

MIDDLE STATES ASSOCIATION OF COLLEGES AND SCHOOLS
COMMISSIONS ON ELEMENTARY AND SECONDARY SCHOOLS

AN INTRODUCTION TO THE
STEM

Science, Technology, Engineering, Mathematics
PROGRAM OF DISTINCTION

V. 2

3624 Market Street ♦ 2 West ♦ Philadelphia, PA 19104

Telephone: (267) 284-5000 ♦ FAX: (215) 662-0957

www.msa-cess.org

MSA
CESS

All rights reserved. The Middle States Association of Colleges and Schools, Commissions on Elementary and Secondary Schools, retain full copyright ownership, rights, and protection of all material contained in this document. This document is to be used by members and candidate members of the Association for accreditation purposes only. No part of this document may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval systems, for any other purposes without the written permission of the Middle States Commissions on Elementary and Secondary Schools.

INTRODUCTION TO THE MIDDLE STATES PROGRAMS OF DISTINCTION

Middle States *Programs of Distinction* recognize outstanding individual programs within MSA accredited and candidate schools and school systems. MSA offers schools and school systems the opportunity to assess the following areas of their curricula for excellence against internationally recognized Standards and Indicators of Quality in each field.

21st Century Skills
Early Childhood Education
Global Literacies
Music
Service Learning
School Counseling
STEM
Visual Arts
World Languages

If a school/system's program demonstrates that it meets the expectations of the Standards and Indicators of Quality at a consistently high level and exhibits the characteristics essential to serving as a high quality exemplar program for other schools, the *Program of Distinction* will be awarded. The expectations for earning recognition as a MSA *Program of Distinction* are very high. As such, a small percentage of programs will be determined eligible to receive the **award**.

Alternatively, schools and school systems can use the MSA *Program of Distinction* process as a tool for **program evaluation** that will yield comprehensive feedback for growth and improvement of the chosen area.

For **award or program evaluation**, the school/system will complete a rigorous self-assessment that is presented in a self study report of the school/system's program. The self-study report is sent to MSA for review and if all is determined to be in order, a specialist visitor or visitors will be assigned to visit the school to validate the program's self assessment and offer feedback. For schools/systems applying for an **award**, the specialist visitor(s) will make a recommendation to award or defer recognition of the program as a MSA *Program of Distinction*. For schools/systems engaging in **program evaluation**, a detailed feedback report including recommendations and resources will be provided to the school/system.

The specialist visits can be scheduled either in conjunction with a Team Visit for accreditation or reaccreditation, or independently at any time during the accreditation period.

Schools and school systems that have engaged in the MSA *Program of Distinction* evaluation process either for the purpose of seeking an award or for conducting a program evaluation have benefitted greatly from the actual experience as well as the outcome of the process. We encourage you to consider either of these approaches for realizing recognition and growth and improvement of your school or school system.

After review of this document, if you are interested in receiving the application for this *Program of Distinction*, please contact your staff liaison/Associate Director or Audra Moyer, amoyer@cess-msa.org.

WHAT IS THE STEM PROGRAM OF DISTINCTION?

We have designed our civilization based on science and technology and at the same time arranged things so that almost no one understands anything at all about science and technology. This is a clear prescription for disaster. [Carl Sagan](#)

To be economically successful and productive citizens, students need a strong understanding of science, technology, engineering, and mathematics (STEM). Current evidence shows that STEM skills are in high demand. In 1983, *A Nation at Risk* spoke to the underperformance of U.S. students on science and mathematics assessments in comparison to international students. A large number of young people in general and in particular low-income and minority youth, still lack foundational skills and knowledge in STEM (NAEP, 2011). STEM jobs are estimated to grow significantly over the next five years. It is predicted that without a focus on STEM preparation, employers will hire more skilled foreign workers or will consider relocating abroad, impacting on the U.S. economic security.

The goal of STEM education is to prepare students for postsecondary education in STEM career fields and to compete in the 21st century workforce. STEM is not only a focus on content related to the disciplines of science, technology, engineering, and mathematics. Context must be created for students to gain experience and practice in the process of critical thinking. Behaviors such as inquiry, reasoning, collaboration, and investigation must be integrated with STEM content to produce a proficient STEM student. The National Governors Association first addressed STEM in its 2007 report, *Building a Science, Technology Engineering and Math Agenda* with an overview of state-related challenges, opportunities, and actions. The 2011 update of this report underscores the continuing need for STEM initiatives and encourages STEM-focused schools to address this need.

According to the National Research Council (NRC), several studies have linked K-12 STEM education to continued scientific leadership and economic growth in the United States. In their 2011 committee report, *Successful K-12 STEM Education: Identifying Effective Approaches in Science, Technology, Engineering, and Mathematics*, NRC notes:

In many respects, effective practices for STEM are closely related to effective practices for education in general. This is not surprising. Still, it is important to pay close attention to these practices in STEM because the research suggests that some strategies are unique to STEM learning and some challenges particularly affect success in STEM.

The STEM Program of Distinction has been reviewed and endorsed enthusiastically by a number of practicing STEM. Schools/systems earning the Program of Distinction will serve as exemplary models for others to emulate as well as attain highly deserved recognition in

the form of external validation. Accredited Middle States schools/systems with quality programs at the elementary, middle, and/or secondary levels are invited to apply for the Program of Distinction.

Schools/systems should not hesitate to apply even if they believe they are aware that their STEM programs are in need of growth and improvement and do not meet the Program of Distinction's Criterion and Indicators at this time. They will find the Program of Distinction is an excellent self-assessment and program evaluation tool against which to measure their programs and a valuable tool and effective guide toward attaining the Program of Distinction in the future.

THE STEM PROGRAM OF DISTINCTION CRITERION

The Criterion: *The school shows a commitment to ensuring that all of its students graduate with a readiness for college pursuit of STEM related content and a 21st century STEM related career. This commitment is accepted, understood, and supported by the school’s governance, staff, students, parents, and the school’s community of stakeholders. The school demonstrates this commitment by 1) creating and implementing a plan for STEM literacy, 2) developing a rigorous, coherent STEM curriculum for all students with a strong emphasis on hands-on, experiential, design-based and learner-centered student experiences and activities, 3) aligning its expectations for students with the expectations of postsecondary institutions and entry into a STEM related career, 4) assessing student learning with nationally normed assessments anchored to the expectations of the school’s state assessments and those of postsecondary institutions; and 5) redesigning the school’s infrastructure to ensure academic excellence, better use of school time, increased professional development for the staff, smaller and more personal learning environments, appropriate facilities and equipment, and a collaborative working relationship with local higher education and STEM industries. In addition, the school provides data-informed student advisory services by 1) bolstering the role of the school counselor in the school’s STEM program, 2) ensuring continuous, coherent future planning in STEM for all students, and 3) providing all students with appropriate opportunities for mentorships and internships in STEM related career fields, where available. Further, the school provides multiple pathways to prepare students for success after graduation by 1) establishing work-based pathways that help students understand STEM career options and to develop in students the needed knowledge and skills to be successful in a STEM related career 2) developing dual enrollment programs that enable students to earn college credits in while still in high school, 3) integrating STEM specific content and instructional strategies into all programs and services.*

THE INDICATORS OF QUALITY

<i>Mission/Vision</i>	
STEM.1	The school/system and its community of stakeholders believe that all students can achieve expectations for STEM skills preparation at a level of excellence and can graduate with the knowledge and skills needed to complete college level STEM coursework and enter a 21 st century STEM related career.
STEM.2	The school/system educational program, student services, activities, and support systems reflect that belief.
STEM.3	The school/system educational program reflects current STEM skills for adult citizens.

<i>Facilities</i>	
STEM.4	The school/system facilities provide a physical environment based on ITEEA*

	<p>recommended standards that supports delivery of the STEM program, services, and activities, and the ability of students to achieve the levels of learning and performance expected of them.</p> <p><i>*International Technology and Engineering Educators Association</i></p> <p>Standard P-4: Technology program learning environments will facilitate technological literacy for all students.</p> <p>Provide learning environments that are designed to facilitate delivery of Standards of Technology Literacy and satisfy “Program Standards.”</p> <ul style="list-style-type: none"> • Provide learning environments that are safe, up-to-date, and adaptable. • Ensure that the number of students in a dedicated technology laboratory-classroom does not exceed its capacity. • Provide elementary school classrooms with adequate physical space for teaching technology. • Provide dedicated technology laboratory-classrooms in middle and high schools with a minimum allotment of 100 square feet per pupil, inclusive of safe ancillary space.
--	--

<i>School Climate and Organization</i>	
STEM.5	The school/system climate and organization provide the means and the environment for all students to achieve STEM related skills needed for success in postsecondary study and entry into a 21 st century career.
STEM.6	The leadership of the school/system and the professional staff has the knowledge, skills, and disposition to model STEM skills for their students.
STEM.7	The school/system is flexible in the scheduling of time for STEM instruction and learning.
STEM.8	Teachers are of the necessary number and have the qualifications to achieve the expectations and goals established by the school/system’s community for the STEM program.
STEM.9	Class size promotes and allows for the development of proficiency in STEM communication and inter and intrapersonal skills.
STEM.10	Students, teachers, counselors and administrators acknowledge and honor students’ histories and cultures.
STEM.11	Students confirm that their voices are heard, acknowledged, and respected within the school/system.
STEM.12	The school/system provides a program of professional development for all staff that is aligned with recognized STEM standards. The program promotes 1) rigorous content, 2) content integration, 3) interpreting and communicating information, 4) inquiry, 5) logical reasoning, 6) team collaboration, 7) systems thinking, and 8)

	strategic application of multiple technologies.
STEM.13	The school/system provides adequate time for the professional staff to plan and work together in and across content areas to ensure consistently well-planned and focused STEM instruction. Adults work collegially in a rich academic environment to deepen their own knowledge and improve their practice.

<i>Educational Program</i>	
STEM.14	All students receive and complete a rigorous, coherent program of study in all core academic areas: English, mathematics, science, social studies and world language. There is alignment and an emphasis on the integration of science, technology, engineering, and mathematics.
STEM.15	The school/system educational program reflects an effective continuum of STEM focused experiential activities which focus on: 1) exposing youth to a broad range of postsecondary STEM options; 2) building STEM content, skills and competencies; 3) making relevant connections between what is learned in the classroom and what is required for college and 21 st century career success; and 4) giving students the knowledge and skills needed to make informed decisions for viable postsecondary plans.
STEM.16	The STEM curriculum is aligned with current learning standards and is articulated horizontally and vertically.
STEM.17	The focus of the school/system curricula is on deeper learning for students. Opportunities are provided for students to identify and solve real-world STEM problems in a collaborative environment. Students experience the transfer and application of content knowledge and process skills to solve problems in new contexts.
STEM.18	Instructional approaches are design-oriented to encourage students to think in practical and useful ways about the systems around them and how they change over time.
STEM.19	The school/system STEM program provides students with ongoing opportunities to develop global mindedness and intercultural competency as well as learn about and appreciate different cultures.
STEM.20	STEM activities in the school/system curricula engage students' personal interests and challenge all students' abilities in both formal and informal settings.
STEM.21	The school/system teaching faculty uses a variety of instructional strategies that effectively promote student attainment of specific STEM related skills, such as such as inquiry, investigation, reasoning, collaboration, communication, and teamwork.
STEM.22	The school/system instructors deliver the STEM curriculum using current teaching and learning materials that are age and learner-appropriate and reflect technology innovation.
STEM.23	Effective and ethical use of technology is integrated into daily STEM instruction as a tool for teaching and learning.

STEM.24	Students have multiple opportunities to develop knowledge, skills, and expertise in STEM through transdisciplinary instruction.
STEM.25	The school/system STEM program provides students with opportunities to demonstrate voluntary service to their school, their communities and to the global community.
STEM.26	The school/system provides all students with pathways that help them learn and understand STEM career options and develop needed skills for entry into the 21 st century workforce.
STEM.27	The school/system STEM program includes meaningful incentives and work-based learning opportunities for all students throughout their high school years such as apprenticeships, work-study, and summer employment.
STEM.28	The school/system seeks and implements STEM internship and mentoring programs when appropriate and available.
STEM.29	The school/system provides students with opportunities for acquiring accelerated college credit.
STEM.30	The school/system establishes strong partnerships with parents, colleges and universities, employers, and local and global community organizations to enrich, guide, and support a rigorous STEM program.

<i>Assessment and Evidence of Student Learning</i>	
STEM.31	The school/system employs rigorous assessments to demonstrate students' deeper learning of STEM content.
STEM.32	The school/system teaching faculty uses a variety of appropriate and current research-based methods, including performance-based assessments, to assess student learning in the school's STEM curricula.
STEM.33	Students learn to assess their work and the work of their peers against rigorous STEM performance standards.
STEM.34	Assessments used by the school/system provide opportunities for students to demonstrate STEM competency in multiple ways.
STEM.35	The school/system STEM curricula provides students learning opportunities to <u>prioritize, plan, manage for results, and produce relevant, high quality products.</u>
STEM.36	Internal STEM assessments are aligned with internationally recognized academic content standards, the expectations of relevant national assessments, and the expectations of postsecondary institutions and industry.
STEM.37	Consistency in student learning within the STEM curricula is ensured by common practice in assessment and evaluation.
STEM.38	The results obtained from assessments of student learning are reviewed and used to identify changes needed to improve instructional practices in STEM.
STEM.39	The school/system collects post-graduate follow-up information to inform STEM curriculum, instruction and assessment.

<i>Student Services</i>	
STEM.40	Counselors, in cooperation with the staff, provide a program of continuous, coherent STEM postsecondary and career planning opportunities for all students.
STEM.41	The percentage of students participating in STEM programs is proportionate to other school programs. A recruitment plan is in place to engage non-traditional students of diverse academic backgrounds in STEM programs and activities with an emphasis on gender equity.
STEM.42	The counselors ensure that all students planning postsecondary study take the appropriate assessments, such as PSAT, SAT, ACT, IB, relevant national examinations and college placement examinations.
STEM.43	The school/system provides externships that allow teachers to spend time in the workplace to gain knowledge of STEM career preparation and expectations.
STEM.44	The school/system provides a program of counseling and advising that ensures all students have an on-going meaningful connection with a supportive adult.

<i>Student Life and Student Activities</i>	
STEM.45	The school/system provides students the opportunity to practice STEM related skills in age and developmentally appropriate co-curricular and extra-curricular activities in formal and informal learning environments outside the K-12 classroom, such as afterschool and summer community based programs, universities and other higher education entities, community colleges, and workforce and job training programs.
STEM.46	The students participate in a variety of experiences that enhance their knowledge of STEM and develop their intercultural competency.

<i>Information Resources</i>	
STEM.47	Information resources are appropriate, functional, and adequate in quantity to facilitate achieving the school's/system's mission and delivery of the STEM program.
STEM.48	Information resources are reviewed periodically for relevancy, currency, and alignment with the school's/system's STEM program. Members of the staff and students are provided with appropriate opportunities to offer input into the types, quality, and format of the information resources provided.
STEM.49	Appropriate instruction is offered to the students and the staff on the appropriate, ethical, and most effective uses of the information resources.
STEM.50	Information resources are appropriately supported with funding from the school's budget and maintained for ready access and use by students and the staff.

APPLYING FOR THE PROGRAM OF DISTINCTION

QUALIFICATIONS

The following qualifications must be met in order for a School/System to apply for the Program of Distinction:

- The School/System must be accredited by MSA-CESS or be a candidate for accreditation by MSA-CESS.
- If applying for the Program of Distinction independent of a current self-study and accreditation/reaccreditation process, the School/System must:
 - Demonstrate that it meets all of the appropriate Standards for Accreditation at the time of its last evaluation and/or
 - Provide evidence that it has addressed successfully all areas of the Standards identified for improvement through Stipulation or Accreditation Maintenance Reports.
- If applying for the Program of Distinction as a part of a current self-study and accreditation process in preparation for a Team Visit, the School/System will integrate the Program of Distinction application as an additional component of the self-study and Team Visit.

GUIDELINES

The following guidelines are offered to Schools/Systems wishing to apply for the Program of Distinction:

Schools/systems:

- Must be a candidate or accredited member in good standing of MSA-CESS or an Alliance partner.
- Must be willing to accept an on-site Team Visit to validate the Program of Distinction application. If the School/System is seeking the Program of Distinction as a part of a Team Visit or Mid-Term Review, the School/System must be willing to accept at least one additional team member to focus on the Program of Distinction Application.
- Must give MSA-CESS notice of its intention to apply for the Program of Distinction at least six months prior to the date of the expected evaluation visit.
- Must meet all of the appropriate Standards for Accreditation in order to be awarded the Program of Distinction. Schools/Systems that are “Accredited with Stipulations” are eligible for the Program of Distinction.
- May seek the Program of Distinction at any time.
- May seek the Program of Distinction as a program evaluation for an additional fee.

If a Schools/System is receiving a Program of Distinction Visitor as a part of a Team Visit, the Program of Distinction Visitor will integrate his/her activities into the three and one-half-day schedule of the Team Visit. If a School/System is receiving a Program of Distinction Visitor as a part of a Mid-Term Review or independent of any other accreditation activities, the Program of Distinction Visitor(s) will develop a separate schedule of meetings specifically targeted on validation of the findings in the School's/System's Application for the Program of Distinction. This may require an additional day extension to the typical one-day Mid-Term Review.

The decisions that the Visitor will recommend are either to award the Program of Distinction or to deny awarding the Program of Distinction. When the awarding of the Program of Distinction is denied, schools/systems may reapply at a later date by submitting a new Application for the Program of Distinction.

The term/length of time for the award of the Program of Distinction will be made to coincide with the School/System's term of accreditation. When the Program of Distinction has been awarded, it is expected that renewal of the Program of Distinction, if desired, will be tied to the renewal of the School/System's accreditation.

ACTIVITY	DEADLINE FOR SUBMISSION
Submission of the Program of Distinction Commitment Form	At least six months prior to the intended date of visit
Submission of the completed Application for the Program of Distinction	At least two months prior to the date of the intended visit

*Schools/Systems may also complete the application for the purpose of a program evaluation and not for seeking the Program of Distinction. Full details will follow in a separate section.

STEPS TO EARNING AND MAINTAINING THE PROGRAM OF DISTINCTION

- 1) The School/System completes the Program of Distinction application, either as a part of its current self-study process or separately as a "stand-alone" application.
- 2) The School/System submits the Program of Distinction Commitment Form.
- 3) The School/System submits the Application for the Program of Distinction to MSA-CESS along with payment.
- 4) The staff coordinator for the Program of Distinction evaluates the Application to determine how well it meets the Criterion and Indicators of Quality and the school/system's readiness to host the Visitor. The staff coordinator will provide feedback to the school/system and a recommendation regarding whether or not a Visitor should be appointed at this time.

- 5) The Visitor(s) appointed by MSA to evaluate the School/System's application have substantial educational, and/or administrative experience. The number of visitors will vary depending upon the comprehensiveness of the School/System's initiatives in the Program of Distinction area, the size of School/System, etc.
- 6) Upon the completion of the visit, the Visitor submits the Report and a recommendation for award or denial of the Program of Distinction. Upon the receipt of the Visitor's report, the staff Coordinator develops an analysis of the Visitor's report and makes a staff recommendation on the award of the Program of Distinction.
- 7) An MSA Accreditation Advisory Committee reviews the Visitor's report and the School/System's application and determines its recommendation on the award of the Program of Distinction. The Middle States Commissions' Membership and Accreditation Committees review the recommendations of staff and the accreditation advisory committee and make a recommendation to the full Commissions.
- 8) The Commissions make a final decision on the award of the Program of Distinction. MSA determines the term of the Program of Distinction, which will generally coincide with the school's/system's normal accreditation term.
- 9) The school/system ensures that all future accreditation maintenance activities (e.g. Periodic Reviews, Mid-Term Reviews Visits, etc.) will examine progress on recommendations outlined in the school/system's Program of Distinction application and the Visitor's report.

The Middle States Commissions on Elementary and Secondary Schools meet twice a year (typically in April and October) to make accreditation decisions. It is at that time that decisions regarding the award of the Program of Distinction will be made although; the School/System will be informed of the recommendation of the Visitor prior to their departure.

FREQUENTLY ASKED QUESTIONS

Our school/system does not have STEM as part of its formal curriculum? Is this required?

Because STEM is a transdisciplinary curriculum, students must have the opportunity to not just learn about science, technology, engineering and mathematics, but they must also have the opportunity to express or demonstrate their creativity, knowledge, and skills as part of their education or as a culminating experience in the learning process. This is also essential for the establishment and application of accurate and multiple assessment strategies of student knowledge and growth. Therefore, the school/system should provide a balance in its STEM offerings. These opportunities may also include organized after school activities.

Is it more difficult for an overseas school/system with a STEM program to qualify for this Program of Distinction? Do STEM magnet schools automatically qualify for this Program of Distinction?

While a number of schools/systems may be able to qualify for the Program of Distinction, it is not automatically conferred to any schools/systems in the United States or abroad. The Commissions believe strongly that before any school/system deserving of the Program of Distinction it should first conduct a self-assessment of the degree to which it meets the Program of Distinction's Criterion and Indicators of Quality. If the results of the self-assessment indicate that the school/system believe its STEM programs meet the Program of Distinction's Criterion and Indicators of Quality, it should proceed to completing and submitting the Application for the STEM Program of Distinction.

Our STEM program does not have a formal or standardized assessment program. How can we show trends in student performance?

Although it is of primary importance to have a picture of student performance against recognized STEM standards, the program may be able to document student results in other ways if state, national, and/or international standards and/or tests are not available. For example, exams that assess knowledge, theory, and application at the appropriate grade and difficulty levels could be valid measures. However, the exams must be consistent and parallel acceptable standards and expectations. When conducting or developing any type of assessment that will measure student performance trends, it is important to know and establish the criteria that are used to determine whether students meet, exceed or do not meet expectations of the course, grade level or program and that these expectations are clearly identified and maintained throughout the evaluation process.

Do all curriculum guides in the program have to be up-to-date?

Ideally, curriculum guides should be the "guide" for current best practices in STEM education and, therefore, should be revised or rewritten in a timely manner. However, the review cycles for the curriculum and performance materials do not always allow for every guide in a program to be perfectly updated. In this case, three factors will determine eligibility for the STEM Program of Distinction:

1. There is ample evidence that the guides reflect the goals and purpose of the current program and support and reflect the school's/system's mission and belief statements.
2. A plan for how the guides will be revised or rewritten and a scheduled review cycle are in place.
3. There is ample evidence that the instructional materials and the instructional strategies and techniques being employed reflect current external guides and standards that are recognized by the profession for students at the appropriate grade level(s).

Do all teachers in the program have to be certificated?

All teachers in the program should be certified in STEM instruction at the appropriate grade level or should be working toward meeting the requirements to teach as required by the

school, school system or civil authority of the jurisdiction(s) in which the school/system operates. It is also expected that the mentoring of new teachers and professional development for all teachers STEM are systematic and consistent with program expectations and goals.

USING THE APPLICATION FOR A PROGRAM EVALUATION

The following guidelines are offered to schools wishing to use the Program of Distinction ONLY as a Program Evaluation tool:

- Schools/Systems may seek the Program of Distinction as a program evaluation tool at any time.
- Schools/Systems seeking to use the Program of Distinction as a formal program evaluation tool must be willing to accept an onsite visit to validate the findings of the self-study. If the school/system is seeking the program evaluation as a part of a team visit or Mid-Term review, the School/System must be willing to accept at least one additional team member to focus on the components of the program.
- If a school is receiving a Visitor as a part of a team visit, the Visitor shall integrate his/her activities into the 3 and ½ day schedule of the team. If a school is receiving a Visitor as a part of a Mid-Term Review or independent of any other accreditation activities, the Visitor shall develop a separate schedule of meetings specifically targeted on validation of the findings in the school’s self-study of the program. This may require an additional day extension to the typical one-day Mid-Term Review.
- Schools must give MSA-CESS notice of its intention to apply for the Program Evaluation at least six months prior to the date of the expected evaluation visit.
- Schools seeking a Program Evaluation independent of any other MSA-CESS accreditation activities shall adhere to the following timelines:

ACTIVITY	DEADLINE FOR SUBMISSION
Submission of the Program of Distinction/Evaluation Commitment Form	At least six months prior to the intended date of visit
Submission of the completed Application for the Program of Distinction/Evaluation	At least two months prior to the date of the intended visit

PREPARING FOR AND HOSTING THE VISITOR(S)

When the application from the school/system has been received and reviewed by the Middle States staff, a visitor(s) will be assigned, and the length of the visit will be determined based upon the size and scope of the STEM program and the type of visit. The visit may be arranged as a “stand alone” or in conjunction with a regularly scheduled accreditation visit. The visitor(s) will contact the school to arrange the details. The purpose of the visit will be to validate the application, ascertain the quality of the program Vis à Vis the Criterion and Indicators of Quality, and make a recommendation to award or deny the STEM Program of Distinction. A schedule will be developed by the visitor(s) and the STEM program liaison for the school/system that will include interviews, classroom observations, and review of materials and documents.

INTERVIEWS AND FOCUS GROUPS

The STEM Program of Distinction Visitor(s) will probably request to meet with the following individuals and groups:

- Board Member(s)
- Superintendent of Schools
- Director of Curriculum
- The Head(s) of School
- The Head(s) of the STEM Program
- STEM Steering Committee
- STEM Staff Members
- Guidance Counselors
- Technology Staff
- Students
- Parents
- Community members, representatives from partnerships, consultants and other stakeholders as appropriate

CLASSROOM OBSERVATIONS

Observations should be arranged so that the visitor(s) see as many of the program’s classes and as possible in the time allotted. If a school system is applying for more than one school, all schools being considered will be visited.

MATERIALS AND DOCUMENTS FOR REVIEW

It is recommended that the school/system has available a variety of evidence in support of its self study and application for the STEM Program of Distinction. Online documents and electronic versions including CDs and videos are welcome. The suggestions below offer a wide range of evidence that the school/system could provide for the visitor(s)' review during the visit:

- STEM curriculum guides and/or course outlines
- Program of Study (course offerings and descriptions)
- Sample units and/or lesson plans if not included in curriculum guides
- Samples of instructional assessment materials and assessment tools and/or criteria/standards
- Copies of programs from presentations
- Student Portfolios
- Documentation of partnerships, e.g., university collaborations, "sister school" relationships, and community connections for exhibitions
- Documentation of field trips and extended travel opportunities the school offers to STEM groups and individuals
- Documentation of co-curricular activities and events that celebrate and promote the school's STEM program
- Documentation of the communication of the goals, value and benefits of the STEM within the school/system, to parents and to the community
- Budget demonstrating resource allocations to the STEM program
- Goals of the program and any short and/or long range plans that have been developed or are currently being developed to attain them
- Documentation of recognition, grants and/or scholarships to the program, staff and/or students which have been awarded
- Documentation of competition results, e.g., local, regional, state, national and/or international contests

FEEDBACK FROM THE VISITORS

At the conclusion of the visit, the STEM Program of Distinction Visitor(s) will meet with the Head of School and Head of the STEM program or other key personnel as appropriate to offer feedback on the interviews, classroom observations, and review of materials and documents. A report of the visit that includes the Visitor(s)' recommendation to award or deny the STEM Program of Distinction will be forwarded to the Head of School within two months. The STEM Program of Distinction will be officially conferred after review of

the report and approval of the recommendation by the STEM Program of Distinction Review Committee and the MSA Commissions on Elementary and Secondary Schools.