NC STEM RECOGNITION

North Carolina Department of Public Instruction

In collaboration with

NC STEM Learning Network in collaboration with
The NC Science, Mathematics and Technology Education Center
and
The Friday Institute at North Carolina State University

NC STEM Recognition Application Release: August 2016
Application Due: February 1, 2017
Elementary and Middle School

School/Program Name:
School System Name:

Public Schools of North Carolina
State Board of Education | Department of Public Instruction

NC STEM LEARNING NETWORK

SMT
North Carolina Science, Mathematics, and Technology Education Center

www.ncpublicschools.org/stem

NC STEM Recognition
North Carolina Department of Public Instruction

STEM Education: Science, Technology, Engineering, and Mathematics (STEM) Education interweaves the disciplines of science, technology, engineering, and mathematics to enable students to understand complex societal problems preparing the next generation of innovators. North Carolina's STEM Education aligns with the Standard Course of Study and is a critical complement to courses in the Arts, Career and Technical Education, English Language, Healthful Living, Music, Social Studies, and World Languages, and to Out-of-School programs. STEM Education is one strategy North Carolina is using to build a world-class workforce that leads to graduation, postsecondary education, and careers in our global economy.

NC STEM Recognition: North Carolina is providing quality STEM education. To recognize our states finest STEM Schools and Programs, NC has developed an application process to identify and recognize exemplary STEM Schools and STEM Programs. Elementary, Middle, and High Schools, Programs, or Future-Ready High Schools/Program of Achievement have the opportunity to submit an application highlighting their distinguished approaches to leading and learning in STEM Education. The application is built around a rubric which outlines critical strengths, eleven "Attributes", of a high quality STEM Education program. Schools and programs demonstrating evidence they are implementing all eleven Attributes of a quality STEM program at the "Prepared" or "Model" level will be recognized.

NC STEM Application Guide:

The Application Guide provides information and directions for Schools and Programs. The Components contain the forms and documents that are to be submitted as part of the application packet. The Appendix outlines and describes the application process and procedures and provides page locations.

Application Guide Contents

1. Time Line
2. Definitions and Guide
3. Application Components
4. Application Template
5. Appendix
    - Directions
    - Achievement Level Criteria
    - Review Process
    - School Visit
    - Recommendation/School Notification
    - State Board of Education
    - Application Renewal
    - Guidance to Applicants
    - Benefits

North Carolina Department of Public Instruction
STEM Recognition Application Guide and Directions

1. Timeline:

Submit your School or Program Application on or before 5:00 pm February 1, 2017

APPLICATION TIMELINE

Timeline	**Application:**
August 2016	√ Application release
February 1, 2017	√ Application due
	Review process:
February – Mid-March 2017	√ Application reviewed
Mid-March – April 2017	√ Site visits to qualifying schools
June 2017	√ State Board of Education Recognition

- **Submit Application electronically to:**
  - Tina Marcus, STEM Project Manager, North Carolina Department of Public Instruction
    E-mail tina.marcus@dpi.nc.gov
  - Indicate in subject line: ***2017 STEM Application***
  - **Paper copies will not be accepted**
- **Received no later than 5:00 pm Wednesday, February 1, 2017**
- **Questions regarding application may be directed to:**
  Tina Marcus
  tina.marcus@dpi.nc.gov
  919-807-3423

The NC STEM Recognition Application will be released annually. Refer to page 42/43 for application renewal information.

2. Definitions and Guide:

STEM Education is teaching and learning that:

- Aligns to the Engineering Design Process/Engineering Connections to engage students in a way of critical thinking, reasoning, collaborative teamwork, investigative and creative skills that are real-world and relevant to today's society
- Anchor to content in the areas of science, technology, engineering, and mathematics (STEM)
- Complements courses in the Arts, Career and Technical Education, English Language Arts, Healthful Living, Music, Social Studies, and World Languages and to Out-of-School programs

This definition of STEM is for guidance purposes

Choose to apply for Recognition as either a ***NC STEM School****,* ***NC STEM Program****, or* ***NC Future-Ready STEM High School or Program of Achievement****. Complete the NC STEM Recognition Application Cover Form* ***(Form A)***

A STEM School is an entire school focused on integrating Science, Technology, Engineering, and Mathematics (STEM) Education plus other content areas as needed to carry out STEM themed content and career cluster theme(s) of the school. Principles that frame STEM include:

- Integrating Science, Technology, Engineering, and Mathematics curriculum, aligned with state, national, international and industry standards
- Incorporating on-going community and industry engagement
- Connecting to postsecondary education

STEM schools are:

- Built on researched-based design principles
- Organized around units of study and courses that interweave S,T,E,M plus other content areas as needed to carry out STEM themed content and career cluster theme(s)
- Engage students in critical thinking, problem solving, collaborative teamwork, and investigative/creative skills to make relevant connections between their studies and the world outside their classroom

Schools are to use the following State Standards:

Science Essential Standards:	http://www.ncpublicschools.org/curriculum/science/scos/
Technology Essential Standards:	http://www.iteaconnect.org/TAA/PDFs/xstnd.pdf Compendium starts on page 211 of document
Engineering Connections:	http://www.ncpublicschools.org/stem/resources/
Mathematics Common Core:	http://maccss.ncdpi.wikispaces.net/home

For all other content areas aligned to this project, the State approved Common Core or Essential Standards are to be used. These standards are identified on the North Carolina Department of Public Instruction website. www.ncpublicschools.org

A STEM Program have the same elements of a STEM school but is a subset organized as a STEM learning community within in a school. It is comprised of a body of students by grade level or heterogeneous body of students. A learning community may be called an academy.

A Future-Ready STEM High School or Program of Achievement schools applicants must meet additional student achievement measures listed below:

Student Achievement	**Target**
Graduation Rate of STEM School or Program High School (4-year rate) Early College (5 year rate) Residential (2 year rate)	90%
College Readiness of STEM school or program ACT: English, Mathematics, Reading, Science (measured junior year)	90% of students have a composite score at 17 or above
Career Readiness of STEM school or program WorkKeys: Locating Information, Applied Mathematics, Reading for Information (measured graduating year)	90% of CTE Concentrators qualify for a Silver Certificate or above

The following components together create the STEM Implementation Rubrics starting on **(Page 15)** upon which this application is built. Rubrics also located at:
http://www.ncpublicschools.org/docs/stem/schools/rubrics/elementary-school.pdf
http://www.ncpublicschools.org/docs/stem/schools/rubrics/middle-school.pdf

Three Principles of STEM Education are priorities that frame quality STEM Education and are grouped as follows:

- Integrated Science, Technology, Engineering, Mathematics (STEM) curriculum, aligned with state, national, international and industry standards
- On-going community and industry engagement
- Connections to postsecondary education

Eleven Attributes of STEM define essential components central to 21st Century Skills and further define the Three Principles of STEM Education (**Page 10**)

- *Integrated Science, Technology, Engineering, Mathematics (STEM) curriculum, aligned with state, national, international and industry standards (Principle)*
  Attributes:
  1. Project-based learning with integrated content across STEM subjects
  2. Connections to effective in and out-of-school STEM programs
  3. Integration of technology and virtual learning
  4. Authentic assessment and exhibition of STEM skills
  5. Professional development on integrated STEM curriculum, community/industry partnerships and postsecondary education connections
  6. Outreach, support and focus on underserved, especially females, minorities, and economically disadvantage

- *On-going community and industry engagement (Principle)*

  Attributes:

  7. A communicated STEM plan is adopted across education, communities and businesses
  8. STEM work-based learning experiences, to increase interest and abilities in fields requiring STEM skills, for each student and teacher
  9. Business and community partnerships for mentorship, internship and other STEM opportunities that extend the classroom walls

- *Connections to postsecondary education (Principle)*

  Attributes:

  10. Alignment of student's career pathway with post-secondary STEM program(s)
  11. Credit completion at community colleges, colleges and/or universities

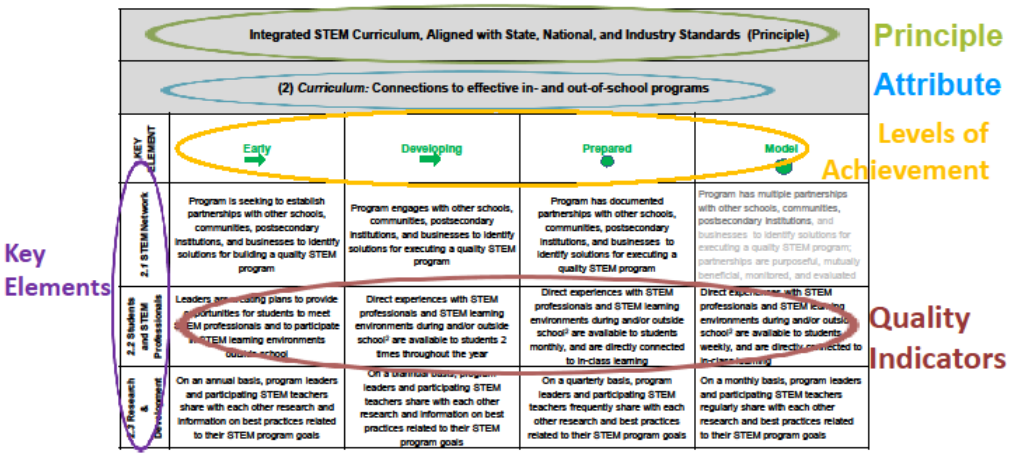
Key Elements (rows in the rubric) describe the components of the Attributes.

Levels of Achievement (columns in the rubric) describe the level of performance attained by the School or Program.

- "Model" Highest level of achievement representing a model
- "Prepared" Quality program meeting expectations
- "Developing" Needs improvement but program has a good start
- "Early" Beginning STEM program

Quality Indicators (cells in the rubric) clarify the performance expectations of each Level of Achievement

STEM Rubric Components
North Carolina Schools



3. **Application Components:**

NC STEM Recognition Application consists of the following components:

- Cover Page **(Form A)**
- Contents Checklist **(Form B)**
- STEM Attribute Implementation Summary Self-Assessment Rubric for Schools or Programs **(Form C1)** ***or***
- STEM Attribute Implementation Summary Self-Assessment Rubric for Future-Ready Schools/Programs of Achievement **(Form C2) High Schools Only**
- Application Response Template **(Form D)** which includes:
  - Key Element narrative responses and linked evidences
- Executive Summary **(Form D)**
- Best Practice Evidence Response **(Form D)**
- Signature Endorsement page **(Form F)**
- NC STEM Attribute Implementation Rubrics: **These rubrics provide guidance for your school to review to understand the criteria and expectations, upon which you will base your application narrative and evidences. This Rubric is not to be sent back as part of the application.**
  - Elementary School: http://www.ncpublicschools.org/docs/stem/schools/rubrics/elementary-school.pdf
  - Middle School: http://www.ncpublicschools.org/docs/stem/schools/rubrics/middle-school.pdf
  - High School: http://www.ncpublicschools.org/docs/stem/schools/rubrics/high-school.pdf

All components **(Forms A-F)** are to be submitted for the application to be considered a complete application and to be reviewed.

4. **Application**

This **PDF document** is intended for guidance and hard copy reference; it also outlines the process and procedure for application submittals.

Google forms and a formal *2017 NC STEM Recognition Application Packet* will be disseminated to schools planning to apply for recognition. Elementary, middle, and high school programs planning to submit an application for STEM Recognition are to contact: Tina Marcus tina.marcus@dpi.nc.gov for the Google form and the formal application.

- Google form provides a workspace for schools to collaboratively collect and develop application responses
- Formal application document is used to complete and submit all components Forms A-F; which includes importing narrative responses and evidences into the templates
- Submit no later than 5:00 pm Wednesday, February 1, 2017 to tina.marcus@dpi.nc.gov

The formal 2017 NC STEM Recognition Application Packet begins on next page

Cover Page
NC STEM Recognition Application

Form A

School Name: ___ **School System:** _____

Date Application Submitted: __/__/__

Main Point of Contact Information

Name: _____

Address: _____

City, State, Zip: _____

Email: _____

Phone: ___-___-____

SELECT ONE: *

- ☐ High School
- ☐ High School Program
- ☐ Future-Ready High School of Achievement
- ☐ Middle School
- ☐ Middle School Program
- ☐ Elementary School
- ☐ Elementary School Program
- ☐ Other grade combination: **(List):** _____

SELECT below that Apply:

- ☐ Public School
- ☐ Early College HS
- ☐ Regional
- ☐ Residential
- ☐ Charter School
- ☐ ** Private School
- ☐ Urban School
- ☐ Rural School

Number of Students in your School/Program: _____

Number of Teachers in your School/Program: _____

Career Cluster Area(s): _____

Curriculum used in classrooms**:**

Name: _____

Developed by: _____

Date: __/__/__

List additional, if applicable: _____

*** Definitions of STEM School or Program refer to page (4). Future-Ready STEM High School or Program of Achievement refer to page (5).**

**** Private schools attaining the "prepared" or "model" levels of distinction are recognized by The NC Science, Mathematics, and Technology Education Center**

Due Date: February 1, 2017

Contents Checklist
NC STEM Recognition Application

Form B

School Name: _____ **School System:** _____

Check List	Application Contents	Page
☐	Insert your School/Program Name and School System Name on Title Page of Application	**1**
☐	NC STEM Attribute Implementation Rubric links reviewed for your Schools level	**7**
☐	STEM Application Cover Page (Form A)	**8**
☐	STEM Application Contents Checklist (Form B)	**9**
☐	NC STEM Attribute Implementation Rubric Summary Self-Assessment School or Program Form (Form C1) **OR**	**10**
☐	NC STEM Attribute Implementation Rubric Summary Self-Assessment Future-Ready School/Program of Achievement Form (Form C2) High School Only	**12**
☐	Executive Summary (Form D)	**15**
☐	STEM Best Practice (Form D)	**15**
☐	*Principle:* Integrated Science, Technology, Engineering and Mathematics (STEM) curriculum, aligned with state, national, international and industry standards **Attribute Evidence(s) for each below** (Form D)	
☐	1) Project-based learning with integrated content across STEM subjects	**16**
☐	2) Connections to effective in and out-of-school STEM programs	**18**
☐	3) Integration of technology and virtual learning	**20**
☐	4) Authentic assessment and exhibition of STEM skills	**22**
☐	5) Professional development on integrated STEM curriculum, community/industry partnerships and postsecondary education connections	**24/25**
☐	6) Outreach, support and focus on underserved, especially females, minorities, and economically disadvantaged	**27**
☐	*Principle:* On Going community and industry engagement **Attribute Evidence(s) for each** (Form D)	
☐	7) A communicated STEM plan is adopted across education, communities and businesses	**28**
☐	8) STEM work-based learning experiences, to increase interest and abilities in fields requiring STEM skills, for each student and teacher	**31**
☐	9) Business and community partnerships for mentorship, internship and other STEM opportunities that extend the classroom walls	**32**
☐	*Principle:* Connections to postsecondary education **Attribute Evidence(s) for each** (Form D)	
☐	10) Alignment of student's career pathway with post-secondary STEM program(s)	**34**
☐	11) Credit completion at community colleges, colleges and/or universities - **High School Only**	**N/A**
☐	STEM Application Signature Page (Form F)	**37**

STEM Attribute Implementation Summary Self-Assessment Rubric
School/Program Template

Form C1

School Name: _____ **School System:** _____

Select either School or Program
☐ North Carolina STEM School
☐ North Carolina STEM Program

Select School Level
☐ Elementary ☐ Middle ☐ High
☐ Elementary ☐ Middle ☐ High

	Schools COMPLETE
STEM Attributes Reference NC STEM Attribute Implementation Rubric at: www.ncpublicschools.org/stem/schools	**Self-Assessment of Your School** *(mark E, D, P, M)*
Integrated Science, Technology, Engineering and Mathematics (STEM) curriculum, aligned with state, national, international and industry standards	__
1) Project-based learning with integrated content across STEM subjects	__
1.1 Frequency of Project-based Learning	__
1.2 Frequency of STEM Integration	__
1.3 Collaborative Professional Learning Communities	__
1.4 Physical Space	__
2) Connections to effective in and out-of-school STEM programs	__
2.1 STEM Network	__
2.2 Students and STEM Professionals	__
2.3 Research and Development	__
3) Integration of technology and virtual learning	__
3.1 Instructional Technology for STEM	__
3.2 Instructional Technology Resources for STEM	__
3.3 Computer & Web-based Technology	__
3.4 Tech Support	__
4) Authentic assessment and exhibition of STEM skills	__
4.1 Authentic Assessments	__
4.2 Teachers Collaboratively Develop Assessments	__
4.3 Celebrate STEM Work	__
4.4 Culture of Innovation	__
5) Professional development on integrated STEM curriculum, community/industry partnerships and postsecondary education connections	__
5.1 Individualized Professional Development (PD)	__
5.2 Job-embedded PD	__
5.3 Specific to Teachers and Students	__
5.4 Frequency of PD	__

Continued on next page

	Schools COMPLETE
STEM Attributes Reference NC STEM Attribute Implementation Rubric at: www.ncpublicschools.org/stem/schools	**Self-Assessment of Your School** *(mark E, D, P, M)*
6) Outreach, support and focus on underserved, especially females, minorities, and economically disadvantaged	__
6.2 Culture of Inquiry	__
6.2 Recognize Under-Represented Students	__
On-going community and industry engagement	__
7) A communicated STEM plan is adopted across education, communities and businesses	__
7.1 STEM Program Plan	__
7.2 Communicate STEM Program Plan	__
7.3 Program Data	__
7.4 Resource Allocation	__
8) STEM work-based learning experiences, to increase interest and abilities in fields requiring STEM skills, for each student and teacher	__
8.1 Learning Connected to Industries	__
8.2 Students Work in Teams	__
8.3 Applied Learning for STEM Teachers	__
8.4 Students Interact with STEM Industries **High School Only**	__
9) Business and community partnerships for mentorship, internship and other STEM opportunities that extend the classroom walls	__
9.1 Collaboration in Network of Schools	__
9.2 Communication Tools	__
9.3 Stakeholders and Funding	__
Connections with postsecondary education	__
10) Alignment of student's career pathway with post-secondary STEM program(s)	__
10.1 Vertical Planning	__
10.2 Information Sharing	__
10.3 Diverse Course Selection **(High School Only)**	__
10.3 Career Exploration for Students **(Elementary and Middle Schools Only)**	__
10.4 Counselor and Student Relationships **(High School Only)**	__
10.5 Counselors and Teachers **(High School Only)**	__
11) Credit completion at community colleges, colleges and/or universities – **High School Only**	__
11.1 Credit of Completion Availability **(High School Only)**	__
11.2 Student Enrollment **(High School Only)**	__
11.3 Comprehensive Advising **(High School Only)**	__
Best Practice	__
STEM Best Practice	__

STEM Attribute Implementation Summary Self-Assessment Rubric
Future-Ready School/Program of Achievement Template **Form C2**
High Schools Only

Select One: ☐ North Carolina Future-Ready STEM High **School** of Achievement
☐ North Carolina Future-Ready STEM High **Program** of Achievement

Student Achievement	**Target**	**% Score**	**Composite Score/Certificate Level**
Graduation Rate of STEM School or Program High School (4-year rate) ☐ Early College (5-year rate) ☐ Residential School (2 year rate) ☐	90%	%	
College Readiness of STEM school or program ACT: English, Mathematics, Reading, Science (measured junior year)	90% of students have a composite score at 17 or above	%	Composite
Career Readiness of STEM school or program WorkKeys: Locating Information, Applied Mathematics, Reading for Information (measured senior year)	90% of CTE Concentrators qualify for a Silver Certificate or above	%	Certificate level

	Schools COMPLETE
STEM Attributes Reference NC STEM Attribute Implementation Rubric at: www.ncpublicschools.org/stem/schools	**Self-Assessment of Your School** *(mark E, D, P, M)*
Integrated Science, Technology, Engineering and Mathematics (STEM) curriculum, aligned with state, national, international and industry standards CONTINUED from previous page	__
1) Project-based learning with integrated content across STEM subjects	__
1.1 Frequency of Project-based Learning	__
1.2 Frequency of STEM Integration	__
1.3 Collaborative Professional Learning Communities	__
1.4 Physical Space	__
2) Connections to effective in & out-of-school STEM programs	__
2.1 STEM Network	__
2.2 Students and STEM Professionals	__
2.3 Research and Development	__
3) Integration of technology and virtual learning	__
3.1 Instructional Technology for STEM	__
3.2 Instructional Technology Resources for STEM	__
3.3 Computer & Web-based Technology	__
3.4 Tech Support	__

Continued on next page

	Schools COMPLETE
STEM Attributes Reference NC STEM Attribute Implementation Rubric at: www.ncpublicschools.org/stem/schools	**Self-Assessment of Your School** *(mark E, D, P, M)*
4) Authentic assessment and exhibition of STEM skills	__
4.1 Authentic Assessments	__
4.2 Teachers Collaboratively Develop Assessments	__
4.3 Celebrate STEM Work	__
4.4 Culture of Innovation	__
5) Professional development on integrated STEM curriculum, community/industry partnerships and postsecondary education connections	__
5.1 Individualized Professional Development (PD)	__
5.2 Job-embedded PD	__
5.3 Specific to Teachers and Students	__
5.4 Frequency of PD	__
6) Outreach, support and focus on underserved, especially females, minorities, and economically disadvantaged	__
6.2 Culture of Inquiry	__
6.2 Recognize Under-Represented Students	__
On-going community and industry engagement	__
7) A communicated STEM plan is adopted across education, communities and businesses	__
7.1 STEM Program Plan	__
7.2 Communicate STEM Program Plan	__
7.3 Program Data	__
7.4 Resource Allocation	__
8) STEM work-based learning experiences, to increase interest and abilities in fields requiring STEM skills, for each student and teacher	__
8.1 Learning Connected to Industries	__
8.2 Students Work in Teams	__
8.3 Applied Learning for STEM Teachers	__
8.4 Students Interact with STEM Industries **High School Only**	__
9) Business and community partnerships for mentorship, internship and other STEM opportunities that extend the classroom walls	__
9.1 Collaboration in Network of Schools	__
9.2 Communication Tools	__
9.3 Stakeholders and Funding	__

Continued on next page

	Schools COMPLETE
STEM Attributes Reference NC STEM Attribute Implementation Rubric at: www.ncpublicschools.org/stem/schools	**Self-Assessment of Your School** *(mark E, D, P, M)*
Connections with postsecondary education	__
10) Alignment of student's career pathway with post-secondary STEM program(s)	__
10.1 Vertical Planning	__
10.2 Information Sharing	__
10.3 Diverse Course Selection	__
10.4 Counselor and Student Relationships	__
10.5 Counselors and Teachers	__
11) Credit completion at community colleges, colleges and/or universities - **High School Only**	__
11.1 Credit of Completion Availability **High School Only**	__
11.2 Student Enrollment **High School Only**	__
11.3 Comprehensive Advising **High School Only**	__
Best Practice	
STEM Best Practice	__

Application Response Template
for Elementary and Middle Schools
NC STEM Attribute/Key Element Response Template **Form: D**

School Name: _____ **School System Name**: _____ **Date:** __/__/__

The Elementary and Middle School Implementation Rubric contain (10) STEM Attributes

IMPORTANT NOTE: An Executive Summary component has been added to the application. In addition, the Best Practice narrative has been moved to the first page of the application. **FORM D** now includes the Executive Summary, Best Practice and the Attribute Narratives.

School Executive Summary Overview	
This section provides an opportunity for a team of reviewers to quickly become acquainted with your school and community matrix. Notes may include but not limited to: size of school, teacher/student ratio, teachers per grade level, urban or rural, early college high school, regional or residential, comprehensive school, program or career cluster(s) or theme focus, economic and community focus, demographics, or include any other designations you school or staff have received.	
School Executive Summary:	
STEM BEST PRACTICE	
Title of Best Practice:	**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
School Narrative:	
Link Evidence:	
Reviewer Comments Best Practice:	**Reviewers Assessment (M, P, D, E):**
End: Best Practice	

ATTRIBUTE NARRATIVES START HERE

STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard

1) Project-based learning with integrated content across STEM subjects

Key Element 1.1 Frequency of Project-based Learning

Check Your Schools Self-Assessment

☐ **= Model**
☐ **= Prepared**
☐ **= Developing**
☐ **= Early**

Early	Developing	Prepared	Model
Project-based learning[1] is used rarely in all STEM content areas	Project-based learning[1] is used monthly in all STEM content areas	Project-based learning[1] is used monthly throughout all subject areas, which includes all STEM content areas as well as additional subjects	Project-based learning[1] is regularly used throughout all subject areas, which includes all STEM content areas as well as additional subjects

[1] Project-based learning (PBL) activities have students working in small, collaborative groups; the groups go through a process of inquiry and eventually produce high-quality products/presentations; projects can mirror the real work of professionals and move beyond classroom in purpose or audience

School Narrative:

Link Evidence :

Reviewer Comments 1.1:

Reviewers Assessment (M, P, D, E):

STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard

1) Project-based learning with integrated content across STEM subjects

Key Element 1.2 Frequency of STEM Integration

Check Your Schools Self-Assessment

☐ **= Model**
☐ **= Prepared**
☐ **= Developing**
☐ **= Early**

Early	Developing	Prepared	Model
Up to 25% of STEM core and elective teachers regularly make explicit efforts to integrate science, technology, engineering and math, requiring students to organize knowledge across disciplines	25-50% of STEM core and elective teachers regularly make explicit efforts to integrate science, technology, engineering and math, requiring students to organize knowledge across disciplines	50-75% of STEM core and elective teachers regularly make explicit efforts to integrate science, technology, engineering and math, requiring students to organize knowledge across disciplines	Over 75% of STEM core and elective teachers regularly make explicit efforts to integrate science, technology, engineering and math, requiring students to organize knowledge across disciplines

School Narrative:			
Link Evidence:			
Reviewer Comments 1.2			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
1) Project-based learning with integrated content across STEM subjects **Key Element** 1.3 Collaborative Professional Learning Communities			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
Semiannually, STEM teachers share STEM activities or ideas and plan learning outcomes through professional learning community meetings and common planning time	Quarterly, STEM teachers share STEM activities or ideas and plan learning outcomes through professional learning community meetings and common planning time	Monthly, STEM teachers share STEM activities or ideas and plan learning outcomes through professional learning community meetings and common planning time	Weekly, STEM teachers share or co-create STEM activities or ideas and plan learning outcomes through professional learning community meetings and common planning time
School Narrative:			
Link Evidence:			
Reviewer Comments 1.3:			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
1) Project-based learning with integrated content across STEM subjects **Key Element** 1.4 Physical Space			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**

On special occasions computer labs or classrooms are transformed into collaborative spaces and project work areas for face-to-face and/or virtual collaboration among students and teachers, or to be used as exhibition spaces	Occasionally computer labs or classrooms are transformed into collaborative spaces and project work areas for face-to-face and/or virtual collaboration among students and teachers, or to be used as exhibition spaces	Frequently computer labs or classrooms are transformed into collaborative spaces and project work areas for face-to-face and/or virtual collaboration among students and teachers, or to be used as exhibition spaces; may include a STEM lab	One or more facilities or spaces are available specifically for students to collaborate and do project work; the spaces can be used for face-to-face and/or virtual collaboration among students and teachers; they can also be used as exhibition spaces; may include a STEM lab
School Narrative:			
Link Evidence:			
Reviewer Comments 1.4:			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
2) Connections to effective in -and out-of-school STEM programs **Key Element 2.1 STEM Network**			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
School/program is seeking to establish partnerships with other schools, communities, postsecondary institutions, and businesses to identify solutions for building a quality STEM school/program	School/program engages with other schools, communities, postsecondary institutions, and businesses to identify solutions for executing a quality STEM school/program	School/program has documented partnerships with other schools, communities, postsecondary institutions, and businesses to identify solutions for executing a quality STEM school/program	School/program has partnerships with other schools, communities, postsecondary institutions, and businesses to identify solutions for executing a quality STEM school/ program; partnerships are purposeful, mutually beneficial, monitored, and evaluated
School Narrative:			
Link Evidence:			
Reviewer Comments 2.1 :			**Reviewers Assessment (M, P, D, E):**

STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
2) Connections to effective in -and out-of-school STEM programs **Key Element 2.2 Students and STEM Professionals**			**Check Your Schools Self-Assessment** ☐ = Model ☐ = Prepared ☐ = Developing ☐ = Early
Early	**Developing**	**Prepared**	**Model**
Leaders are creating plans to provide opportunities for students to meet STEM professionals and/or to experience professional STEM work environments during and/or outside school[2]	Direct experiences with STEM professionals, professional STEM work environments, and/or practical applications of STEM content during and/or outside school[2] are available to students at least 2 times throughout the year	Direct experiences with STEM professionals, professional STEM work environments, and/or practical applications of STEM content during and/or outside school[2] are available to students at least 4 times throughout the year	Direct experiences with STEM professionals, professional STEM work environments, and/or practical applications of STEM content during and/or outside school[2] are available to students approximately month
[2] For example, presentations or workshops, field trips, clubs, competitions, study trips, and summer/afterschool/weekend programs taught by STEM teachers and/or industry professionals			
School Narrative:			
Link Evidence:			
Reviewer Comments 2.2 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
2) Connections to effective in -and out-of-school STEM programs **Key Element 2.3 Research and Development**			**Check Your Schools Self-Assessment** ☐ = Model ☐ = Prepared ☐ = Developing ☐ = Early
Early	**Developing**	**Prepared**	**Model**
On an annual basis school/program leaders and other STEM teachers share with each other research and information on best practices related to their STEM program goals	On a semiannual basis school/program leaders and other STEM teachers share with each other research and information on best practices related to their STEM program goals	On a quarterly basis school/program leaders and other STEM teachers share with each other research and best practices related to their STEM program goals	On a monthly basis school/program leaders and other STEM teachers share with each other research and best practices related to their STEM program goals

School Narrative:			
Link Evidence:			
Reviewer Comments 2.3 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
3) Integration of technology and virtual learning **Key Element 3.1** Instructional Technology for STEM			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
Technology tools relevant to the STEM program have been identified[3]	Technology tools relevant to the STEM program are available to STEM teachers and students;[3] up to 50% of students and teachers are proficient in these technology tools	Technology tools relevant to the STEM program are being used by most STEM teachers and students;[3] 50-75% of students and teachers are proficient in common technology tools	Technology tools relevant to the STEM program are being used by almost all STEM teachers and students;[3] more than 75% of students and teachers are proficient in common technology tools
[3] For example, spreadsheet applications in biology, robotics in programming, design software in engineering, or calculators in math			
School Narrative:			
Link Evidence:			
Reviewer Comments 3.1 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
3) Integration of technology and virtual learning **Key Element** 3.2 Instructional Technology Resources for STEM			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**

STEM teachers rarely receive information regarding computer-based and/or online instructional resources for STEM aligned to the NC Essential Standards for Technology (e.g. links to instructional technology tools, articles about effective use of instructional technology, meetings with peers focused on instructional technology, etc.)	STEM teachers annually receive information regarding computer-based and/or online instructional resources for STEM aligned to the NC Essential Standards for Technology (e.g. links to instructional technology tools, articles about effective use of instructional technology, meetings with peers focused on instructional technology, etc.)	STEM teachers semiannually receive information regarding computer-based and/or online instructional resources for STEM aligned to the NC Essential Standards for Technology (e.g. links to instructional technology tools, articles about effective use of instructional technology, meetings with peers focused on instructional technology, etc.)	STEM teachers monthly receive information regarding computer-based and/or online instructional resources for STEM aligned to the NC Essential Standards for Technology (e.g. links to instructional technology tools, articles about effective use of instructional technology, meetings with peers focused on instructional technology, etc.)
School Narrative:			
Link Evidence:			
Reviewer Comments 3.2:			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
3) Integration of technology and virtual learning **Key Element** 3.3 Computer and Web-based Technology			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
STEM teachers occasionally use a few computer-based, online, mobile, virtual, and/or other technology tools to support instruction	STEM teachers weekly use computer-based, online, mobile, virtual, and/or other technology tools to support instruction	STEM teachers daily use computer-based, online, mobile, virtual, and/or other technology tools, as appropriate, to support instruction; the technology is often in the hands of students	STEM teachers seamlessly integrate computer-based, online, mobile, virtual, and/or other technology tools are into instruction; the technology is consistently in the hands of students
School Narrative:			
Link Evidence:			
Reviewer Comments 3.3 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			

3) **Integration of technology and virtual learning** **Key Element** 3.4 Tech Support			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
STEM teachers have limited access to maintenance support for instructional technology; IT equipment is regularly inoperable for extended periods of time	STEM teachers occasionally have access to maintenance support for instructional technology; IT equipment is occasionally inoperable for extended periods of time	STEM teachers have regular access to maintenance support for instructional technology; IT equipment is rarely inoperable for extended periods of time	STEM teachers and students have on-demand access to maintenance support instructional technology; IT equipment is rarely inoperable for extended periods of time
School Narrative:			
Link Evidence:			
Reviewer Comments 3.4 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
4) **Authentic assessment and exhibition of STEM skills** **Key Element 4.1** Authentic Assessments			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
STEM core and elective teachers are encouraged and supported to use multiple indicators of student success, including knowledge- and performance-based assessments (projects, portfolios, etc.)	As many as 50% of STEM core and elective teachers use multiple indicators of student success, including knowledge- and performance-based assessments (projects, portfolios, etc.)	50-75% of STEM core and elective teachers use multiple indicators of student success, including knowledge- and performance-based assessments (projects, portfolios, etc.) multiple times during the school year	Over 75% of STEM core and elective teachers regularly use multiple indicators of success, including knowledge- and performance-based assessments (projects, portfolios, etc.)
School Narrative:			
Link Evidence:			

Reviewer Comments 4.1 :			Reviewers Assessment (M, P, D, E):
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
4) Authentic assessment and exhibition of STEM skills **Key Element 4.2** Teachers Collaboratively Develop Assessments			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
Twice a year STEM teachers share assessment strategies	Quarterly STEM teachers share assessment strategies; they occasionally co-create measures of student success and examine and reflect on student work	STEM teachers collaborate at least monthly to reflect on student work, to discuss strategies for using the results to inform instruction, and to co-create various measures of student success	STEM teachers collaborate at least biweekly to reflect on student work, to discuss strategies for using the results to inform instruction, and to co-create various measures of student success
School Narrative:			
Link Evidence:			
Reviewer Comments 4.2 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
4) Authentic assessment and exhibition of STEM skills **Key Element** 4.3 Celebrate STEM Work			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
Students, teachers and administrators annually celebrate high-quality student work in STEM	Students, teachers and administrators celebrate high-quality student work in STEM with semiannual on-site and online exhibits	Students, teachers and administrators celebrate high-quality student work in STEM with quarterly on-site and online exhibits	Students, teachers and administrators celebrate high-quality student work in STEM through on-going student exhibits on-site, online and/or in state and national forums

School Narrative:			
Link Evidence:			
Reviewer Comments 4.3 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
4) Authentic assessment and exhibition of STEM skills **Key Element** 4.4 Culture of Innovation			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
Program leadership annually honors and encourages innovation in STEM among students	Program leadership semiannually honors and encourages innovation in STEM among students	Program leadership and program participants quarterly honor and encourage innovation in STEM among students	Program culture consistently honors, encourages and incentivizes innovation in STEM among students
School Narrative:			
Link Evidence:			
Reviewer Comments 4.4 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
5) Professional development on integrated STM curriculum, community/industry partnerships and postsecondary education connections **Key Element** 5.1 Individualized Professional Development PD			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
STEM teachers participate in large group professional development sessions that introduce novice STEM teaching	STEM teachers participate in large group professional development sessions focusing on critical STEM teaching	STEM teachers have identified unique professional development goals and tailor as much as 25% of their STEM	STEM teachers have identified unique professional development goals and tailor at least 50% of their STEM

skills	skills – may include strategies for inquiry-based instruction, for integrating STEM, or information on cutting edge content	professional development activities to meet their individual, professional needs – may include strategies for inquiry-based instruction, for integrating STEM, or information on cutting edge content	professional development activities to meet their individual needs – may include strategies for inquiry-based instruction, for integrating STEM, or information on cutting edge content
School Narrative:			
Link Evidence:			
Reviewer Comments 5.1 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
5) Professional development on integrated STM curriculum, community/industry partnerships and postsecondary education connections **Key Element** 5.2 Job-embedded PD			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
A job-embedded or practice-based approach to professional development [4] is used twice during the school year for STEM teachers	A job-embedded or practice-based approach to professional development[4] is used quarterly during the school year for STEM teachers	A job-embedded or practice-based approach to professional development[4] is used monthly during the school year for STEM teachers	A job embedded or practice-based approach to professional development[4] is used multiple times a month for STEM teachers
[4] Job-embedded professional development includes action research, peer observation, critical friends feedback, curriculum alignment, coaching, lesson study, or problem-solving			
School Narrative:			
Link Evidence:			
Reviewer Comments 5.2 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			

5) Professional development on integrated STM curriculum, community/industry partnerships and postsecondary education connections **Key Element** 5.3: Specific to Teachers and Students			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
Professional development activities for STEM teachers focus on standardized, scripted teaching strategies	On an annual basis professional development activities for STEM teachers focus on strategies for teaching specific content to specific types of learners [5]	On a quarterly basis professional development activities for STEM teachers focus on strategies for teaching specific content to specific types of learners[5]	Professional development activities for STEM teachers that focus on strategies for teaching specific content to specific types of learners[5] are frequently available
[5] Specific by content area and grade-level, and for either high-performing, low-performing, average-performing, English as Second Language, or Exceptional Children, etc.			
School Narrative:			
Link Evidence:			
Reviewer Comments 5.3 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
5) Professional development on integrated STM curriculum, community/industry partnerships and postsecondary education connections **Key Element** 5.4 Frequency of PD			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
STEM teachers participate in 10-20 hours per year of STEM-related professional development which addresses integrated content, community/industry partnerships, connections with postsecondary education, pedagogy, and/or digital learning	STEM teachers participate in 20-25 hours per year of STEM-related professional development which addresses integrated content, community/industry partnerships, connections with postsecondary education, pedagogy, and/or digital learning	STEM teachers participate in 25-30 hours per year of STEM-related professional development which addresses integrated content, community/industry partnerships, connections with postsecondary education, pedagogy, and/or digital learning	STEM teachers participate in 30 or more hours per year of STEM-related professional development which addresses integrated content, community/industry partnerships, connections with postsecondary education, pedagogy, and/or digital learning
School Narrative:			

Link Evidence:			
Reviewer Comments 5.4 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
6) Outreach, support and focus on underserved, especially females, minorities, and economically disadvantaged **Key Element** 6.1 Culture of Inquiry			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
A few school/program leaders have articulated what a culture of inquiry and creativity looks like as it relates to STEM, emphasizing the inclusion of all students in the culture	A core group of school/program participants maintain a culture of inquiry and creativity as it relates to STEM, and emphasize the inclusion of all students in the culture	A culture of inquiry and creativity exists throughout a majority of participants in the STEM school/program and emphasizes the inclusion of all students in the culture	A culture of inquiry and creativity exists between and among the STEM school/program students, teachers and administrators and emphasizes the inclusion of all students in the culture
School Narrative:			
Link Evidence:			
Reviewer Comments 6.1:			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Integrated Science, Technology, Engineering, and Mathematics (STEM) curriculum, aligned with state, national, international, and industry standard			
6) Outreach, support and focus on underserved, especially females, minorities, and economically disadvantaged **Key Element** 6.2 Recognize Underrepresented Students			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
No clear guidelines and/or practices explicitly focus on increasing long-term	1 guideline and/or practice focuses on increasing long-term participation by	At least 2 guidelines and/or practices focus on increasing long-term	Several guidelines and/or practices focus on increasing long-term

participation by students from underrepresented groups[1] in the STEM education pipeline	students from underrepresented groups[6] in the STEM education pipeline	participation by students from underrepresented groups[6] in the STEM education pipeline	participation by students from underrepresented groups[6] in the STEM education pipeline

[6] In North Carolina and nationally groups of students underrepresented in stages of the education and workforce pipeline include female students, students of color, and students from low socio-economic backgrounds

School Narrative:

Link Evidence:

Reviewer Comments 6.2 :	**Reviewers Assessment (M, P, D, E):**

STEM Principle: On-going community and industry engagement

7) A communicated STEM plan is adopted across education, communities, and businesses **Key Element** 7.1 STEM Program Plan	**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**

Early	Developing	Prepared	Model
Program leaders have created a basic STEM program plan[7] in which actions toward 1-4 *STEM Attributes* are outlined	Program leaders have created a detailed STEM program plan[7] grounded in research and in which actions toward 5-10 *STEM Attributes* are outlined	At least 50% or more of a STEM Leadership Team [8] is formed and has created a STEM program plan[7] that is grounded in research, aligned with school and/or school-system strategic plans, focused on student participation in the STEM pipeline [9], and outlines action toward 11 *STEM Attributes*	A fully-formed STEM Leadership Team[8] has led stakeholders in a collaborative design process to create a STEM program plan[7] that is aligned with school and/or school-system strategic plans, focused on student participation in the STEM pipeline[9], and demonstrates evidence of 11 *STEM Attributes*

[7] A school- or district-level STEM plan which already exists, including detailed sections in a School Improvement Plan or a 5 Year Plan, may be substituted

[8] A fully-formed STEM Leadership Team is at the school-level, and includes at least 1 or more representatives of the following groups: students, teachers, administrators, community college staff, college or university staff, business persons (at least one person for each career pathway, if pathways are a focus), community leaders, and parents

[9] This includes student participation in any identified STEM career pathways/clusters

School Narrative:

Link Evidence:			
Reviewer Comments 7.1 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: On-going community and industry engagement			
7) A communicated STEM plan is adopted across education, communities, and businesses **Key Element** 7.2 Communicate STEM Program Plan			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
Program leaders' communication of the STEM program plan garners minimal participation and buy-in from STEM teachers and key stakeholders	Program leaders' annual communication of the STEM program plan develops some participation and buy-in from STEM teachers and key stakeholders	Program leaders' semi-annual communication of the STEM program plan develops participation and buy-in from STEM teachers and key stakeholders	Program leaders' quarterly communication of the STEM program plan secures participation and buy-in from STEM teachers and key stakeholders
School Narrative:			
Link Evidence:			
Reviewer Comments 7.2 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: On-going community and industry engagement			
7) A communicated STEM plan is adopted across education, communities, and businesses **Key Element** 7.3 Program Data			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
A variety of school/program-level student data on STEM performance (from test scores to work samples) is available annually to	A variety of school/program-level student data on STEM performance (from test scores to work samples) is available semiannually	A variety of school/program-level student data on STEM performance (from test scores to work samples) is available quarterly to	A variety of school/program-level student data on STEM performance (from test scores to work samples) is available monthly to

administrators and teachers and is used to inform decisions	to administrators and teachers, and is used to inform instructional and programmatic decisions	administrators and teachers, and is used to inform instructional and programmatic decisions throughout the year	administrators and teachers, and is used to inform instructional and programmatic decisions throughout the year
School Narrative:			
Link Evidence:			
Reviewer Comments 7.3 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: On-going community and industry engagement			
7) A communicated STEM plan is adopted across education, communities, and businesses **Key Element** 7.4 Resource Allocation			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
Limited discretionary funds or other resources are allocated for implementation of STEM strategies	Discretionary funds or other resources are allocated to advance implementation of some strategies outlined in the STEM Program Plan	Discretionary funds or other resources are allocated to advance implementation of most of the STEM strategies outlined in the STEM Program Plan and a sustainability plan is in place	Discretionary funds or other resources are allocated to advance implementation of all the strategies outlined in the STEM Program Plan and a sustainability plan is in place
School Narrative:			
Link Evidence:			
Reviewer Comments 7.4 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: On-going community and industry engagement			
8) STEM work-based learning experiences to increase interest and abilities in fields requiring STEM skills for each student and teacher			**Check Your Schools Self-Assessment**

Key Element 8.1 Learning Connected to Industry			☐ = Model ☐ = Prepared ☐ = Developing ☐ = Early
Early	**Developing**	**Prepared**	**Model**
Program leaders are researching and planning in-school learning opportunities for students on content that is directly connected to current work in STEM-related industries	1-2 in-school learning opportunities (projects, activities, etc.) for all students focus on content directly connected to current work in STEM-related industries	Several in-school learning opportunities (projects, activities, etc.) for all students focus on content directly connected to current work in STEM-related industries	In-school learning opportunities (projects, activities, etc.) for all students frequently focus on content directly connected to current work in STEM-related industries
School Narrative:			
Link Evidence:			
Reviewer Comments 8.1 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: On-going community and industry engagement			
8) STEM work-based learning experiences to increase interest and abilities in fields requiring STEM skills for each student and teacher **Key Element** 8.2 Students Work in Teams			**Check Your Schools Self-Assessment** ☐ = Model ☐ = Prepared ☐ = Developing ☐ = Early
Early	**Developing**	**Prepared**	**Model**
Students rarely learn in teams to frame problems and test solutions that incorporate STEM content and/or apply STEM skills	Students occasionally learn in teams, with clearly defined individual and team expectations, to frame problems and test solutions that incorporate STEM content and/or apply STEM skills	Students weekly learn in teams, with clearly defined individual and team expectations, to frame STEM-related problems and test solutions that incorporate STEM content and/or apply STEM skills	Students regularly learn in teams, with clearly defined individual and team expectations, to frame problems and test solutions that incorporate STEM content and/or apply STEM skills
School Narrative:			
Link Evidence:			
Reviewer Comments 8.2 :			**Reviewers Assessment (M, P, D, E):**

STEM Principle: On-going community and industry engagement			
8) STEM work-based learning experiences to increase interest and abilities in fields requiring STEM skills for each student and teacher **Key Element** 8.3 Applied Learning for STEM Teachers			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
Very few STEM teachers ever participate in applied learning experiences[10] to increase their STEM content or career knowledge	At least 25-50% of STEM teachers participate every-other-year in at least 1 applied learning experience[10] to increase their STEM content or career knowledge	50-75% of STEM teachers participate every-other-year in at least one applied learning experience[10] to increase their STEM content or career knowledge	Over 75% of STEM teachers participate every-other-year in at least one applied learning experience[10] to increase their STEM content or career knowledge
[10] For example, study trips, fellowships, externships, etc.; durations of experiences could vary from 1 day to 1 year			
School Narrative:			
Link Evidence:			
Reviewer Comments 8.3 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: On-going community and industry engagement			
9) Business and community partnerships for mentorship, internship and other STEN opportunities that extend the classroom walls **Key Element** 9.1 Collaboration in Network of Schools			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
School/program leadership rarely participate in a network of schools or school leaders which addresses STEM education issues	School/program leadership participates semiannually in an active, online network of schools or school leaders which addresses STEM education issues	School/program leadership participates annually in a face-to-face or at least quarterly in an active, online network of schools or school leaders which addresses STEM education issues	School/program leadership participates annually in a face-to-face and at least quarterly in an active, online network of schools or school leaders which addresses STEM education issues
School Narrative:			

Link Evidence:			
Reviewer Comments 9.1 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: On-going community and industry engagement			
9) Business and community partnerships for mentorship, internship and other STEN opportunities that extend the classroom walls **Key Element** 9.2 Communication Tools			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
One-way communication tools, such as websites and newsletters, and/or two-way tools, like social media platforms, webinars, and meetings, are used annually to communicate internally and externally about STEM program activities	One-way communication tools, such as websites and newsletters, and/or two-way tools, like social media platforms, webinars, and meetings, are used semiannually to communicate internally and externally about STEM program activities	One-way communication tools, such as websites and newsletters, and/or two-way tools, like social media platforms, webinars, and meetings, are used quarterly to communicate internally and externally about STEM program activities	One-way communication tools, such as websites and newsletters, and/or two-way tools, like social media platforms, webinars, and meetings, are used monthly to communicate internally and externally about STEM program activities
School Narrative:			
Link Evidence:			
Reviewer Comments 9.2 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: On-going community and industry engagement			
9) Business and community partnerships for mentorship, internship and other STEN opportunities that extend the classroom walls **Key Element** 9.3 Stakeholders and Funding			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**

A team of community stakeholders has assembled to discuss STEM education solutions or to create funding streams	A team of community stakeholders assembles at least every 2 years to discuss STEM education solutions, including long-term funding; these individuals include the STEM Leadership Team, local business partners, and other STEM industry professionals	A team of community stakeholders assembles annually to continue building a STEM program and long-term funding streams; these individuals include the STEM Leadership Team, local business partners, and other STEM industry professionals	A team of community stakeholders assembles semiannually to maintain a STEM program and long-term funding streams; these individuals include the STEM Leadership Team, local business partners, and other STEM industry professionals
School Narrative:			
Link Evidence:			
Reviewer Comments 9.3 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Connections with postsecondary education			
10) Alignment of students career pathway with postsecondary STEM program(s) **Key Element** 10.1 Vertical Planning			**Check Your Schools Self-Assessment** ☐ **= Model** ☐ **= Prepared** ☐ **= Developing** ☐ **= Early**
Early	**Developing**	**Prepared**	**Model**
STEM teachers vertically plan within their school and across school-levels (elementary, middle and high) every 2 years	Once a year STEM teachers vertically plan within their school and across school-levels (elementary, middle and high)	At least twice a year STEM teachers vertically plan within their school; once a year STEM teachers plan across school-levels (elementary, middle and/or high)	At least twice a year STEM teachers vertically plan within schools; twice a year STEM teachers plan across school-levels (elementary, middle, and/or high)
School Narrative:			
Link Evidence:			
Reviewer Comments 10.1 :			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Connections with postsecondary education			
10) Alignment of students career pathway with postsecondary STEM program(s)			**Check Your Schools Self-Assessment**

Key Element 10.2 Information Sharing			☐ = **Model** ☐ = **Prepared** ☐ = **Developing** ☐ = **Early**
Early	**Developing**	**Prepared**	**Model**
Information about middle school, secondary, and/or postsecondary STEM programs and/or STEM career topics is shared annually among counselors (elementary schools may not have counselors) and some teachers	Information about middle school, secondary, and/or postsecondary STEM programs and/or STEM career topics is shared semiannually among counselors (elementary schools may not have counselors) and some teachers	Information about middle school, secondary, and/or postsecondary STEM programs and/or STEM career topics is shared quarterly among counselors (elementary schools may not have counselors) and some teachers	Information about middle school, secondary, and/or postsecondary STEM programs and/or STEM career topics is shared quarterly among counselors (elementary schools may not have counselors) and all teachers
School Narrative:			
Link Evidence:			
Reviewer Comments 10.2:			**Reviewers Assessment (M, P, D, E):**
STEM Principle: Connections with postsecondary education			
10) Alignment of students career pathway with postsecondary STEM program(s) **Key Element** 10.3 Career Exploration for Students			**Check Your Schools Self-Assessment** ☐ = **Model** ☐ = **Prepared** ☐ = **Developing** ☐ = **Early**
Early	**Developing**	**Prepared**	**Model**
Once a year students participate in career exploration activities which include opportunities to explore STEM careers and professional activities and skills (e.g. online activities, guidance from teachers, guidance from business partners, etc.)	Twice a year students participate in career exploration activities which include opportunities to explore STEM careers and professional activities and skills (e.g. online activities, guidance from teachers, guidance from business partners, etc.)	Quarterly students participate in career exploration activities which include opportunities to explore STEM careers, professional activities, and skills (e.g. online activities, guidance from teachers, guidance from business partners, etc.)	Monthly students explore careers, including STEM careers, professional activities, and skills, as a part of their coursework (e.g. online activities, guidance from teachers, guidance from business partners, etc.)
School Narrative:			
Link Evidence:			

Reviewer Comments 10.3 :	Reviewers Assessment (M, P, D, E):
End: Attribute Responses	

Signature Endorsement (Form F) located on next page

NC STEM Recognition Program Application
Signature Page

Form F

Partners: The list below represents partners who endorse this STEM School, Program, or Future-Ready School/Program of Achievement. The partners have collaborative involvement with the STEM School or Program.

School Name: _____ **School System Name:** _____

Signatures are required for the following:

Superintendent: _____ **Email:** _____

Signature: _____

Principal: _____ **Email:** _____

Signature: _____

Local School Board Member Name: _____ **Email:** _____
Signature: _____

School STEM Leader: _____ **Title:** _____
Signature: _____

Community College Representative Name: _____ **Email:** _____

Community College Name:

Signature: _____

College or University Representative Name: _____ **Email:** _____

College/University School Name: _____

Signature: _____

Business Representative Name: _____ **Email:** _____

Business Organization Name: _____

Signature: _____

Other Representative(s) Name: _____ **Email:** _____

Affiliation Name: _____

Signature: _____

5. Appendix

Directions: Submitting an Application

A. Review the NC STEM Attribute Implementation Rubric for your School or Program grade levels.
   - Elementary: http://www.ncpublicschools.org/docs/stem/schools/rubrics/elementary-school.pdf
   - Middle: http://www.ncpublicschools.org/docs/stem/schools/rubrics/middle-school.pdf
   - High: http://www.ncpublicschools.org/docs/stem/schools/rubrics/high-school.pdf

B. Insert your School and/or Program name **and** your School System name on the **Title page** of this document. **First Page**

C. Complete and submit the following documents:
   - Cover Page **(Form A) Page 8**
   - Contents Checklist **(Form B) Page 9**
     i. Indicate with a check mark that all components and forms have been included in the application.
   - Complete the Summary Self-Assessment Implementation Rubric for Schools/Programs Template **(Form C1) Page 10.**
     i. Self-assess your school or program Level of Achievement. (Mark on the Summary Self-Assessment Form by indicating with either an: **E**=Early, **D**=Developing, **P**=Prepared, or **M**=Model letter of your school or programs Levels of Achievement). Quality Indicators for all ten Attributes are to be at the "Prepared" or "Model" level of achievement to be recognized as a NC STEM School.

D. Present narrative responses for each of the Key Element which comprise the ten STEM Attributes for elementary and middle schools. **(Form D) Starting on Page 16**
   - Include evidences of your schools/programs innovative strategies and accomplishments relating to each Key Element. All Key Elements for each Attribute are to be addressed separately within the Attribute. Key Elements are to include electronic evidence as support documentation.
     i. Expectations:
        a. Provide data, use student and/or teacher results, and outcomes in your responses. For example: how has the programming and work your school employs impacted teaching and learning: include example(s) of specific outcomes. (It is suggested for schools to attend scheduled webinars for additional application guidance and process support)
        b. Use Calibri or Arial font and no smaller than (11) point font
        c. Electronic support documentation:
           a. Supporting artifact evidences may be exemplified as:
              - Links to documents, PowerPoints, or video clips (less than 2 minutes in length)
              - Describe artifact links with a short 1-2 sentence descriptor. For example: Students at our school tap into our community and industry experts in STEM-related fields to brainstorm solutions. Experiences extending outside the classroom are reflected in the following article located at: http://www.url.org
              - Each Key Element within the Attributes provides space to link supporting evidence.

E. Present an Executive Summary which may include but not limited to: size of school, teacher/student ratio, teachers per grade level, urban or rural, early college high school, regional or residential, comprehensive school, program or career cluster(s) or theme focus, economic and community focus, demographics, or include any other designations you school or staff have received **(Form D) Page 15**
F. Submit evidence of **one** STEM Best Practice **(Form D) Page 15**
   - Link distinguishing artifacts supporting your schools Best Practice
   - Use Calibri or Arial font and no smaller than (11) point font
G. Submit Signature page **(Form F) Page 37**
   - Obtain input from education, business, and community partners throughout the process of completing the application
   - Download Signature Page form to obtain each partners signature. Located on **Page 37**
   - Submit the signed Signature Page as a PDF as an attachment with the Application
H. Submit the application components including the Signature Page on or before 5:00 pm February 1, 2017
   - E-mail application to Tina Marcus: tina.marcus@dpi.nc.gov
   - Include in the subject line: *Application Submittal: 2017 NC STEM Recognition*

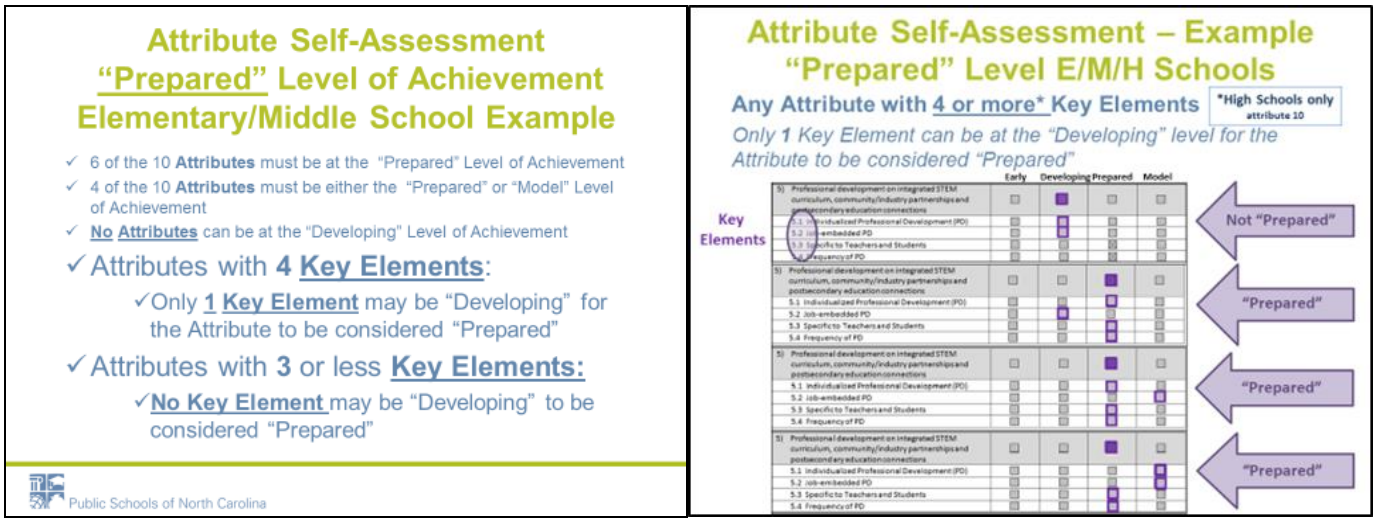
Achievement Level Criteria continued on next page

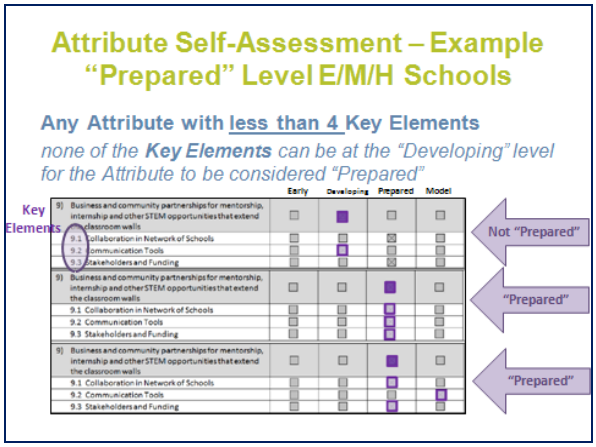
Achievement Level Criteria

"Prepared" Level of Achievement for Elementary and Middle Schools:

- To achieve "Prepared" Level of Achievement: six of the ten Attributes must be at the "Prepared" Level of Achievement; the remaining four of the ten Attributes must be at the "Prepared" or "Model" Level
- Attributes with 4 Key Elements:
  - Only 1 Key Element may be "Developing" for the Attribute to be considered "Prepared"
- Attributes with 3 or less Key Elements:
  - No Key Element may be "Developing" for the Attribute to be considered "Prepared"

Prepared Level of Achievement for Schools

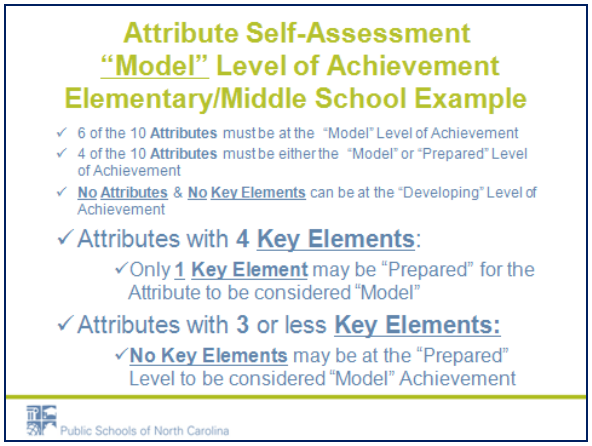


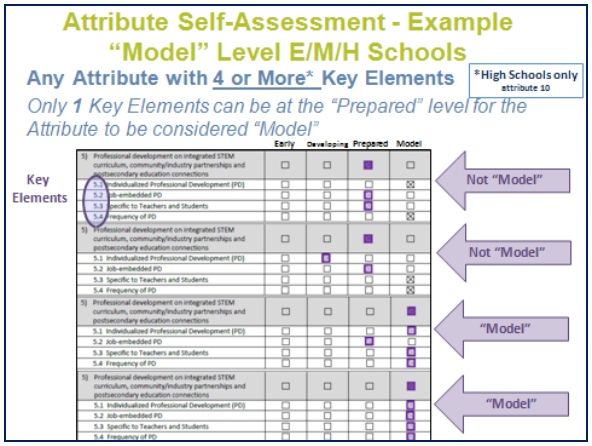


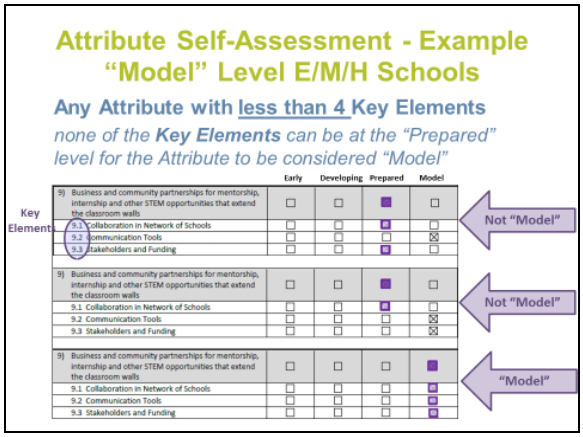
"Model" Level of Achievement for Elementary and Middle Schools:

- To achieve "Model" Level of Achievement: six of the ten Attributes must be at the "Model" Level of Achievement; the remaining four of the ten Attributes must be at the "Model" or "Prepared" Level
- No Attributes and no Key Elements can be at the Developing Level of Achievement
- Attributes with 4 Key Elements:
  - Only 1 Key Element may be "Prepared" for the Attribute to be considered "Model"
- Attributes with 3 or less Key Elements:
  - No Key Elements may be at the "Prepared" level to be considered a "Model" Level of Achievement

Model Level of Achievement for Schools







Review Process

Completed applications will be reviewed by a team of reviewers. Reviewers represent educators and business and industry partners from K-12 schools, Local Education Agencies, state agency consultants and coordinators, Community Colleges, Colleges and Universities, and STEM-related specialists.

1. Each application will be reviewed to assure it is complete and submitted according to the directions
2. Each self-assessing application at the "Prepared" or "Model" level of Achievement will be evaluated by a team of reviewers
3. Applications will be reviewed for consensus
4. Schools assessing at the "Prepared" or "Model" level of achievement will be recommended to receive a site visit

School Visit

Schools receiving an assessment level of "Prepared" or "Model" will receive a visit from the review team. Site visits will align to a school day schedule. Expectations and agenda format include:

- Feedback will be provided from review team members prior to site visit with a set of questions to be addressed. Schools are to provide additional tangible evidence if requested.

- On-site agenda to include, but not limited to, classroom visits, STEM problem/project-based work displays, and student focus groups, community/business/parent/teacher convenings. Highlight one STEM Best Practice and demonstrate the distinguished strategies of your schools high quality STEM programming
- Concluding the visit: schools leadership will be debriefed which will include summary observations of evidences of successes and opportunities for improvement
- Note: Schools receiving a site visit does not constitute they will receive honor as a STEM School of Distinction. Final recommendations will be determined concluding the site visit

Recommendation and School Notification

Following the site visit the review team will reconvene for consensus to determine final recommendations.

- Schools distinguished at the "Prepared" or "Model" Level of Achievements will be recommended to be presented before the State Superintendent and the North Carolina State Board of Education for STEM Recognition
- Notification: schools will be notified of their distinguished achievement in May 2016

State Board of Education

Distinguished schools will be honored at a North Carolina State Board of Education meeting.

Application Renewal

Schools and Programs receiving the STEM designation of "Prepared" or "Model" Level of Achievement; possess their status for three years. After three years schools are to reapply for STEM Recognition and consideration to maintain or advance their status.

Applied for STEM Recognition during school year	Received Status as a STEM School of Distinction	Application Renewal to maintain or advance status will be during school year	Application Release	Application Due
2013-14	November 2014	2017-18	September 2017	February 1, 2018
2014-15	November 2015	2018-19	September 2018	February 1, 2019
2015-16	June 2016	2019-2020	September 2019	February 1, 2020
2016-17	June 2017	2020-2021	September 2020	February 1, 2021
2017-18	June 2018	2021-2022	September 2021	February 1, 2022
2018-19	June 2019	2022-2023	September 2022	February 1, 2023
2019-2020	June 2020	2023-2024	September 2023	February 1, 2024

Time line examples:

- Schools having received recognition in November 2014 for the 2013-14 school year are to reapply during the 2017-2018 school year. Application release: September 2017; Application due: Thursday, February 1, 2018.
- Schools having received recognition in November 2015 for the 2014-15 school year are to reapply during the 2018-19 school year. Application release: September 2018; Application due: Friday, February 1, 2019.
- Schools receiving recognition in May 2016 for the 2015-16 school year are to reapply during the 2019-20 school year. Application release: September 2019; Application due: February 1, 2020.

Schools or Programs may reapply annually to improve and advance their current status when:

1. Elementary, Middle, or High Schools or Programs at the "Prepared" Level of Achievement status are pursuing to elevate their status to the "Model" Level of Achievement designation.
2. High Schools or Programs at the "Model" Level of Achievement status are pursuing to advance their status to the Future-Ready High School/Program of Achievement.
3. Future-Ready High School/Program of Achievement at the "Prepared" Level of Achievement status is pursuing to elevate their status to the STEM "Model" Level of Achievement designation.

Schools reapplying to advance their current status are to address the feedback provided by the reviewers.

Reapplying Requirements

Schools reapplying to advance their status submit an application that describes the schools STEM Best Practice. Include the following:

- Elaborating on previous strategies and projects
- Building upon current project work and STEM program
- Specifying planned visions of the STEM program moving forward
- Indicating project's accomplishments
- Validating objectives and outcomes (for example: include evidence of measured instruction, student learning and/or growth, data projections, growth expectations, etc.)
- Demonstrating the persistence of STEM activities and processes
- Providing three artifact evidences

Guidance to Schools

Information below was gleaned from recognized STEM Schools of Distinction, reviewers, and schools piloting the NC STEM Recognition Application Process. The goal of this application is to illustrate the strategies and qualities that demonstrates your school or program is a high quality STEM school or program.

NC STEM Recognition Process

Start planning <u>at minimum</u> a year in advance

- Plan to:
  - <u>Attend scheduled webinars for additional application guidance and process support</u>
  - Incorporate plans for improvement in school improvement plan
  - Involve business partners, community partners, and postsecondary partners early for input and collaborative involvement
  - Incorporate professional development early in the process: document attendees, dates, notes, action items, outcomes, etc.
  - Build in whole-staff, grade-level, and cross-curricular team discussions and collaborations
  - Encourage feeder schools to participate in the STEM Initiative
  - Share your schools progress, accomplishments, and successes with your partners throughout the application process

    - Connect with distinguished schools
    - Create and dedicate a webpage to collect and document outstanding supporting evidences

- Illustrate strategies that:
    - Include data or number examples (e.g. How many individuals? For how long? How frequently?)
    - Provide descriptive examples and links such as; but not limited to: unit/lesson plans, class samples, articles, photos, student/teacher reflections, or videos. (Video clips do not have to be polished, but rather examples that capture and best illustrate and align to the Attribute/Key Element you are demonstrating
    - Tag examples by defining characteristics of your school (e.g. urban, small or large, rural)
    - Share the story on "how" the strategies implemented within your program impact teaching, learning, and your community; include outcomes - what has changed as a result
    - Evidence of intentionality—evidence of a schools plan is extremely important to capture

- Application:
    - Plan 60-80 hours for completing/transposing narrative documentation and artifacts into the application
    - Create a team to divide the work of the application
    - Identify each Key Element of each Attribute separately
    - Develop one best practice - identify and describe only one best practice as part of the application
    - Select supporting evidences that best exemplifies and distinguishes your school
    - Use student results and outcomes in responses
    - Include multiple people in the process for peer review and spellcheck
    - Seek partners signature endorsements at least a month in advance of the application due date (Applications are incomplete without the signed PDF signature endorsement page attached with the application. Partial signatures also render the application incomplete.)

Benefits of NC STEM Recognition

Benefits of a STEM School, Program, or Future-Ready STEM High School/Program of Achievement

1. Prepare students to be career and college ready in STEM fields
2. Enable district, school, and teacher leadership that align with attributes of the Educator Effectiveness Model
3. Ensure effective communication of STEM Education among STEM programs in public schools, business/industry, community colleges, colleges/universities, and community members in the Economic Development Regions
4. Recognize the needs in the community in the public schools
5. Participate as part of the NC STEM Learning Network/ NCSTEM Center portal
    a. Access best practices - projects, practices, research technologies
    b. Convene virtual communities - on-line groups and professional development
    c. Collaborate with STEM partners - businesses, organizations, other states
6. Connect with STEMx, a nineteen states membership to leverage development resources to develop STEM initiatives of value to the partnership.

Acknowledgements

The following individuals and organizations are gratefully acknowledged for their commitment, dedication, and collaborative contribution as a member of the STEM Recognition Program application review team for school year 2015-16.

- Gretchen Baute, Teacher, Patriots Elementary School, Cabarrus County
- Steven Bookhart, Principal, Patriots Elementary School, Cabarrus County
- Rebecca Burris, Teacher, Green Central High School, Green County
- Lara Cabaniss, K-5 STEM Coach, Coltrane-Webb Elementary School, Cabarrus County
- Tiffany Cassell, Teacher, James Kenan High School, Duplin County
- Lacey Clark, Teacher, Antioch Elementary School, Union County
- Tani Caudle, Teacher, Davie County High STEM Center, Davie County
- Paul Domenico, Director of Curriculum Enhancement Programs, Wake County Public School System
- Brenda Eason, Teacher, Patriots Elementary School, Cabarrus County
- Malinda Faber, Research Associate, Friday Institute for Educational Innovation, North Carolina State University
- Beth Fine-Cole, Instructor, East Carolina University, Wayne County
- Andy Forsleff, K-12 Support, Wayne County
- Sarena Fuller, Instructional Coach, NC School of the Deaf, Burke County
- Jose Garcia, STEM Greene Central High School, Greene County
- Linnea Gibson, Magnet/STEM Coordinator, Conn Magnet Elementary School
- Angi Godard, Teacher Bear Grass Charter School, Martin County
- Christopher Gordon, Assistant Director, Center for Education in Science, Technology Engineering and Mathematics, UNC-Wilmington
- Bethany Gregory, STEM Coordinator, Central Cabarrus High School STEM Magnet Program, Cabarrus County
- Donna Hamilton, Assistant Principal, Coltrane-Webb Elementary School, Cabarrus County
- Beth Harris, STEM Consultant, Wake County
- Jinda Haynes, Director 9-12 Curriculum and Instruction, Davie County
- Forrest Hinton, Teacher, North Carolina School of Science and Mathematics, Durham, County
- Michael Holton, Principal, James Kenan High School, Duplin County
- Dr. Sam Houston, Director, North Carolina Science, Mathematics, Technology Education Center, Research Triangle Park

- Cayley Icenhower, K-5 STEM Coordinator, Hendersonville Elementary School, Henderson County
- Bridget Jones, K-12 STEM Director, Cabarrus County Schools
- Lisa Kenney, Teacher, Davie County High STEM Center, Davie County
- Tracey Kerstetter, K-5 Instruction, Antioch Elementary School, Union County
- Krystal Lee, Teacher, Riverside Middle School, Martin County
- Keith Maletta, Teacher, Central Cabarrus High School STEM Magnet Program, Cabarrus County
- Nicole Murray, K-12 STEM Coordinator Duplin County Schools, Duplin County
- Tracey Parker, STEM Coordinator, Hendersonville Elementary School, Henderson County
- Kia Powers, Bluford STEM Academy, Guilford County
- Steven Reece, Instructor, Wayne Community College, Wayne County
- Lisa Rhoades, Senior Program Associate, NC Science, Mathematics, and Technology Education, Research Triangle Park
- Lou Rose, K-5 Instruction, Tommy's Road Elementary, Wayne County
- Sherry Schliesser, Principal, Kingswood Montessori STEM Magnet School, Wake County
- Franklin Scott, Jr, Teacher, Riverside Middle School, Martin County
- Maria Smith, Teacher and STEM Coordinator, East Cary Middle School, Wake County
- Jill Staton, Teacher, Patriots Elementary School, Cabarrus County
- Julie Stern, Teacher, East Cary Middle School, Wake County
- Iris Stuart, 9-12 Instructor, NC School of the Deaf, Burke County
- Chris Thomas, Teacher, North Carolina School of Science and Mathematics, Durham, County
- Cason Treharn, Teacher, Antioch Elementary School, Union County
- Kathleen Weeks, Teacher, Immaculata K-8 School, Wake County
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- Jerome Williams, Project Manager, STEM Education, Warren County Schools
- Lisa Wilson, Teacher, Green Central High School, Green County
- Kim Wolfe, STEM Coordinator Teacher, North Duplin Jr Sr High School, Duplin County

Thank you for your participation.

Tina Marcus
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