared to transfer the student data into usable information. Therefore, teachers will be training on how the students assessment results could be used to inform educational decisions.

Queen City STEM believes in the value and importance of integrating multimedia learning & teaching approaches and computer assisted instruction in all the learning and teaching approaches presented above. Both multimedia learning principles and computer assisted instruction facilitate students learning. Mayer and Moreno (2007) state that students, who acquire any information through multimedia whether it is verbal, image-base, text-base, or visual, learn more because information presented in this way employs multiple cognitive processes that support enhanced learning. Queen City STEM specifically believes that computer-assisted instruction improves education of all students due to the immediate feedback in the process. Computers also provide opportunities for a wide range of exploration, especially for academically gifted students. In conclusion, multimedia learning and

computer assisted instruction in Queen City STEM lesson plans will result in better educational environments for both the students as well as the teachers.

4. *Provide a school academic calendar in Appendix C (minimum of 185 instructional days or 1,025 hours).*
5. *Describe in a brief narrative below on how the calendar coincides with the tenets of the proposed mission and education plan.*

Queen City STEM will offer instruction for at least 185 days by following Charlotte-Mecklenburg Schools calendar. However, the school reserves the right to make any necessary change in the calendar as long as said change(s) is/are in compliance with NCGS 115C-238.29F(d)(1).

### **9-12 Curriculum and Instructional Design:**

Describe the basic learning environment (e.g., classroom-based, independent study), including class size and structure.

Well-defined and implemented curriculum: Center for Science, Mathematics, and Engineering Education emphasize the "importance of defining and coordinating [mathematics and science] curricula across the 13-year span based on standards in use by local school districts as a way to improve the quality of education ". Queen City STEM will use standards-based mathematics, science and language arts curriculum, supported by National Science Foundation and research.

As mentioned earlier in this document, Queen City STEMs curriculum has been adopted from the Triad Math and Science Academy (TMSA) model, a charter school in Guilford County under NC Charter School Law. This model employs an inquiry-based curriculum, which is research-based and has been proven through extensive field studies across the nation. At the high school level, in addition to the core areas, there will be an emphasis on information technologies and advanced placement courses. TMSA will also have a focus on college preparation with individualized SAT tutoring and customized practice testing opportunities. Such an approach will ensure that TMSA graduates will be prepared to pursue both advanced degrees in STEM fields and also seek career and internship opportunities in the local high-tech companies and research institutes (e.g. NSA, NASA, NIH, Lockheed Martin, etc).

Active engagement of students and problem-based learning are two important component of the instruction in Queen City STEM at the high school level as the same as the K-8. To ensure effective use of these instructional methods, some of the strategies we will employ are: Use of whole class, small group and pair instruction effectively and in a balanced way; use of metacognitive skills, such as reflecting their own thinking process, and developing effective learning strategies; the peer tutoring and tutoring strategies will be used to provide additional learning opportunities for students at risk of academic failure. Teachers will structure, monitor, and initiate the tutoring process and students will be prepared for the process .

All core subject areas are essential in students learning in all grade levels. Nonetheless, learning to read is the most important skill students need to learn to be successful in school and life. While Queen City STEM is

developing comprehension and vocabulary skills, and strong mathematics skills at early grades; Grades 9-12 will be to develop a focused science, mathematics and technology skills towards higher education. Students will be guided to help choose STEM career pathways and follow college preparatory programs.

Characteristics of the physical learning environment: The physical learning environment will be created with a variety of interest centers where children can pursue special projects. The materials will be stored in enough space and at the students eye level so that students can access easily. Students in the classroom work with paper, cardboard, wood, leather, cloth, yarns, clay and sand, and the metals, with and without tools by employing the process of folding, cutting, pricking, measuring, molding, modeling, pattern-making, heating and cooling, and the operations characteristic of such tools as the hammer, saw, file, etc. Students are provided with active occupations such as outdoor excursions.

Provide a synopsis of the planned curriculum, including:

1. *One sample course scope and sequence for one core subject (specific to the school's purpose) (Appendix B2).*
2. *As Appendix B3, provide a visual disseminating what courses (core content and electives) will be offered in year one through year five of the charter high school. Please ensure the projected staff and budget aligns with the course offerings.*
3. *Identify how this curriculum aligns with the proposed charter school's mission, targeted student population, and North Carolina Accountability Model.*

Queen City STEM is proposing a Science, Technology, Engineering, and Math (STEM) program which will customize TMSAs academic program with a specific focus on Mathematics & Science. Our mission includes developing students capacity to succeed in college. The STEM program that we are proposing will prepare Mecklenburg County students for higher education especially in technical fields.

It is Queen City STEMS goal to address needs of students in the targeted area in the most efficient and productive way possible, and thus play a supplemental role to the existing public school system. In this regard, Queen City STEM will implement an innovative, technology-integrated educational program that builds up a rigorous academic background in a nurturing, productive, safe, and disciplined learning environment. Queen City STEMS innovative educational approach will allow the school to pursue its performance targets of exceeding the districts SAT averages, greatly surpassing the districts EOC test averages, and achieving high college acceptance rates.

Queen City STEM will participate in NC ABCs Accountability Model and conduct the statewide testing required as in all NC public schools; achievement goals will be based on the results obtained from the assessments in the ABCs Accountability Model. Addition to the achievement goals that are given for K-8 level, some specific achievement goals for Queen City STEM High School for each academic school year:

\* The mean score of Queen City STEM juniors and seniors who take the SAT Test or American College Testing (ACT) will exceed the same of 85 percent of

non-charter public schools with similar demographics in Charlotte-Mecklenburg Schools.

\* Student graduation rate at Queen City STEM will be higher than the same of 85 percent of non-charter public schools with similar demographics in Charlotte-Mecklenburg Schools.

\* College acceptance rate of Queen City STEM students will be higher than the same of 85 percent of non-charter public schools with similar demographics in Charlotte-Mecklenburg Schools.

4. *Describe the primary instructional strategies that the school will expect teachers to master and explain why these strategies will result in increased academic achievement for the targeted student population.*

Brief description of the Instructional Methods and the related Teaching Approaches:

Indirect Instruction: Indirect instruction is a teaching and learning approach in which concepts, patterns, and abstractions are taught in the context of strategies that emphasize concept learning, inquiry, and problem solving. Constructivist teaching approach supports the usage of indirect instruction in the school settings. As Queen City STEM, we believe that the best way to apply indirect instruction is to design and sequence constructivist lessons to encourage learners to use their own experiences to actively construct meaning. The nature of constructivist lessons at Queen City STEM will have the following characteristics: promoting development of higher level and abstract thinking, promoting critical thinking and questioning, promoting collaboration and cooperation within the classroom, use of questions to guide investigation and discovery, encouraging students self-reflection and evaluation

\* Using students ideas to organize the lesson around each students needs and interests,

\* Encouraging students positive attitudes towards learning.

Project Based Learning: Queen City STEM provides a project-based learning environment by utilizing technological tools and authentic, challenging tasks embedded in course projects. The usage of technological tools in challenging projects embedded in Queen City STEM lessons can contribute to students' sense of authenticity and to the "real-life" quality of the task at hand. Queen City STEM lessons establish a learning environment which includes many connections with real life situations. These connections are facilitated with the use of technology for simulations and virtual manipulative and with the use of computer software (e.g., Spreadsheet, Fathom, Thinker Plot, GSP). The accessibility of these technological tools that are used for challenging tasks in the project based learning allows Queen City STEM students to aspire to a level of effort and quality of product that more closely reflects what they see and know of the real world.

Discovery Learning: Students are more likely to remember concepts they discover through their own experiences. Queen City STEM teachers will provide an appropriate teaching and learning environment to better serve each students understanding and learning abilities by acting as a facilitator and using appropriate instructional technology tools. Current technology allows creation of virtual environments for students to explore, examine, and investigate. Queen City STEM teachers will use innovative

technological tools to provide additional discovery learning opportunities. In this learning approach, students will have a chance to observe and reflect on their first-hand experience, and thus, generate solution strategies.

5. *Explain how the proposed instructional plan and graduation requirements will ensure student readiness for college or other postsecondary opportunities (trade school, military service, or entering the workforce).*

Queen City STEM students will experience intense and individualized instruction, especially in mathematics and IT, thus acquiring a strong academic background for a successful higher education. They will be provided opportunities for internships, projects, and in science fairs to gain hands-on experience and also observe, firsthand, real-world applications of the concepts they learn in class. One-on-one tutoring and peer-study groups will also be available for students to further assist them in their studies. At Queen City STEM, we will expose our children to a variety of perspectives by means of technology, and we will challenge our students with high quality math and science curricula.

The United States has entered into a significant national decline in the number of college graduates with STEM degrees. This downward trend is an issue of national importance as it affects the countries capacity to maintain a technological lead in critical skills and disciplines related to mathematics and science. The ability to compete on the increasingly internationalized stage will be hindered without college graduates with the ability to understand and invent cutting edge technologies in the decades to come. While the foundational skills to succeed in STEM fields will be built in early grades in Queen City STEM; students mathematics and science skills will be sharpened during their high school experience. Indeed, a strong mathematics and science foundation is critical to succeed in college regardless of the field attained. Furthermore, as we move towards a more technology-based and globalized world, the importance of mathematics and science for functioning in the society effectively is indisputable.

In addition to the academic welfare of the Charlotte-Mecklenburg Schools students, their social welfare will also be top priority. Therefore, we will integrate "Character Education" programs into the fabric of our curriculum to help with value formation while helping to boost academic performance. According to reports released by the Character Education Partnership (CEP), schools that integrated character education into the fabric of their curricula and cultures (for example, CEPs National Schools of Character) experienced improvement in academic achievement, behavior, school culture, peer interaction, and parental involvement. Through character education programs, students develop performance habits and intellectual qualities that enable them to perform at their highest potential not only in school but also in their personal and professional lives. These dual functions of character education work together in mutually supportive and complimentary ways. Research has shown that schools implementing good character education programs report, on the one hand, reduced levels of violence, crime, disruptive behavior, and discipline referrals, while on the other, improved attendance and academic achievement.

6. *If implemented, describe how the proposed charter school will meet the Future-Ready Core*

*requirements. Provide details on how the students will earn credit hours, how grade-point averages will be calculated, what information will be on transcripts?*

Aligned with NC State requirements, Queen City STEM high school students are expected to meet Future-Ready Core course and credit requirements and testing standards to receive a high school diploma. Table 1 below shows the required course, credits and tests that Queen City STEM students will meet before they graduate from high school.

CONTENT AREA	FUTURE-READY CORE Credits and Courses	Tests to be Scored "Proficient"
1-English (4 Crdt)	English I, II, III, IV Or a designated combination of 4 courses	English II (EOC)
2-Mathematics (4 Crdt)	(CC Math I, II, III)4th Math Course to be aligned with the students post high school plans	Algebra 1 (EOC)
3-Science (3 Crdt)	A Physical Science course, Biology, Environmental Science	Biology (EOC)
4-Soc. Study (4 Crdt)	Civics and Economics, World History, American History I: Founding Principles and American history II OR AP US History, additional social studies course	
5-Computer Skills		
6-Health & Physical Ed. (1 Crdt)	Health/Physical Education	
7-Electives or requirements crds(6 reqrd. 4 recommended)	2 Elective credits of any combination from either: -Career and Technical Education (CTE) -Arts Education -Second Languages 4 Elective credits strongly recommended (four course concentration) from one of the following: -Career and Technical Education (CTE) -Arts Education (e.g. dance, music, theater arts, visual arts) -Any other subject area (e.g. math, science, social studies, English)	

Total= 22 Credits

7. *Provide a school academic calendar in Appendix C (minimum of 185 instructional days or 1,025 hours)*
8. *Describe in a brief narrative below on how the calendar coincides with the tenets of the proposed mission and education plan.*

Queen City STEM will offer instruction for at least 185 days by following Charlotte-Mecklenburg Schools calendar. However, the school reserves the right to make any necessary change in the calendar as long as said change(s) is/are in compliance with NCGS 115C-238.29F(d)(1).

### **Special Programs and "At-Risk" Students**

1. *Describe the methods and clear systems of prevention and intervention teachers will utilize to provide assistance to students that are not performing at expected levels: ensuring continued progress and academic student growth.*

#### Special Programs and "At-Risk" Students

According to research students with limited English proficiency, students from minority groups, and students from low socio economic backgrounds are at risk of academic failure. We believe in a "catch them before they fall" approach for our at risk students. On-going observations and assessments are critical for early identification of at-risk students. To improve learning of students who are identified as at risk of academic failure, we follow a three-tiered approach that will be explained in detail later in this document.

2. *Explain how the instructional plan and curriculum will meet the needs of English Language Learner (ELL) students, including the following:*
  - a) *Methods for identifying ELL students.*
  - b) *Specific instructional programs, practices, and strategies the school will employ to ensure academic success and equitable access to the core academic program for ELL students.*
  - c) *Plans for monitoring and evaluating the progress and success of ELL students, including exiting students from ELL services.*

#### a) Methods for identifying ELL students.

The WIDA-ACCESS Placement Test (W-APT) is the assessment used in North Carolina for initial identification and placement of students identified as limited English proficient. Eligibility assessment on the W-APT is based on results of the Home Language Survey (HLS) process. The HLS process, identification, and subsequent placement of limited English proficient students in English as a Second Language (ELL/ESL) services are guided at the state level by the NCDPI Curriculum and Instruction Division.

#### b) Specific instructional programs, practices, and strategies the school will employ to ensure academic success and equitable access to the core academic program for these students.

- \* Differentiated instruction to meet the needs of all learners
- \* ELL/ESL pull outs
- \* Stand-alone ELL/ESL programs
- \* Cooperative learning
- \* Content based ELL/ESL programs

\* Collaborative teaching with other teachers

c) Plans for monitoring and evaluating the progress and success of ELL students, including exiting students from ELL services. The ESL teacher closely monitors the student's development of social communicative language and academic language proficiency during the school year. A series of steps are taken for monitoring and guiding student progress:

\* Ongoing monitoring of development of language and content skills/knowledge as the student progresses through the individualized program of instruction (Assessments of student work are used to determine appropriate instructional approaches, adaptations, materials and coursework).

\* Determining when the student has acquired the academic language proficiency necessary to be placed full-time at the appropriate grade level in the regular instructional program without ELL/ESL services (exit criteria);

\* Post-service monitoring to ensure successful transition into the regular instructional program;

\* Periodic program evaluation to ensure that language and academic support services for ELL/ESL students are effective.

3. *Explain how the school will identify and meet the needs of intellectually gifted students, including the following:*

a) *Specific instructional programs, practices, strategies, and opportunities the school will employ or provide to enhance their abilities.*

b) *Plans for monitoring and evaluating the progress and success of intellectually gifted students.*

QCSTEM will work closely with the AIG Office of Charlotte-Mecklenburg Schools to make sure that our future Academically or Intellectually Gifted (AIG) students showing high performance capability academically and intellectually are correctly identified and their highly unique and specialized needs are fully met in our nurturing school environment. Queen City STEM will establish an AIG Committee Review Team to be comprised of an Administrator, AIG Coordinator, classroom teachers, special educator and English for Speakers of Other Languages (ESOL) teacher where applicable. This committee will meet to review nominations and pertinent data to determine the continuation of the screening process for identification. Queen City STEM will find out whether each student was already placed in an AIG program before; students who have previously been designated as AIG will then be further screened by Queen City STEM School to confirm eligibility.

If there is no record available about a student who claims to have been classified as AIG, then the student will be advised to take one or more tests, such as Common Test of Basic Skills, Stanford Achievement Test, Weschler series of IQ tests, MAP Test, and Stanford-Binet test.

**IQ Classification**

130-145 Moderately Gifted

145-160 Highly Gifted

160-180 Exceptionally Gifted

180 d above Profoundly Gifted

a) Specific instructional programs, practices, strategies, and opportunities

the school will employ or provide to enhance their abilities. Queen City STEM will adhere to the following program when educating AIG students:

1. Emphasizing skills in critical thinking, problem solving, and inquiry.
2. Involving the student in selecting and planning field trips.
3. Planning and providing optional and voluntary enrichment activities.
4. Planning assignments and activities that challenge the students to the full extent of their abilities.
5. Providing in-class seminars for students to discuss topics and problems that they are pursuing individually or as members of a learning team.
6. Providing independent and joint learning opportunities.
7. Working with individual students in the planning of their own objectives and activities for learning.

Queen City STEM believes that all students are entitled to equal access to learning and achievement. We provide this access by placing exceptional students in the most enabling learning environment possible.

#### AIG Program at Queen City STEM

Once a student is identified as an AIG student, with the signed consent from their legal guardians, Queen City STEM will take the following steps:

\* This student will be invited to Queen City STEMs Advanced Placement Program.

\* Students will be observed during the first half of the academic year. If teachers report that the student has the necessary academic potential, the student will be invited to a special interest team such as the Science Olympiad Team or the Math Olympiad Team and students will be placed in Special Interest Certification Programs.

b) Plans for monitoring and evaluating the progress and success of intellectually gifted students. Queen City STEM monitors and evaluates all gifted students to ensure students are making learning gains. Goals will be established based on each students gifted level and these goals will be stated in each students IEP. Teachers who have gifted students in the classrooms monitor the students progress to ensure the gifted students achieve successful completion of the gifted goals in the general education setting. The special education teacher is required to maintain a record of the services as related to the PEP goals. Goals for gifted learners will be monitored to ensure the gifted services provide focus on expected outcomes as indicated in the PEP document, and these goals are clearly intended to ensure increased academic gains. The AIG committee review team will meet to evaluate the program and to facilitate effective changes as needed.

### **Exceptional Children**

*The public charter school cannot deny admission to any child eligible for special education services as identified under the federal legislation Individuals with Disabilities Education Improvement Act (IDEA), IDEA regulations, and Article 9 115C of the North Carolina General Statutes, North Carolina Policies Governing Services for Children with Disabilities. **All public schools are responsible for hiring***

*licensed and 'highly qualified' special educators pursuant to law. Public schools are required to provide a full continuum of services to meet the unique needs of ALL students with disabilities.*

### Identification and Records

1. *Explain how you will identify students who are enrolled within the charter school that have previously been found to be eligible for special education services or are protected under Section 504 of the Rehabilitation Act.*
2. *Provide the process for identifying students who may be eligible for special education services as identified in the federal 'Child Find' mandate. Be sure to include how student evaluations and assessments will be completed.*
3. *Provide a plan detailing how the records of students with disabilities and 504 Accommodation plans will be properly managed.*
  - a) *Requesting Records from previous schools*
  - b) *Record Confidentiality (on site)*
  - c) *Record Compliance (on site)*

1. Students with special needs, including those under Section 504, will be identified according to the NC DPI regulations and recommended procedures. Students will be provided with a full range of services and placements to fulfill the special education requirements identified for students with disabilities. An Individualized Education Plan (IEP) will be developed in accordance with standard practices for each student with disabilities. The IEP team will be responsible for the development of Individualized Education Plans.

2. The students IEP will reflect all the elements required by the Individuals with Disabilities Education Act, Section 504 of the Rehabilitation Act, and the Americans with Disabilities Act. The services will include intense elements:

- \* Students present levels of functioning and academic performance;
- \* Measurable annual goals and, where appropriate, short-term objectives;
- \* Special education, related services, and supplementary aids and services;
- \* A statement of program modifications and/or supports to be provided for the student;
- \* The extent (if any) to which the student will participate with non-disabled students in the general education class and extracurricular activities;
- \* Any individual modification in the administration of state or other required assessments of student achievement needed for the student to participate in the assessments;
- \* Projected date for the beginning of services and modification and anticipated frequency, location, and duration of services and modifications;
- \* How progress toward annual goals will be measured;
- \* Transition services for students ages 13 years and above; and
- \* Documentation that the student has been informed of his/her rights that will be transferred to the student upon reaching the age of majority.

Evaluation procedures will be administered in accordance with federal regulations to determine whether a student is disabled and the nature and extent of the special education and related services that the student needs. The use of this term means procedures are used selectively with an individual student and does not include basic tests administered to or

procedures used with all students in a school, grade, or class.

3.

a) Requesting Records from previous schools

To request records from previous schools, a written record request form will be sent to students previous schools via facsimile. The request for the records of students with disabilities will be also sent in attention of Exceptional Children Department, and the request for students with 504 Accommodation plans will be also sent in attention of schools 504 Coordinator.

b) Record Confidentiality (on site)

In order to ensure record confidentiality, the records of students with disabilities and 504 Accommodation plans will be kept in a secure place with access sheet included in the records.

c) Record Compliance (on site)

Our school will provide special education and related services according to the federal mandates of the Individuals with Disabilities Education Act and the regulations of the North Carolina Public School Law, Article 9. To ensure record compliance, our school will develop and implement a record compliance monitoring system. The Exceptional Children Coordinator will complete a compliance checklist for all records of students with disabilities. Each record will be reviewed and if any noncompliance is found, a correction action of noncompliance will take place immediately. Verification of correction will be the final action to ensure the noncompliance was corrected. The 504 Coordinator at our school will monitor the 504 ccommodation plans compliance as required by Section 504 of the Rehabilitation Act of 1973.

**Exceptional Children's Education Programming**

1. *Describe the educational programs, strategies, and additional supports the school will provide to ensure a full continuum of services for students with disabilities.*
2. *Describe the methods and support systems that will be in place to ensure students with disabilities receive a Free and Appropriate Public Education (FAPE).*
3. *Describe how implementation of the Individualized Education Plan (IEP) will be monitored and reported to the student, parents and relevant staff.*
4. *Describe the proposed plan for providing related services.*

1- Queen City STEM will adhere to all applicable provisions of federal law, relating to students with disabilities, including the IDEA, Section 504 of the Rehabilitation Act of 1973, and Title II of the Americans with Disabilities Act of 1990. Queen City STEM will work with Charlotte-Mecklenburg Schools to ensure that all students with disabilities who qualify under the Individuals with Disabilities Education Act (IDEA): (1) will have available a free appropriate public education (FAPE); (2) are appropriately evaluated; (3) are provided with an individualized educational plan (IEP); (4) receive an appropriate education in the least restrictive environment; (5) are involved in the development of and decisions regarding the IEP, along with their parents.

Queen City STEM will have policies and procedures to ensure that all children with disabilities residing in the schools jurisdiction, regardless of the severity of their disability, and who are in need of special

education and related services, are identified, located, and evaluated in accordance with NC Procedures Governing Programs and Services for Children with Disabilities. Queen City STEM will offer a full inclusion model as much as a student's needs and IEP allow. Research has shown evidence that those students with exceptional needs whose educational needs can be met in a regular classroom setting benefit from remaining in that setting. We seek to offer students the least restrictive environment possible for their optimal learning. Queen City STEM will provide this fully inclusive model in conjunction with a special education teacher who will make necessary modifications and supplement curriculum for identified students. The special education teacher will collaborate with classroom teachers to ensure that all accommodations and modifications are provided as required by a student's IEP. In addition to supporting students in the regular classroom, special educators will also pull students out of class, as needed, for additional support and assessment. In order to make sure that students are achieving all their IEP goals, Queen City STEMs everyday instruction will be differentiated to meet various needs and learning levels. Some of the programs offered to exceptional children at Queen City STEM may include the following:

- \* Extended Time on Assignments
- \* Multiple Sessions
- \* Individual Pull-Out Instruction
- \* In-Classroom Collaboration with the Special Education Teacher
- \* Preferential Seating
- \* Small Group Instruction
- \* Peer Tutoring
- \* Differentiated Assignments

2- All special education students will receive appropriate support, remediation, and consultation services in accordance with FAPE. All students will have access to appropriate procedures and mechanisms, along with their parents, to resolve any disputes or disagreements related to Queen City STEMs or Charlotte-Mecklenburg Schools provision of FAPE.

Curricula for exceptional children in Queen City STEM will follow the curricula adapted for non-exceptional students. However, focus will be given to instruction on various subjects, depending on the needs of the individual students. Exceptional students cognitive, affective, motor and vocational development within the curricular areas will be emphasized.

Queen City STEM will designate one of the schools special education teachers as the schools special education liaison with Charlotte-Mecklenburg Schools. Responsibilities of this individual will include coordinating with the Charlotte-Mecklenburg Schools special education office throughout the year to ensure that all required special education and related services are being provided and that all IEPs are appropriately updated. Education and related services are being provided and that all IEPs are appropriately updated. Queen City STEM shares the vision that "special education is built on the belief that all students can and will learn".

Queen City STEM targets to support and enhance the social, emotional, and academic functioning of all students in the school, especially the special education students. This education shall include special services supported with special education teachers; and will meet their unique needs by providing a full range of educational opportunities offered in the least restrictive environment. There are examples for TMSA "that education services designed to meet the individual education needs of students with

disabilities as adequately as the needs of nondisabled students are met" and "the education of each student with a disability with nondisabled students, to the maximum extent appropriate to the needs of the student with a disability" ( as explained at <http://www2.ed.gov/about/offices/list/ocr/docs/edlite-FAPE504.html> )

3-The students IEP will be reviewed by the IEP team and also will be discussed with the student at least twice a year. Based on these reviews and discussions, the IEP will be updated accordingly. The IEP team will also develop and implement teaching strategies and classroom modifications so that the special education student will be educated in the least restrictive environment. Referrals to outside resources will be made on the basis of need in order to address more complex and difficult issues.

Following the evaluation, Queen City STEM will notify the parents/guardian that the evaluation has been completed. The notice shall include the following, with the exception of the items specified which are pertinent to both permission for evaluation and placement;

- \* Results of the evaluation and the educational implications;
- \* Statement of the parents/guardian(s) rights to attend a meeting of the IEP team;
- \* A statement of the parents/guardians right of refusal of permission for placement;
- \* An explanation of other rights pertaining to the placement process;
- \* A full description of all procedural safeguards available;
- \* A declaration that the student will not be placed in special without the knowledge and written approval of the parent;
- \* A list of the sources where the parents/guardian may obtain free/low cost legal services; and
- \* A statement of any other factors relevant to the proposed action.

4- Queen City STEM will ensure to comply with Federal and State regulations for serving exceptional children. Following are some of the commitments that TMSA makes:

- \* Enrollment to all children will be open, regardless of disability status, which is in compliance with the regulation states that "free appropriate public education is available for exceptional children"
- \* Assistive technology devices or assistive technology services, or both, will be made available to a child with a disability if required as a part of the child's--(1) Special education; (2) Related services; or (3) Supplementary aids and services
- \* Exceptional children will be placed in least restrictive environment
- \* Each exceptional child will have an Individualized Educational Plan (IEP) and IEP team.
- \* An initial evaluation and reevaluation activities will be conducted after parent consent is obtained.
- \* Annual notices to the parents of exceptional children will be given
- \* Child with special needs will be placed in the appropriate special program within 90 calendar days of receipt of a referral, unless the parent refuses to give consent for evaluation or placement.

## Student Performance Standards

1. Describe the student performance standards for the school as a whole.
2. Explain the use of any evaluation tool or assessment that the proposed charter school will use in addition to any state or federally mandated tests. Describe how this data will be used to drive instruction and improve the curriculum over time for the benefit of students.
3. Explain the policies and standards for promoting students, including students with special needs, from one grade level to the next. Discuss how and when promotion criteria will be communicated to parents and students.
4. Provide the public charter school's exit standards for graduating **ALL** students. These standards should set forth what students in the **last grade served** will know and be able to do. Be sure to include plans for the "At-Risk" population.

1- The QCSTEM High School students participate collaboratively as well as cooperatively as a member of a team. Collaboratively, the student gathers ideas from the group to develop an individual position. Cooperatively, the student works to resolve divergent ideas in order to achieve a common purpose.

Attributes:

- A. Self-assesses and monitors own behavior in order to contribute to group maintenance.
- B. Works interdependently toward the achievement of group goals.
- C. Demonstrates effective interpersonal skills and applies them respectfully when challenging and responding to the ideas of others.

2- Benchmark Assessments of the Standards: Due to the critical factor of providing intervention as early and as focused as possible, QCSTEM will utilize benchmarks for the Student Accountability Standards. These benchmarks will be administered at grades 3- 8 in reading, writing, science, math, and in End Of Course (EOC) tested courses in high school in the proper sequence and frequency. The purpose of the assessments will be to guide teachers as they modify instruction and curriculum for students in danger of not meeting the standards. For benchmark assessment, nationwide-known standardized achievement tests will be used such as Measures of Academic Progress (MAP) by NWEA and Study Islands pre and post-tests.

Participation in North Carolina Testing Program: Queen City STEM will comply with the North Carolina Testing Program, including ABC Accountability Model, EOG Tests, EOC Tests, other state mandated tests, and student portfolio requirements. Below is the summary of the program.

1. Elementary school students are required to take the following assessments:
  - \* NC K-2 literacy assessment
  - \* Grade 3 Pretest in the first three weeks of the school,
  - \* End of Grade Tests (EOGs) -Mathematics and Reading Comprehension at grades 3, 4 and 5
  - \* End of Grade Test (EOG)- Science at grade 5.
  - \* NC Final Exams Social Studies at grade 4 and 5.
  - \* NC Final Exam Science at grade 4.
  - \* MAP Testing in Mathematics, Reading, Language Usage, and Science at grade K-5.

2. Middle school students are required to take the following assessments:

Reading

- \* End-of-Grade Test (EOG) in Grade 8 Science
- \* NC Final Exams Social Studies at grade 6,7, and 8.
- \* NC Final Exams Science at grade 6 and 7.
- \* MAP Testing in Mathematics, Reading, Language Usage, and Science at grade 6-8.

In addition to meeting local promotion requirements, students in grade 8 will demonstrate proficiency by having test scores at Level III or above on an end-of-grade test in both reading and mathematics. Alternate assessments are available for many of the state tests for students with disabilities who have Individualized Education Programs (IEPs) and students with limited English proficiency who meet specific eligibility requirements.

3. High school students enrolled required to take the following state tests:

- \* NC EOC tests: Common Core Math I, Biology, English II,
- \* ACT PLAN at grade 10
- \* ACT at grade 11 or 12

High school students are also required to take the following NC Final Exams:

- o English Language Arts I at grade 9
- o English Language Arts III at grade 11
- o English Language Arts IV at grade 12
- o Math II at grade 10
- o Math III at grade 11
- o Precalculus at grade 12
- o Physical Science at grade 9
- o Chemistry at grade 11
- o Physics at grade 12

4. Other tests to be administered:

- \* WIDA ACCESS Placement Test (W-APT) in K-12 for students identified as limited English Proficient for students with special needs
- \* Measurement of Academic Progress Testing (MAP)

Why MAP Testing?

- allows teachers to modify lesson plans on a per-pupil or per-ability grouping level.
- provides teachers with accurate results to develop data driven instruction and curriculum according to the students needs.
- identifies students current abilities, allows teachers to set appropriate goals, and measures progress.

3-

#### PROMOTION POLICY

At the end of the school year, the Student Academic Committee (Including Dean, Guidance Counselor, and one core subject teacher) will review each students case and make a recommendation to the Principal for final approval. The EC Coordinator will be part of the Committee when reviewing a student with special needs' case.

1. Any student failing 3 or more core classes for an academic year is automatically retained at that grade level.
2. Any student failing 2 core subjects in a given year may be:
  - a. If student failed math and language arts, then student is automatically

retained.

b. If student also fails EOGs in two or more subjects, then student is automatically retained.

c. If students GPA is less than 1.0, then student is automatically retained.

d. Retained at parental request.

e. Put on academic probation (probation to last through the following school year)

3. Any probationary student that fails the same 2 core subjects in a subsequent year will automatically retained (parent will already have signed paper in step #2 above that indicates understanding of this action).

4. The principal may implement his authority to make the final decision based on the best interest of the student.

The policy above applies for the students with special needs as well. Meeting the students' special needs as stated in their Individualized Education Program will be the main focus when discuss promoting students with special needs, from one grade level to the next. Slightly changes may apply based on each student' individual needs, present level of academic and functional performance, and the progress toward meeting the Individual Education Program's goals.

#### 4-Graduation Requirements

To graduate from Queen City STEM High School, a student must meet the following requirements:

A total of twenty-one credits as follows:

English	4 credits
Mathematics	4 credits
Science	3 credits
Social Studies	4 credits
Health/Physical Education	1 credit

Electives/Other Requirements 6 Credits required and 4 credits strongly recommended

\*\*\*

#### Expectations and Performance Standards:

The student expectations are the basis for the knowledge, skills, and characteristics expected of all graduates of Queen City STEM High School. The student expectations are defined and measured by performance standards and assessment rubrics.

### **Student Conduct:**

*Provide a brief narrative that disseminates how student conduct will be governed at the proposed charter school and how this plan **aligns** with the overall mission and proposed Education Plan of the charter school.*

*Provide a draft copy of the student handbook specific to the proposed charter school within the appendices (Appendix D).*

*Be sure to include:*

- 1. Practices the school will use to promote effective discipline.*
- 2. A preliminary list and definitions of the offenses which may result in suspension or expulsion of students.*
- 3. An explanation of how the school will take into account the rights of students with disabilities in regards to these actions that may or must lead to suspension and expulsion.*
- 4. Policies and procedures disseminating due process rights, including grievance procedures, for when a student is suspended or expelled.*

Queen City STEM school will implement Positive Behavior Intervention and Support as an effective and proactive process for improving social competence and academic achievement for all students.

Positive Behavior Intervention and Support, and Character Education are programs aimed at improving school climate and creating systems that support academic and social success for all students. Coaches are assigned to schools to provide professional development and technical support, and to assist with data analysis, problem solving and planning.

The coaching model is focused on building capacity at the school level and assisting school to create sustainable practices. Queen City STEM school designates a team of representative staff that takes the lead in learning and supporting the implementation of new practices.

The purpose of Positive Behavior Intervention and Support is to provide assistance to students to create positive school climate and develop more effective strategies for working with challenging behavior. This is achieved through school-wide behavior support planning, professional development on best behavioral practices, supporting teachers to master strategies, and developing systems of intervention for small groups of students and for specific students. Each school participating in the initiative develops specific goals, identifies data sources to measure progress, and creates an action plan to meet goals.

Implementing PBIS with fidelity over time demonstrate the following outcomes:

- \* Improved school climate
- \* Reductions in office discipline referrals and in-school and out of school suspensions
- \* Increased parent and community satisfaction
- \* Improved systems for responding to students in need of additional support with social behavior

The mission of the PBIS Coach Team is to empower adults within a school with the skills needed to improve overall classroom and school climate to achieve higher academic performance for all students.

All students at Queen City STEM will comply with all discipline rules governing behavior and conduct. It is the Queen City STEM Board of Directors responsibility to establish a set of written rules and discipline in place. The Board will revisit, revise and update student conduct and discipline rules when necessary. For application of these rules within the school environment, it is the responsibility of the Queen City STEM principal: 1) to investigate fully the cases of students appropriately referred to principals office for misbehavior, 2) to ensure fair treatment of such students and protection of their procedural and substantive rights, and to determine what, if any, disciplinary action is warranted. The teacher shall have the responsibility and authority to discipline students, except in

those cases requiring the attention of the principal. Queen City STEM discipline policy will support the attainment of the schools mission statement that stresses preparing students to become competent, responsible and successful individuals in our globalized and technology- based society through a strong academic program. Queen City STEM will implement a positive discipline model that leads to a nurturing school environment that sets the stage for engagement and academic excellence. School leadership and staff will uphold high expectations and be responsible for establishing a positive school climate that continuously identifies and praises students for respectful behavior. Staff will model and identify appropriate behaviors in varying environments throughout the course of the school day and academic setting. Learning behavior transitions amongst varying environments is a valuable part of the socialization process of a productive citizen. All school staff will be trained to support and implement a school-wide positive discipline model which will be outlined in the Student/Parent Handbook.

**IV. GOVERNANCE, OPERATIONS and CAPACITY**

(No more than ten total pages in this section)

**NOTE:** Please answer all sections completely. Do not use "same as LEA" or "whatever the law states". Lack of proper documentation could deem the application incomplete.

**Governance:**

**Private Nonprofit Corporation:**

\*The nonprofit corporation must be officially authorized by the NC Secretary of State by the final approval interview date.

*Name of Private Nonprofit:* Charlotte Education Foundation

*Mailing Address:* 3529 Park Hill Crossing Dr.

*City/State/Zip:* High Point NC 27265

*Street Address:* 3529 Park Hill Crossing Dr.

*Phone:* 336-601-1740

*Fax:* 336-931-7452

*Name of registered agent and address:* Ali Tombak  
3529 Park Hill Crossing Dr., High Point, NC 27265

*FEDERAL TAX ID:* 46-4239471

**Tax-Exempt Status 501 (c)(3)**

The private nonprofit listed as the responsible organization for the proposed charter school has received 501 (c)(3) status:

Yes (copy of letter from federal government attached: Appendix E)  
 No

**NOTE:** If the non-profit organization has yet to obtain the 501(c)(3) status, the tax-exempt status must be obtained from the Internal Revenue Service within twenty-four (24) months of the date the Charter Application is given final approval.

**Governance and Organizational Structure of Private Non-Profit Organization:**

The private nonprofit corporation is the legal entity that has responsibility for all aspects of the proposed charter school. Its members should reflect the ability to operate a charter school from both business and education perspectives.

Please complete the table provided depicting the initial members of the nonprofit organization.

<b>Board Member Name</b>	<b>Board Title</b>	<b>County/State of Residence</b>	<b>Current Occupation</b>
Mustafa Atay	Board Member	GUILFORD	Assoc. Professor of Computer

			Science, WSSU
Ali Tombak	Board President	GUILFORD	Staff Design Engineer, RF Micro Devices Inc.
Mahfuz Sapan	Treasurer	MECKLENBURG	Businessman
Amela Mekic	Secretary	MECKLENBURG	Supervisor at Pfeifer University
Carlton Cammon	Vice President	MECKLENBURG	Auditor, BDO USA LLP.

**Please provide the following in this location of the APPLICATION:**

1. *A description of the governance structure of the proposed charter school, including the governing board's functions, primary duties, roles and responsibilities as it relates to overseeing the charter school. Include how the board will recruit, hire, and supervise the lead administrator.*

The proposed Queen City STEM School will be governed by Charlotte Education Foundation Company. The board hires the principals and the principals run the day to day operation of the schools. The governing board is committed to the education of all students to the best of their individual abilities. The governing board maintains a focus on the concerns and desires of the community regarding the quality and performance of the school while the board assumes an educational leadership role. Additionally, the governing board will oversee the employment of school personnel who, under the direction of the principal, will ensure that the school maintains an outstanding academic position and will carry out the policies of the board with innovation and dedication. Responsibilities of the board include:

- \* interpreting the education needs and aspirations of the student community through the formulation of policies to stimulate the learner and the learning process;
- \* governing the school in accordance with federal and state laws;
- \* providing leadership in order to carry out the goals and objectives of the school effectively;
- \* facilitating communication with the community served by the school, and
- \* gathering and providing the data appropriate for the management functions of planning, evaluating, organizing, controlling and executing.

More detailed information on the functions, primary duties, roles and responsibilities of the board can be seen in Bylaws in Appendix H.

The principal will be recruited among qualified candidates, and the candidate possessing the highest qualifications will be appointed by signing a contract with the Board. The job description of the principal position will be used to advertise for the position. The principals performance will be monitored by the board through the schools academic, financial, and organizational successes as well as the satisfaction of students, teachers, and parents. Professional development services will be provided to the principal.

2. *Describe the size, current and desired composition, powers, and duties of the governing board. Identify key skills, areas of expertise, and constituencies that will be represented on the governing board. Explain how this governance structure and composition will help ensure that a) the school will be an educational and operational success; b) the board will evaluate the success of the school and school leader; and c) there will be active and effective representation*

*of key stakeholders, including parents.*

According to Bylaws, the board size is at least 5 members. Currently, these positions are filled. Currently, the board has 2 members from Guilford County and 3 members from Mecklenburg County. The board is empowered with conducting the activities, affairs and business of the schools. The board is responsible for governing the school in accordance with federal and state laws, formulating policies to address the education needs of students, and providing the leadership in order to carry out the goals and objectives of the school effectively. Our board members have with significant experience in diverse areas such as STEM education, finance, accounting, school governance and accountability, school facility planning, and the private sector. Some of our board members have gained experience through the process of governing the charter schools, TMSA-Greensboro (in Guilford County) and TMSA-Raleigh (in Wake County). They will share their experience with the other board members. The board is planning to follow similar procedure with TMSA-Greensboro (in Guilford County) and TMSA-Raleigh (in Wake County) in evaluating the success of the school and administrators. The board is planning to follow similar procedure with TMSA-Greensboro (in Guilford County) and TMSA-Raleigh (in Wake County) in evaluating the success of the school and administrators. The board is dedicated to have effective representation from parents. We promote the establishment of a Parent Volunteer Organization (PVO) for each school. PVO is given a dedicated slot in our board meeting agendas to hear the voice of the parents. The board also requires the teachers to attend at least one board meeting in a given school year. During the year, the board conducts 2 school climate surveys to hear about the parents and teachers voices, and formulate new and better policies if needed.

3. *Explain the procedure by which the founding board members have been recruited and selected. If a position is vacant, how and on what timeline will new members be recruited and added to the board?*

The board members are recruited based on their background, and their dedication to serve community. Current members of the board formed from people who wanted to initiate a STEM school in Charlotte area and couple of TMSA board members to help replication. Our board member Mr. Carlton Cammon was appointed to the board because of his significant governance and accounting experience, his Mecklenburg County residency as well as his willingness to dedicate his time for a STEM charter school in Mecklenburg County. Mrs. Mekic was selected to the board because of her experience in management at the Pfeifer University. During the regular operation of the school, we expect to fill any vacancies in the board within one school year. Mr. Mahfuz Sapan is a local businessman in Charlotte. Mr. Ali Tombak is an experienced board member, he founded TMSA operating two charter schools. Mr. Mustafa Atay is a professor of computer science.

4. *Outline below the strategic board calendar detailing how often the board will meet according to the bylaws established.*

The board will meet once a month for regular meetings.

5. *What kinds of orientation or training will new board members receive, and what kinds of ongoing professional development will existing board members receive? The plan for training and development should include a timetable, specific topics to be addressed, and requirements for participation (Board Policies Draft: Appendix J).*

New board members will be required to complete several board training and orientation programs. In these programs, new board members will be able to learn our philosophy and approach for effective board-staff relations and

have an opportunity to better understand the school curriculum, state standards, testing requirements, other school operations and impact on the student achievement as well as budget and financial planning. This training and orientation will be provided by the Board president and school principal. We believe that training increases the boards capacity to accomplish their responsibilities, overcome challenges, and work together. Appendix J includes draft board policies on new board member orientation and training programs with timelines as well as professional development programs for existing board members.

- 6. Describe the board's ethical standards and procedures for identifying and addressing conflicts of interest. Identify any existing relationships that could pose actual or perceived conflicts if the application is approved; discuss specific steps that the board will take to avoid any actual conflicts and to mitigate perceived conflicts.*

The Bylaws has a Conflict of Interest policy as well as a detailed Nepotism Policy. Any board member who has a conflict of interest in a matter pending before the board must explicitly state it and refrain from voting. In addition, our Nepotism Policy identifies specific restrictions in order to avoid the possibility of favoritism based on family or personal relationship. Our current board has not had any prior or current business relationships with the schools it has been governing, and all of the board members are professionals working for 3rd party companies or public institutions. There are no perceived conflicts and we intend to keep the board structure and membership in a similar way to eliminate the possibility of any perceived conflicts.

- 7. Explain the decision-making processes the board will use to develop school policies.*

The board is the place where we have been making and will be making governance decisions. In order to conduct the activities, affairs and business of the school and to address the education needs of students, the board will formulate policies time to time. The board will first identify a need for the new policy, and then will assign it to a team (such as an ad hoc committee) to draft new policy. The team will write a first policy draft, which will then be reviewed by a legal counsel. The policy then will be presented to the board for approval in a board meeting.

- 8. Describe any advisory bodies, councils, or associations listed in the organization chart or to be formed, including the roles and duties of that body, and the reporting structure as it relates to the school's governing body and leadership.*

As provided in the organizational chart in Appendix F, the principal will be working with volunteers and volunteer groups in the school. One prominent volunteer group is the parent volunteer organization (PVO). Parents will be encouraged to form the PVO once the school opens. PVO membership will include all parents, legal guardians and staff at Queen City STEM School. The PVO's mission will be to promote open communication and understanding between parents and staff, and to enhance the education experience of each child. The PVO will support teachers in classroom setting, hold fund-raisers for supplemental educational materials and experiences, and support school and family social interaction. During our regular board meeting, PVO will be given a dedicated time slot so that the board can hear the voices of the parents and address any areas of concern.

- 9. Discuss the school's grievance process for parents and staff members.*

Queen City STEM School (QC STEM) fosters safe, secure, and friendly working atmosphere. In order to ensure the continuum of this atmosphere, employee complaints will be taken seriously and will be addressed in a timely and consistent fashion. Disagreements should be solved whenever possible among

the people most closely involved while preserving positive relationships. Therefore, when an employee has a complaint or disagreement with any parties at QC STEM, they should observe the following guidelines:

1. If the complaint involves a situation with a student, school-wide code of conduct shall be followed.
2. If the complaint involves a situation with a parent, immediate supervisor such as Dean or the Principal should be contacted to get assistance to resolve the issue.
3. If the complaint involves a situation with another employee or if the complaint is with a school-wide policy or procedure, the employee should seek to resolve the issue with an immediate supervisor.
4. If a resolution with an immediate supervisor is not possible, the employee should seek to resolve the issue with the Principal.
5. If a resolution with the Principal is not possible, the employee should address a complaint to the Board of Directors in writing. The employee shall submit a written grievance within the 30 calendar days of the situation or incident. The Board of Directors will discuss the grievance in closed session and respond in writing. This will occur within 30 days of receiving a grievance.
6. If the employee is not satisfied with the boards resolution, the employee has the right to seek resolution through the North Carolina Department of Public Instruction. Complaints may be addressed to the Director, Office of Charter Schools, North Carolina Department of Public Instruction, 301 North Wilmington Street, Raleigh, North Carolina 27601.
7. This Grievance Policy is not designed to supersede or supplant federal law and parent rights under The Individuals with Disabilities Education Improvement Act of 2004 and the Family Educational Rights and Privacy Act (FERPA) as amended, 1996.

### Governance and Organizational Structure of Private Non-Profit Organization (continued)

#### Include in the Appendices:

1. A well-defined organizational chart showing the relationship of the Board of Directors to the parents and staff of the proposed charter school. This chart should also include lines of authority to and from any outside entity that will play a role in managing or supporting the charter school (such as educational service providers, advisory bodies or parent/teacher councils). (Appendix F)
2. A one-page resume from each founding board member and responses to the questions found on the Charter School Board Member Form (Appendix G).
3. The proposed by-laws, which must include a Conflict of Interest Policy for board members and a stated commitment to the NC Open Meetings Law (Appendix H).
4. A copy of the articles of incorporation, if available. If not available, this document must be available prior to interview by SBE, the applicant must demonstrate that it has been applied for prior to submission of the proposed application. (Appendix I)
5. Copy of any board policies if adopted already (Appendix J).
6. Copies of meeting minutes (if available), relevant to the development of the charter school plan, during the application process (Appendix K).

### Proposed Management Organization (Educational Management Organization or Charter Management Organization)

*If the proposed school does not intend to contract with an education service provider, mark "Not Applicable"*

*and follow the direction #3 in the Application Specifications.*

**X Not Applicable**

**Private School Conversions: complete ONLY if the proposed charter is a private school conversion. Otherwise, mark "Not Applicable" and follow the direction #3 in the Application Specifications.**

**X Not Applicable**

***Applicable" and follow the direction #3 in the Application Specifications. Understand that the replication means that a new charter school will be governed separately from the charter school the application is modeled after.***

**Not Applicable**

1. The proposed charter school will be governed by
2. Describe the rationale for replicating the application based upon the success of another charter school. Include documentation and evidence that the existing charter school model is successful in student achievement, charter school governance, and fiscal responsibility. Base this explanation upon academic data available through state and national summative assessments, financial audits, and state compliance reports.

**Student Achievement:** The board is replicating the TMSA school model currently running in two charter schools: TMSA-Greensboro and TMSA-Wake. The academic standing of both of these schools show that TMSA model is successful in that it improves the progress of at-risk students, while challenging the academically skilled students. Both of these schools have been making adequate yearly progress as quantified by state testing since their inceptions. Students from both schools have won several local, regional, national and international medals in STEM fields consistent with our mission. The success story of the school has produced a large waiting list and the schools have been experiencing increasing student population. In TMSA Wake there is about 900 students in waiting list. In TMSA Greensboro there is more than 1000 students in the waiting list.

**Fiscal and Governance Responsibility:** At TMSA school model, governance responsibility is manifested itself as financial responsibility. For example, within 2 years of its operation, TMSA-Greensboro was able to successfully secure required financing to buy its Greensboro campus: A 76,000 square feet of building with a state of the art gym sitting on 11.4 acres of land. Recently, the board replicated the same business model in Raleigh and the school moved to its new building after its first year. For both schools, the financial audit reports in the past three years show satisfactory results with no major findings. The new board of Charlotte Education Foundation is planning to replicate the same business model for the proposed charter school.

3. Depict and analyze the current enrollment trends and student demographics of the replicated charter school model over the past three academic years.

In TMSA, over the past three years the African American enrollment increased from 56 percent to 59 percent. The Caucasian enrollment dropped from 33 percent to 26 percent. Hispanic enrollment has moved from 4 percent to 5 percent. Asian enrollment increased from 2 percent to 5 percent. Multi-racial enrollment is stable around 2 percent. Both American Indian and Hawaiian Pacific enrollment are less than 1 percent. Overall the school has a diverse student population. Every year there is about 1000 students in the waiting list.

4. Explain why the governing board of the proposed charter school is a good fit for the proposed student population as noted in Section II Mission and Purposes.

Consistent with our mission to provide rigorous math and science education, some of our governing board constitutes engineers, and scientists in science and technology fields. In addition, in our board we have members who have experience in accounting and management, which are very important skills for a school board. The professional diversity in our board is a good fit for the mission of our proposed charter school.

5. Provide a copy of the organization's IRS Form 990 for the last three years as Appendix S

### **Projected Staff:**

Provide, as Appendix M, a list of positions anticipated for the charter school; (e.g., principal or director; finance officer, administrative support staff; teachers (part-time and full-time); paraprofessionals/teaching assistants, clerical, and maintenance.). Be mindful that your predicted administration and staff match the projected enrollment noted in Section I, course offerings and align with the proposed budget.

### **Staffing Plans, Hiring, and Management**

Include the following information for the proposed charter school:

The school will implement a non-discriminatory Human Resources (HR) policy, which will be fully compliant with the North Carolina State laws and the No Child Left Behind Act. The school believes that the quality of the teachers is an important factor in determining the quality of education offered. It is the responsibility of the principal to locate and recruit the best-qualified candidates to meet the school's educational needs. The school will prefer qualified certified teachers.. However, in case of shortage of certified candidates and/or for any other reason deemed appropriate by the principal, candidates from traditional secondary environments, from postsecondary environments, from international teacher recruitment organizations, and from business, industry and the military will also be considered. Selection will be based on strong academic preparation, professional competence, intellectual rigor, emotional maturity, enthusiastic professional attitude, knowledge of instructional practices, and ability to contribute to the advancement of the school mission. The school will offer a competitive compensation scheme where the longevity with the school is rewarded. Also, with the additional flexibilities of charter schools offering over public schools, we hope to retain our high performing teachers.

2. *Provide a description of the relationship that will exist between the charter school employees and the nonprofit board. Provide as Appendix L, a draft of the employment policies to be implemented by the proposed charter school.*

The primary means of communication between the school employees and the board will be through the principal. The board will have a positive relationship with school administration and staff while maintaining an appropriate distance from day-to-day decision making. The school personnel are required to attend at least one board meeting in a given school year. From time to time, the board may organize informal sessions to interact with the staff, listen to their voices, and receive input in important decisions. Board members should also attend school functions. Appendix N provides

detailed employment policies. These policies have been used in the TMSA school model in Guilford and Wake Counties.

*4. Outline the board's procedures for hiring and dismissing school personnel, including conducting criminal background checks.*

The principal fulfills the hiring process on behalf of the board. At the beginning of the recruitment process, the open positions are identified by the administration based on the number of students, grade levels, subjects to be taught, and justified in the schools budget. Positions are then posted on the schools website, a local newspaper, and a third party website (such as [www.teachers-teachers.com](http://www.teachers-teachers.com)). A resume screening is done by the administration and the employment application form is sent to the selected applicants. After reviewing the employment application forms and supporting documents, the candidate is invited for an interview. The principal makes the hiring decision. Finally, the list of new hires are presented to the board and approved in the first board meeting. Employment at the school is contingent on fingerprinting and successful criminal background checks. The principal also fulfills the dismissal decision, he/she will dismiss the personnel after applicable notice requirements, and will present to the board for approval in the first board meeting after dismissal.

*5. Outline the school's proposed salary range and employment benefits for all levels of employment.*

Queen City STEM School will offer competitive compensation to its employees. We are planning to use a similar salary scale as in the TMSA model, which is currently active in TMSA-Greensboro and TMSA-Raleigh. The school will also offer comprehensive benefit plans including medical insurance, life insurance, short/long term disability insurance, personal/sick leave days, leaves due to jury/military duties, etc.

*6. Provide the procedures for employee grievance and/or termination.*

QC STEM fosters safe, secure, and friendly working atmosphere. In order to ensure the continuum of this atmosphere, employee complaints will be taken seriously and will be addressed in a timely and consistent fashion. Disagreements should be solved whenever possible among the people most closely involved while preserving positive relationships. Therefore, when an employee has a complaint or disagreement with any parties at QC STEM, they should observe the following guidelines:

1.If the complaint involves a situation with a parent, immediate supervisor such as Dean or the Principal should be contacted to get assistance to resolve the issue.

2.If the complaint involves a situation with another employee or if the complaint is with a school-wide policy or procedure, the employee should seek to resolve the issue with an immediate supervisor.

3.If a resolution with an immediate supervisor is not possible, the employee should seek to resolve the issue with the Principal.

4.If a resolution with the Principal is not possible, the employee should address a complaint to the Board of Directors in writing. The employee shall submit a written grievance within the 30 calendar days of the situation or incident. The Board of Directors will discuss the grievance in closed session and respond in writing. This will occur within 30 days of receiving a grievance.

5.If the employee is not satisfied with the boards resolution, the employee has the right to file a complaint with the NC DPI Office of Charter Schools (OCS). However, the Boards decision is final and the OCS only investigates

the complaint. The OCS does not have authority to overturn or amend any decision made by a schools board.

6. This Grievance Policy is not designed to supersede or supplant federal law and parent rights under The Individuals with Disabilities Education Improvement Act of 2004 and the Family Educational Rights and Privacy Act (FERPA) as amended, 1996.

7. *Identify any positions that will have dual responsibilities (within or without the organization) and the funding source for each position.*

Not Available

8. *Describe the plans to have qualified staffing adequate for the anticipated special needs population, means for providing qualified staffing for ELL and gifted students.*

For the proposed charter school, the board will replicate the same practice as in TMSA model for running effective school organization. We will provide qualified and adequate staff for ELL, gifted and other special need populations. Teachers serving these students will be certified in their fields.

9. *Provide a narrative detailing the roles and responsibilities, qualifications and appropriate licenses that each position must have to be hired by the non-profit organization and effectively perform the job function(s).*

As North Carolina State Statues requires, 50% of elementary, middle, and high school teachers will be licensed. School will meet this requirement. In addition QC STEM will hire teachers who are either licensed in North Carolina or in the process of getting licensed. The latter could be recent graduates of teacher programs who applied for a license, out-of-state teachers who applied to transfer their license, or teachers with Baccalaureate degree in related fields and enrolled in a lateral entry program. The school will strongly encourage its non-licensed teachers to become North Carolina licensed by going through the state licensure procedures.

The Principal position requires a Bachelors degree in a STEM field or Secondary Education, and at least 1 year of experience in charter school administration or teaching. An M.S. degree and experience involving charter school application preparation / startup will be preferred. The principal will be the ultimate authority and responsible person in the day-to-day operation of the school. Briefly, the principal will be responsible for the educational, administrative, and counseling activities of the school, establishing and maintaining relationships with external organizations and service providers, teacher evaluations, and safety of the school.

The Assistant Principal will hold a minimum of Bachelors degree and one year charter school teaching experience. Briefly, he/she will assist the principal in planning and assessing the educational program, ensuring compliance with all applicable federal and state laws, and designing, managing, and implementing information systems to manage and track progress on school goals and academic excellence indicators.

Teacher assistants will be required to have Baccalaureate degrees. QC STEM will prefer candidates who are interested in becoming teachers. These assistants will be supporting homeroom teachers in K-3 classes.

### **Staff Evaluation and Professional Development**

1. *Identify the positions responsible for maintaining teacher licensure requirements and professional development.*

Academic Deans / Assistant Principal will be responsible for maintaining teacher licensure requirements and arranging professional development

- 2. Provide a detailed plan noting how the school will mentor, retain, and evaluate staff in a format that matches the school's mission, educational program, and meet the teacher certification and licensure requirements for teachers as prescribed by state law and No Child Left Behind. Be sure this overview matches with the projected staff and funding of the proposed budget section.*

The Queen City STEM School will employ the highest quality staff and teachers. All new employees will be introduced to school culture, mission, and goals through an orientation program. Teachers with less than three years of teaching experience will be supported by the Beginning Teacher Program developed at the Queen City STEM School based on the State of North Carolinas Professional Teaching Standards. The purpose of the Beginning Teacher Program is to promote teacher confidence and professionalism through constructive feedback. Each employee will receive annual performance reviews from his/her mentor identified by the Principal. Employees will frequently meet with their mentors to openly discuss their performance and to have an ongoing dialogue about professional best practices. Competitive compensation and supportive environment for professional development will help retaining employees. The Queen City STEM School will meet the licensure and certification standards outlined in the NC charter school law and federal law including No Child Left Behind. All teachers will have at least a bachelors degree from a four-year college or university. Moreover, each teacher will be required to obtain a license by the end of his/her 3rd of teaching at the school, and maintain high competency in his/her subject area.

- 3. Describe the core components of professional development plan and how these components will support effective implementation of the educational program. Describe the extent to which professional development will be conducted internally or externally and will be individualized or uniform.*

We value professional development of our teaching staff. Our professional development plan has two main components: In-service and out-of-school training. In-service training includes such activities as in teacher orientation week, periodic departmental training, teacher work days, and other in-school instructional and content-based enrichment programs. Out-of-school training includes mainly workshops/training/webinars organized by professional organizations such as by National Association of Science Teachers, Math Teacher Associations, and other professional associations providing training to enhance knowledge-base, sharpen instructional and leadership skills.

- 4. Provide a schedule and explanation of professional development that will take place prior to school opening. Explain what will be covered during this induction period and how teachers will be prepared to deliver any unique or particularly challenging aspects of the curriculum and instructional methods.*

Preplanning professional development is an important timeframe for a successful school start. The preplanning week will include a welcome breakfast, a tour of the school facility, staff enrollment into medical insurance and payroll system, grade and room assignments, drop-off/dismissal/emergency procedures, smart board and school network system training, an overview of employment policies and parent/student handbook, and several workshops on classroom management, effective parent-teacher communication, common core curriculum standards, and students with disabilities. During this time, the staff will be able to learn all the tools necessary to successfully manage through the school year as well as

making their classrooms and lesson plans ready.

5. Describe the expected number of days/hours for professional development throughout the school year, and explain how the school's calendar, daily schedule, and staffing structure accommodate this plan.

The schedule and professional development activities provided in the school are outlined below. The school calendar and staffing needs are determined in consideration of this professional development plan.

#### Activity-Timeline

1. Staff Orientation and Preplanning-5 days before school starts
2. Departmental or Grade Level Meetings-Every Wednesday after classes end
3. Professional Development Days-One day every other month
4. Year End Meetings-2 days after school closes
5. Conferences/Workshops-As needed

### **Enrollment and Marketing:**

Reaching the full capacity for enrollment will be critical to obtain the necessary financial resources to keep your school viable and operating efficiently. In addition, it is required by law that charter schools provide equal access to all students. Read the charter school state statute regarding admissions GS 115C.238.29F(g) (1-7) carefully.

### **Marketing Plan**

*Marketing to potential students and parents is vital to the survival of a charter school. Provide a plan indicating how the school will market to potential students and parents in order to reasonably reflect the racial/ethnic and demographic composition of the district in which the charter school will be located or of the special population the school seeks to serve: (G.S.115C-238.29F(g)(5)).*

Queen City STEM School Board of Directors will execute a sound marketing plan that will enable us to best communicate with parents, students, community leaders, prospective teachers, staff and the public in general. The school will publicize all enrollment information throughout the counties being served through its website, flyers, bulletins, newspaper ads, websites, mailings, town meetings, informational open house sessions, and/or presentations at other local schools or public institutions such as libraries. Being a STEM focused school, we will mainly attract those students who are curious to explore and have intrinsic motivation for math, science and technology. Queen City STEM School will be a public school with an open enrollment policy. Therefore, we anticipate the school demographics will reflect the local demographics. In order to make sure the school continuously represents the local demographics, we will collect demographic information from the application forms at the beginning of each academic year and accordingly tailor our recruiting efforts towards underrepresented communities.

### **Parent and Community Involvement**

1. Describe how you will communicate with and engage parents and community members from the time that the school is approved through opening.
2. Describe how you will engage parents in the life of the public charter school. Explain the plan for building engaging partnerships between the family and school that strengthen support for student learning.

1.

Queen City STEM School is dedicated to a positive parent and student

experience; hence, it considers parents and students as well as the community in general as its customer base. Therefore, communicating with them has utmost importance for both the success of the schools educational program as well as its financial health. Upon the approval of the Queen City STEM Schools charter application, the school will start accepting applications and publicize its educational program through its website, flyers, bulletins, newspaper ads, websites, mailings, town meetings, informational open house sessions, and/or presentations where prospective parents and students can learn more about the schools educational program. During these events, the school will collect the contact information of interested parents, who will then be engaged in attracting other prospective parents/students, recruiting staff members, securing and renovating a school facility, and equipping it with the instructional equipment, furniture, and other supplies required during the initial phase of opening the school.

2.

We believe that active parent engagement is as important as having a quality educational program. Therefore, once the school starts, parents will be encouraged to form the Parent Volunteer Organization (PVO). Its membership will include all parents, legal guardians and staff at Queen City STEM School. The PVO's mission will be to promote open communication and understanding between parents and staff, and to enhance the education experience of each child. The PVO will support teachers in classroom setting, hold fund-raisers for supplemental educational materials and experiences, and support school and family social interaction.

## **Admissions Policy**

Provide the school's proposed policies and the procedures for admitting students to the proposed charter school, including:

1. *Tentative dates for the open enrollment application period; enrollment deadlines and procedures. \*Please be advised schools cannot accept applications until after final approval from the SBE.*
2. *Clear policies and procedures detailing the open enrollment lottery plan including policies regarding statutory permitted student enrollment preferences.*
3. *Clear policies and procedures for student waiting lists, withdrawals, re-enrollment, and transfers.*
4. *Explanation of the purpose of any pre-admission activities (if any) for students or parents.*
5. *Clear policies and procedures for student withdraws and transfers.*

1- Tentative Dates for the open enrollment period (starting from 2015)

\*Availability of Application forms: January 15 March 31

\*Open Enrollment Period (pre-applications are accepted for two months): February 1-March 31

\*Conducting school open house(s): March

\*Application Deadline: March 31

\*Lottery Date: On First Monday of April

\*Notification of lottery winners/parents: By Second Friday of April

\*Registrations for lottery winners to be completed (in three weeks): By First Friday of May

\*Registration invitations to students in waiting lists: First Monday following the registration deadline of the lottery winners ongoing

\*Orientation of parents: A week prior to first day of school

\*First school day: Similar calendar as Mecklenburg County

2-Clear policies and procedures detailing the open enrollment lottery plan including policies regarding statutory permitted student enrollment preferences.

Application, lottery, and enrollment procedures will be governed by the Queen City STEM School Admissions and Lottery Policy. Students who are the sibling of an already admitted and continuing student enrolled in the school, current and continuing students from the previous grade/school year, and students who are the children of a current employee or founding board member (only in the first year) of the school are given enrollment preference, then available spots for the upcoming school year will be determined on a lottery basis.

3-Clear policies and procedures for student waiting lists, withdrawals, re-enrollment, and transfers.

After conducting the lottery, a waiting list will be created from which students will be enrolled as spots become available. Students who are planning to withdraw from school should report to Administrative Assistant with their parents in person three days prior to leaving the school. After the appropriate withdrawal paperwork is submitted, all school property is returned, and all outstanding debts are paid off, the withdrawal process will be completed. When the student transfers to another school and requests the transfer of students records to the new school, Queen City STEM School will fulfill this request with appropriate written documentation. Similarly, if a student wants to re-enroll at the school, he will go through the same procedures as the other applicants, i.e. application, lottery, and enrollment. No enrollment preference will be given to students who want to re-enroll.

4- Explanation of the purpose of any pre-admission activities (if any) for students or parents.

During the pre-admission period, the school will publicize all enrollment information throughout Counties served via its website, flyers, bulletins, newspaper ads, websites, mailings, town meetings, informational open house sessions, and/or presentations at other local schools and public institutions. Queen City STEM School will be a public school with an open enrollment policy. Therefore, we anticipate the school demographics will reflect the local demographics. In order to make sure the school continuously represents local demographics, it will collect demographic information from the application forms at the beginning of each academic year and accordingly tailor recruiting efforts towards underrepresented communities.

5- Clear policies and procedures for student withdraws and transfers.

This question was already asked and answered in question #3.

**PROJECTED ENROLLMENT 2015-16 through 2019-2020**

IDENTIFY LEA FROM WHICH STUDENTS WILL PROBABLY COME

LEA #1 Charlotte-Mecklenburg Schools  
 LEA #2  
 LEA #3

In the following tables, please list for each year and grade level, the numbers of students that the school reasonably expects to enroll. In addition, please indicate any plans to increase the grade levels offered by the school over time and be sure these figures match those on the initial cover page.

	2015-2016			2016-2017			2017-2018			2018-2019			2019-2020		
	LEA 600	LEA 000	LEA 000	LEA 600	LEA 000	LEA 000	LEA 600	LEA 000	LEA 000	LEA 600	LEA 000	LEA 000	LEA 600	LEA 000	LEA 000
Kindergarten	36	0	0	36	0	0	36	0	0	36	0	0	36	0	0
Grade 01	40	0	0	40	0	0	40	0	0	40	0	0	40	0	0
Grade 02	40	0	0	40	0	0	40	0	0	40	0	0	40	0	0
Grade 03	44	0	0	44	0	0	44	0	0	44	0	0	44	0	0
Grade 04	44	0	0	44	0	0	44	0	0	44	0	0	44	0	0
Grade 05	44	0	0	44	0	0	44	0	0	44	0	0	44	0	0
Grade 06	44	0	0	66	0	0	66	0	0	66	0	0	66	0	0
Grade 07	0	0	0	44	0	0	66	0	0	66	0	0	66	0	0
Grade 08	0	0	0	0	0	0	44	0	0	66	0	0	66	0	0
Grade 09	0	0	0	0	0	0	0	0	0	44	0	0	66	0	0
Grade 10	0	0	0	0	0	0	0	0	0	0	0	0	44	0	0
	292			358			424			490			556		

### **Transportation Plan:**

*Describe in detail the transportation plan that will ensure that no child is denied access to the school due to lack of transportation. The details of this plan should align with the Mission, identified need for the charter school, targeted student population, and the budget proposal.*

The board will ensure that transportation will not be an obstacle for any student within our community, and therefore, anticipates adhering to the plan as described below:

\* Transportation of students attending Queen City STEM School will be decided based on the analysis of student population, traffic patterns, school bus capacities, exceptional education students needs within the local transportation guidelines.

\* The board aims to obtain a facility within easy access in the transportation of students to and from the school. The school will present parents or guardians with carpooling options and maintain a list of participating parents. The school may arrange a transportation service to serve students who do not have any other option of attending the school. The school will also help students get passes from/to the local transportation system. At the beginning of each school year the school will coordinate with the parents and local community to come up with the most effective transportation plan.

\* The school will provide transportation for the students as prescribed by law such as children with special education needs that require transportation service.

### **School Lunch Plan:**

*Describe in detail the school lunch plan that will ensure that no child is lacking a daily meal. The details of this plan should align with the targeted student population and school budget proposal.*

QC STEM will be using catering company to serve hot lunch to students. This company will be cooking the meals at their facilities and will serve them in school meeting health departments all food safety requirements. The school will collect household income surveys from enrolled students to determine if the school will opt in for the federal free and reduced lunch program. If the percentage of students who are eligible for the program is low, then the school together with the parent volunteer organization will cover the cost of lunch for these students ensuring that every student is getting a daily meal.

### **Civil Liability and Insurance (GS 115C-238.29F(c)):**

The Charter School shall obtain and maintain insurance at a minimum in the following amounts:

1. Errors and omissions: one million dollars (\$1,000,000) per claim;
2. General liability: one million dollars (\$1,000,000) per occurrence;
3. Boiler and machinery: the replacement cost of the building;
4. Real and personal property: the appraised value of the building and contents;
5. Fidelity bonds: no less than two hundred fifty thousand dollars (\$250,000) to cover employee dishonesty;
6. Automobile liability: one million dollars (\$1,000,000) per occurrence; and

## 7. Workers' compensation: as specified by Chapter 97 of the General Statutes.

Area of proposed coverage	Proposed amount of coverage		Cost (Quote)
Comprehensive General Liability	\$1,000,000		\$1,533.00
Officers and Directors/Errors and Omissions	\$1,000,000		\$3,332.00
Property Insurance	\$200,000		\$400.00
Motor Vehicle Liability	\$1,000,000		\$181.00
Bonding Minimum/Maximum Amount	\$0	\$250,000	\$332.00
Other	\$1,000,000		\$7,863.00
Total Cost			\$13,641.00

\*The applicant must provide a quote from an insurance provider as part of this application (as Appendix O) to demonstrate the levels of insurance coverage and projected cost.

**Health and Safety Requirements:**

All public charter schools are required to follow the regulations regarding health and safety as stated in § 115C238.29F (a).

We, the Board members at (Charter School Name) will develop a written safety plan and policies to be shared with staff, parents and students and be available upon inspection from the Department of Public Instruction and local Health Departments.

qcstem 12/05/2013

(Board Chair Signature)

(Date)

**Facility:**

*Note that the SBE may approve a charter school prior to the school's obtaining a facility; however, students may not attend school and no funds will be allocated until the school has obtained a valid Certificate of Occupancy for Educational use to the Office of Charter Schools.*

*What is your plan to obtain a building? Identify the steps that the board will take to acquire a facility and obtain the Educational Certificate of Occupancy. If a facility has been identified please fill out the Facility Form (Appendix N).*

Queen City STEM School board has started searching for an adequate school facility to lease in the Mecklenburg County upon approval of final charter. The school facility will be located in a place that is easily accessible by most community elementary, middle and high school students. Based on the availability of the classrooms and space, we are willing to utilize any school facility, partially or as a whole. We started working with local real estate agents to find a building that meets the needs of Queen City STEM School as explained in the next question. Upon finding a potential school facility, we will work with local city government, health and fire

departments to ensure that it is compliant with the North Carolina State Building Code for elementary, middle and high schools.

**Facility Contingency Plan:** *Describe the method of finding a facility if the one the board has identified will not be ready by the time the public charter school will be opening. Include information regarding the immediate spatial needs of the school and identify any programs that will not be immediately offered because a permanent facility has yet to open.*

We will consider various options for securing a school facility by the start day of the school such as lease, purchase, land with modular classrooms on, leasing school/classroom space from other public/private schools or churches. We need 12 classrooms for the first three years in addition to one science lab, one computer lab, four offices, one resource room, one teacher work area and lounge, one conference room, a library, a multipurpose room with enough parking and play area. All applicable inspections and certifications will be in place prior to opening the school. Total square footage of the building is expected to be 25,000 to 30,000 sq.ft. If the identified school facility is smaller than the intended size, we will reduce the enrollment to be able to fit into the available space while ensuring that the quality of the educational programs and the budgetary obligations of the school are not compromised.

### V. FINANCIAL PLAN

In the following sections present a detailed description of assumptions and revenue estimates, including but not limited to the basis for revenue projections, staffing levels, and costs. The narrative should specifically address the degree to which the school budget will rely on variable income.

#### **Budget: Revenue Projections from each LEA 2015-16**

**SHOW CALCULATIONS FOR FIGURING STATE AND LOCAL DOLLARS FOR THE PROPOSED CHARTER SCHOOL**

*Refer to the Resource Manual Finance Section for guidance on estimated funding amounts*

**State Funds:** Charter schools receive an equivalent amount per student as the local education agency (LEA) receives per student receives from the State. Funding is based on the 1<sup>st</sup> month average daily membership.

- In year 1 – Base state allotments are determined by the LEA in which the student resides
- In year 2 and beyond- Base State allotments are determined by the LEA in which the school is located.

**Local Funds:** Charter schools receive a per pupil share of the local current expense of the LEA in which the student resides.

**Federal Funds:** Charter schools must qualify and apply for the individual federal grants based on their population of students.

**REFER TO RESOURCE GUIDE FOR ADDITIONAL INFORMATION AND SOURCE DOCUMENTS**

LEA #1 600 - Charlotte-Mecklenburg Schools

Revenue	2013-2014 Per Pupil Funding	Projected LEA ADM	Approximate funding for 2015-2016
State Funds	\$4,582.77	292	\$1,338,168.84
Local Funds	\$2,318.13	292	\$676,893.96
Federal EC Funds	\$3,743.48	32	\$119,791.36
<b>Totals</b>			\$2,134,854.16

**Total Budget: Revenue Projections 2015-16 through 2019-2020**

<b>INCOME: REVENUE PROJECTIONS</b>	<b>2015-2016</b>	<b>2016-2017</b>	<b>2017-2018</b>	<b>2018-2019</b>	<b>2019-2020</b>
<b>-State ADM Funds</b>	\$1,338,169	\$1,640,632	\$1,943,094	\$2,245,557	\$2,548,020
<b>-Local Per Pupil Funds</b>	\$676,894	\$829,891	\$982,887	\$1,135,884	\$1,288,880
<b>-Exceptional Children Federal Funds</b>	\$119,791	\$134,765	\$172,200	\$202,147	\$224,608
<b>-Other Funds*</b>	\$0	\$0	\$0	\$0	\$0
<b>-Working Capital*</b>	\$0	\$0	\$0	\$0	\$0
<b>Z - TOTAL REVENUE</b>	\$2,134,854	\$2,605,288	\$3,098,181	\$3,583,588	\$4,061,508

**\*If the applicant is depending on other funding sources or working capital to balance the operating budget, please provide documentation such as signed statements from donors, foundations, bank documents, etc., on the commitment of these funds. If these figures are loans, the repayment needs to be explained in the narrative and found within the budget projections.**

**Assurances are needed to confirm the commitment of these additional sources of revenue. Please include these as Appendix R.**

**Personnel Budget: Expenditure Projections 2015-16 through 2019-2020**

The personnel list below may be amended to meet the staffing of individual charter schools: This list should align with the projected staff located in the Operations Plan (Appendix M).

BUDGET EXPENDITURE PROJECTIONS Personnel	2015-2016			2016-2017			2017-2018			2018-2019			2019-2020		
	Num Staff	Avg Salary	Total salary	FTE	Avg Salary	Total salary									
Administrative & Support Personnel:															
Lead Administrator	1	\$80,000	\$80,000	1	\$82,400	\$82,400	1	\$85,000	\$85,000	1	\$87,450	\$87,450	1	\$90,500	\$90,500
Assistant Administrator	1	\$57,000	\$57,000	2	\$58,000	\$116,000	2	\$59,000	\$118,000	2	\$60,500	\$121,000	3	\$61,500	\$184,500
Finance Officer	.5	\$40,000	\$20,000	1	\$40,500	\$40,500	1	\$41,000	\$41,000	1	\$41,500	\$41,500	1	\$42,000	\$42,000
Clerical	1	\$22,000	\$22,000	2	\$22,000	\$44,000	2	\$23,000	\$46,000	2	\$23,500	\$47,000	2	\$24,000	\$48,000
Food Service Staff	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0
Custodians	.5	\$20,000	\$10,000	.5	\$20,000	\$10,000	.5	\$20,000	\$10,000	.5	\$20,000	\$10,000	.5	\$20,000	\$10,000
Transportation Staff	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0
A - Total Admin and Support:	4	\$219,000	\$189,000	6.5	\$222,900	\$292,900	6.5	\$228,000	\$300,000	6.5	\$232,950	\$306,950	7.5	\$238,000	\$375,000
Instructional Personnel:															
Core Content Teacher(s)	18	\$36,000	\$648,000	22	\$36,500	\$803,000	26	\$37,000	\$962,000	30	\$37,500	\$1,125,000	34	\$38,000	\$1,292,000
Electives/Specialty Teacher(s)	1	\$40,000	\$40,000	1	\$41,000	\$41,000	1	\$42,000	\$42,000	2	\$43,000	\$86,000	2	\$44,000	\$88,000
Exceptional Children Teacher(s)	1	\$41,000	\$41,000	1	\$42,000	\$42,000	1	\$43,000	\$43,000	2	\$44,000	\$88,000	2	\$45,000	\$90,000
Instructional Support	1	\$8,000	\$8,000	1	\$32,000	\$32,000	2.5	\$36,700	\$91,750	3	\$30,500	\$91,500	3.5	\$32,000	\$112,000
Teacher Assistants	2	\$22,000	\$44,000	3	\$23,200	\$69,600	3	\$23,400	\$70,200	3	\$23,700	\$71,100	4	\$24,000	\$96,000
B - Total Instructional Personnel:	23	\$147,000	\$781,000	28	\$174,700	\$987,600	33.5	\$182,100	\$1,208,950	40	\$178,700	\$1,461,600	45.5	\$183,000	\$1,678,000
A+B = C - Total Admin, Support and Instructional	27	\$366,000	\$970,000	34.5	\$397,600	\$1,280,500	40	\$410,100	\$1,508,950	46.5	\$411,650	\$1,768,550	53	\$421,000	\$2,053,000

Queen City STEM School

Personnel:															
Administrative & Support Benefits															
Health Insurance	3	\$6,000	\$18,000	6	\$6,000	\$36,000	6	\$6,000	\$36,000	6	\$6,000	\$36,000	7	\$6,000	\$42,000
Retirement Plan--NC State	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0
Retirement Plan--Other	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0
Life Insurance	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0
Disability	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0
Medicare	4	\$685	\$2,740	6	\$708	\$4,248	6	\$725	\$4,350	6	\$742	\$4,452	7	\$777	\$5,439
Social Security	4	\$3,048	\$12,192	6	\$3,149	\$18,894	6	\$3,225	\$19,350	6	\$3,300	\$19,800	7	\$3,455	\$24,185
D - Total Admin and Support Benefits:	11	\$9,733	\$32,932	18	\$9,857	\$59,142	18	\$9,950	\$59,700	18	\$10,042	\$60,252	21	\$10,232	\$71,624
Instructional Personnel Benefits:															
Health Insurance	23	\$6,000	\$138,000	28	\$6,000	\$168,000	33	\$6,000	\$198,000	40	\$6,000	\$240,000	45	\$6,000	\$270,000
Retirement Plan--NC State	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0
Retirement Plan--Other	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0
Social Security	23	\$2,190	\$50,370	28	\$2,275	\$63,700	33	\$2,363	\$77,979	40	\$2,357	\$94,280	45	\$2,405	\$108,225
Disability	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0
Medicare	23	\$492	\$11,316	28	\$511	\$14,308	33	\$531	\$17,523	40	\$530	\$21,200	45	\$541	\$24,345
Life Insurance	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0	0	\$0	\$0
E - Total Instructional Personnel Benefits:	69	\$8,682	\$199,686	84	\$8,786	\$246,008	99	\$8,894	\$293,502	120	\$8,887	\$355,480	135	\$8,946	\$402,570
D+E = F - Total Personnel Benefits	80	\$18,415	\$232,618	102	\$18,643	\$305,150	117	\$18,844	\$353,202	138	\$18,929	\$415,732	156	\$19,178	\$474,194
A+D = G - Total Admin and Support Personnel (Salary & Benefits)	15	\$792,374	\$221,932	24.5	\$849,632	\$352,042	24.5	\$947,922	\$359,700	24.5	\$1,046,398	\$367,202	28.5	\$1,102,335	\$446,624
B+E = H - Total Instructional Personnel (Salary & Benefits)	92	\$470,382	\$980,686	112	\$521,111	\$1,233,608	132.5	\$608,994	\$1,502,452	160	\$625,837	\$1,817,080	180.5	\$625,946	\$2,080,570

Queen City STEM School

G+H = J - TOTAL PERSONNEL	107	\$1,262,756	\$1,202,618	136. 5	\$1,370,743	\$1,585,650	157	\$1,556,916	\$1,862,152	184. 5	\$1,672,235	\$2,184,282	209	\$1,728,281	\$2,527,194
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**Operations Budget: Expenditure Projections 2015-16 through 2019-2020**

<b>BUDGET OPERATIONS EXPENDITURE PROJECTIONS</b>		<b>2015-2016</b>	<b>2016-2017</b>	<b>2017-2018</b>	<b>2018-2019</b>	<b>2019-2020</b>
	Administrative & Support:					
Office:	Office Supplies	\$2,000	\$3,000	\$3,500	\$4,000	\$5,000
	Paper	\$1,000	\$1,225	\$1,500	\$1,750	\$2,000
	Computers & Software	\$59,500	\$66,500	\$78,000	\$68,000	\$68,000
	Communications & Telephone	\$8,500	\$10,000	\$11,500	\$12,500	\$14,000
	Copier leases	\$9,500	\$9,500	\$9,500	\$12,000	\$12,500
Management Company	Contract Fees	\$0	\$0	\$0	\$0	\$0
Professional Contract	Legal Counsel	\$16,000	\$18,000	\$19,000	\$24,000	\$26,000
	Student Accounting	\$0	\$0	\$0	\$0	\$0
	Financial	\$5,000	\$5,500	\$6,000	\$7,000	\$8,000
	Other Professional	\$0	\$0	\$0	\$0	\$0
Facilities	Facility Lease/Mortgage	\$345,000	\$380,000	\$450,000	\$530,000	\$560,000
	Maintenance	\$11,000	\$11,000	\$12,500	\$16,000	\$18,000
	Custodial Supplies	\$5,000	\$5,500	\$6,000	\$6,500	\$7,500
	Custodial Contract	\$30,000	\$32,000	\$34,000	\$36,000	\$39,000
	Insurance (pg19)	\$13,641	\$14,050	\$14,472	\$14,906	\$15,353
	Other	\$500	\$650	\$1,000	\$1,500	\$2,000
Utilities	Electric	\$24,000	\$25,000	\$27,500	\$30,000	\$33,000
	Gas	\$0	\$0	\$0	\$0	\$0
	Water/Sewer	\$3,000	\$3,500	\$4,000	\$4,500	\$5,000
	Trash	\$1,000	\$1,000	\$1,250	\$1,500	\$1,750
Transportation	Buses	\$2,000	\$2,450	\$2,750	\$3,000	\$5,000
	Gas	\$0	\$0	\$0	\$0	\$0
	Oil/Tires & Maintenance	\$0	\$0	\$0	\$0	\$0
Other	Marketing	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
	Child nutrition	\$0	\$0	\$0	\$0	\$0
	Travel	\$5,000	\$5,500	\$5,500	\$5,750	\$6,000
	Other	\$2,000	\$2,500	\$2,000	\$4,500	\$6,000
	K - TOTAL Administrative & Support Operations	\$563,641	\$616,875	\$709,972	\$803,406	\$854,103
	Instructional:					
Instructional Contract	Staff Development	\$13,000	\$15,000	\$18,000	\$20,000	\$22,000
Classroom Technology	Software	\$27,400	\$33,500	\$35,000	\$60,000	\$60,000
Books and Supplies	Instructional Materials	\$148,000	\$242,000	\$308,000	\$291,000	\$277,000

	Curriculum/Texts	\$69,300	\$31,000	\$37,000	\$42,000	\$43,000
	Copy Paper	\$5,000	\$6,125	\$7,500	\$9,000	\$12,000
	Testing Supplies	\$5,000	\$6,500	\$7,500	\$8,750	\$10,000
	Other	\$47,000	\$3,500	\$5,000	\$7,500	\$10,000
	L - TOTAL Instructional Operations	\$314,700	\$337,625	\$418,000	\$438,250	\$434,000
	K+L = M - TOTAL OPERATIONS	\$878,341	\$954,500	\$1,127,972	\$1,241,656	\$1,288,103

**Overall Budget:**

<b>BUDGET OPERATIONS EXPENDITURE PROJECTIONS</b>	<b>2015-2016</b>	<b>2016-2017</b>	<b>2017-2018</b>	<b>2018-2019</b>	<b>2019-2020</b>
J - TOTAL PERSONNEL	\$1,202,618	\$1,585,650	\$1,862,152	\$2,184,282	\$2,527,194
M - TOTAL OPERATIONS	\$878,341	\$954,500	\$1,127,972	\$1,241,656	\$1,288,103
J+ M =N TOTAL EXPENDITURES	\$2,080,959	\$2,540,150	\$2,990,124	\$3,425,938	\$3,815,297
Z - TOTAL REVENUE	\$2,134,854	\$2,605,288	\$3,098,181	\$3,583,588	\$4,061,508
Z - N = SURPLUS / (DEFICIT)	\$53,895	\$65,138	\$108,057	\$157,650	\$246,211

**Budget Narrative:** (No more than one and a half pages)

Please include additional information that showcases all assumptions for your budgetary calculations.

1. *How was the student enrollment number projected?*

*Provide an explanation as to why you believe there is a demand for the school that will meet this enrollment projection.*

*Provide the break-even point of student enrollment.*

**Enrollment:** The school will have initially K-6 grades and each grade will have two classes of students with 19-22 students per class. QC STEM will add one more grade as the enrolled students progress and increase the middle grade class by one. Hence there will be 14 classes in the first year and class size will increase by 3 every year. This will add approximately 66 students each year.

**Personnel:** QC Stem will hire teachers and school staff according to the projected classes and offered courses. For K-3 each classroom has a class teacher and specialized teachers will deliver courses such as Art, Music and PE. After the 3rd grade, math and science and language arts divisions departmentalize as aligned with the core mission of the QC STEM. The teachers with specialized degrees will teach these courses.

**Operational Costs:** In addition to the conventional operational costs for instructional supplies, materials, facility costs, the budget includes purchase of specialized services to aid teachers to assess the student level and teach specialized courses in the STEM fields as well as language arts. For example, the proposed budget includes MAP testing, which is essential for determining student level in the beginning of the school year. Budget also includes resources to help students with tutoring and education of EC students and at-risk students.

**Break-even Point:** The budget projections are adequate for the proposed operation of the school. The break-even point for the student enrollment is 283 student, which is 9 students lower compared to the proposed enrollment. If the revenues are lower than the anticipated, grant applications, fundraising activities will be used to cover the deficit.

**Demand for the School:** Increasing the number of students who are proficient in vital STEM fields has been set as a national priority where the current percentage of American high school seniors (16%) falls short in matching the projected increase in STEM jobs (see:<http://www.ed.gov/stem>). The national and state-wide strategies to reduce this demand-and-supply mismatch require more K-12 institutions like QC STEM.

*Discuss the school's contingency plan to meet financial needs if anticipated revenues are not received or are lower than estimated.*

The proposed school budget planned with a cushion amount as a protection of the school from deficit that could result from less than anticipated revenues. In the case that revenues are less than the anticipated amounts, the school has a contingency plan that will be executed as the budget and spending is monitored very closely with the financial oversight committee. The plan is introduced in the chart above. Namely the plan is to reduce the payroll by 3% and facility costs by 1% and instruction supplies by 1%. For the first year this will provide an additional \$50K to the projected surplus.

*Does the budget rely on sources of funds other than state, county, and federal (e.g. loans, donations etc.)? If so, please provide the source and amount. Be sure that the appropriate assurances documentation is provided in the appendices*

*The core operation of the school solely depends on state, local funds per pupil and federal EC funds. There is no commitment from any other sources nor is there the need for such sources for the core operation. However, the board will apply to federal implementation grants for charter schools. The school also will fundraise for science fairs and for engagement in STEM related competitions.*

*Provide the student to teacher ratio that the budget is built on.*

Budget is built on 12-13 student per teacher.

- 2. Does the school intend to contract for services such as student accounting and financial services, exceptional children instructional support, custodial etc. Describe the criteria and procedures for the selection of contractors and large purchases.*

Accounting: The QC STEM School employ an accountant for managing accounting activities.

Purchasing: School purchasing policies are determined by the existing by-laws.

All checks shall be signed by any of the two Board members, or any Board member and the Principal. The Principal and the assistant principal can sign the checks for recurring expenses, and expenses that are not exceeding \$5,000. Endorsements for deposit to the credit of the Corporation in any of its duly authorized depositories will be made by the Principal or treasurer or by any officer or agent who may be authorized by the Board to do so.

Payroll: The QC STEM School will use existing ISIS system managing payrolls.

Audit: An independent audit company approved by the NC Local Government Commission (LGC) will perform the financial audit of the school annually.

Contracted Services: Queen City STEM School expects to contract external companies for education related services. For example the school will receive contracted services for EC speech occupational therapy, psychological evaluations, financial audits, and janitorial services. These service providers are selected through a bidding process as regulated by NC State codes. At least three companies bid to contract for a service. The Board reserves the right to interview the winning bidder before approving the contract.

Financial Oversight: The accounting and budget projection will be strictly monitored by the Board in each monthly Board meeting. In order to achieve the projected annual figures in the budget and maintain the financial

strength of the school, the Board will establish a financial oversight committee to assess the priorities of the school and provide feedback and guidance to the purchasing and accounting. Such a committee is established for both TMSA schools in Guilford and Wake counties.

3. *Explain how the budget aligns with the school's mission, curricular offerings, transportation plans, and facility needs.*

Curricular offerings: Teacher hires, instructional materials and supply purchases are aligned coherently with the schools mission. For example: All math and science teachers are required to be certified and to have BS degree in relevant majors. All of the classrooms are equipped with smart boards. All teachers are provided with a laptop. The purchased science curriculum includes experimental kits for hands-on, inquiry based education. The school will organize regional science fairs and attend regional, national and international science fairs. For assessment of the student math and reading skills, school will purchase MAP testing. The instructional supplies also include purchase and subscription of online resources such as Study Island, learning A-Z, educationcity.com, ED helper, learning.com and online student tracking systems. In addition to these the budget also includes purchase of "interactive response system", a wireless remote kit that facilitates active student engagement in the class for specifically teaching STEM related subjects. The budget also includes supplementary curriculum for education of EC students.

Transportation plan: School will be located in an easily accessible location in Mecklenburg County. The budget does not include any additional transportation item. Details of the transportation plan are explained in the previous sections.

Professional development: Staff professional development is very important for continuing success of the school. Therefore starting from the first year budget includes staff development allocations, which will be used for teacher workshops, and teacher conferences.

4. *What percentage of expenditures will be the school's goal for a general fund balance? Describe how the school will develop the fund balance.*

The Board recognizes its responsibility to establish an unreserved fund balance in consideration of unanticipated costs or revenue shortfalls. Consequently, the Board will direct the Principal to manage the adopted budget in such a way to ensure (strive for), at a minimum, an unreserved ending fund balance of no less than 3 to 8 percent of the general fund budget. To achieve this, the Board will monthly review a variety of factors with potential impact on the charter schools budget including the predictability and volatility of its expenditures; the availability of resources in other funds as well as the potential drain upon general fund resources from other funds; liquidity; and designations.

5. *Provide a description of proposed financing structure. Include financing of facilities, other asset financing and leases.*

The school facility will be rented in the first years. The stable and increasing enrollment combined with our experienced board with successful history will enable the expansion, relocation and new development for the ownership of the facilities as an investment. For this, the resources that

will be relied on include the existing reserves, ongoing percentage of revenue, public/private fundraising and seeking other funding alternatives (bond, loan, lease etc.).

7. *Will the school have assets from other sources (e.g. building, furniture, chairs, computers, etc.)? If yes, please provide a list. Note which are secured and which are anticipated, and include evidence of commitment for any assets on which the school's core operation depends*

The school will not have assets from other sources.

**Financial Compliance:** (No more than a half of a page)

*How will the school ensure adequate internal controls, including segregation of duties, safeguarding of assets, accurate and adequate recording keeping?*

Financial Compliance, internal control and Safeguarding the assets:

Regardless of the amount, we will use "Purchase Order (PO)" system for all purchases. Adopting our business policies, procedures and practices from TMSA Greensboro, we will establish internal control mechanism to ensure that proper internal approval protocol is followed. The PO system not only it will provide us an ability to track expenses with respect to allocated budget amount automatically, but will also help us establish a sense of accountability and responsibility in using public money. It is our policy that principal can authorize purchasing up to \$5000, while any expense exceeding that amount has to be approved by the board/ or a member of the board who is authorized to sign it. . We require that regardless of the amount, there is always 2 signatures on the face of each check. Bank reconciliation will be done by the accountant at the end of each month and reviewed/ approved (if necessary) by the board treasurer. We will also establish a financial oversight committee among the admin team, board members and external consultants to ensure that monthly budget report is periodically reviewed and necessary recommendation/actions are taken in a timely fashion to prevent over estimation or over expenditures.

Safeguarding the Assets:

All assets will be tagged with a barcode and recorded in an excel spreadsheet according to the source of funding. For example, an asset bought by using federal grant is tagged with red label, state grant with blue and local fund yellow. All items at risk will be kept in locked room or cabinet with an access control system. Students and employee personal files are to be kept in a safe room in fire-proof cabinets with daily log of access. First year Assistant Principal and then Custodian will watch over these items. Asset list will be checked at the end of every quarter by 2 people.

*Provide any known or possible related party transactions (relationship, description of transaction and estimated dollars involved)*

Not Applicable

*Provide the name and contact information of the independent audit firm who will conduct the annual financial statement audit. If a firm has yet to be identified please list the firms the board has investigated.*

Name: Petway Mills & Pearson, PA

Address: 806 North Arendell Avenue, Zebulon, NC 27597

Phone Number: (919)-269-7405

Fax Number: (919)-269-8728



