ARRAY

GLOBAL EDUCATIONAL SERVICES

STEM

SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS

&

STEAM

SCIENCE, TECHNOLOGY, ENGINEERING, ARTS, AND MATHEMATICS

Certification Report

Institution Name

CERTIFICATION REPORT

The Certification Report is a combination of two reports—the institution self-study report and visit team site visit report. The purpose of these reports is to:

1. Conduct a self-study by the institution to determine the effectiveness of STEM/STEAM integration in the educational program.

2. Validate the completion and accuracy of the institution's self-study by an external visiting team and provide feedback to assist the institution in their STEM/STEAM efforts.

3. Verify that the institution meets the Array Global standards for STEM/STEAM integration.

Instructions for Self-Study

The steps the institution should take to prepare for the certification visit are:

STEP 1 CREATE A SELF-STUDY COMMITTEE

If possible, six months prior to the institution's certification visit, the institution should create a Self-Study Committee and include administration, parents, and representatives from each grade level. Responsibility for completing the different sections in this self-study should be divided among the team members. The self-study should represent the Self-Study Committee's collective work and findings; it should not be the work of one or two individuals.

STEP 2 CONDUCT THE SELF-STUDY

The Self-Study Committee reviews the indicators in each standard and gives a rating based on the rating framework. The Committee must be completely transparent in rating the institution to ensure that the self-study process is being followed.

The completed self-study will be submitted to the Visit Team Chair one-month prior to the certification visit.

STEP 3 GATHER ITEMS OF EVIDENCE

Evidence is documentation or items that substantiate the Self-Study Committee's rating for each indicator. The Committee will gather items of evidence for each indicator and organize them electronically in a separate folder for each standard. Items of evidence should be in English for

international schools and in the native language for national schools. The institution should ensure that the items of evidence are embedded into the institution program and used to provide a quality program. Items of evidence should not be simply copied and considered as adopted by the institution. The electronic folders containing items of evidence will be reviewed prior to and during the institution's full accreditation visit, but are also for the institution's ongoing use to aid in the institution's improvement process.

Items of evidence may apply to more than one indicator. In these instances, include the items of evidence for the first indicator and for other indicators, indicate where the items of evidence are first included.

All items of evidence will be submitted digitally (preferably through Google Drive or OneDrive) to the Visit Team Chair one-month prior to the full accreditation visit.

STEP 5 HOST THE SITE VISIT

The self-study, along with the items of evidence, will be used by the visit certification team to evaluate and validate the institution's self-study, and to assist in verifying whether the institution meets the Array Global standards for STEM/STEAM certification.

Self- Study Information

COMMITTEE (to be completed by the institution)	
COMMITTEE MEMBER: JOB TITLE:	
COMMITTEE MEMBER: JOB TITLE:	
COMMITTEE MEMBER: JOB TITLE:	
COMMITTEE MEMBER: JOB TITLE:	
COMMITTEE MEMBER: JOB TITLE:	

INSTITUTION DESCRIPTION (to be completed by the institution)
Provide a brief description of the institution including its history, number of students, strengths, weaknesses, etc.

Site Visit Information

VISIT TEAM (to be completed by the visit team)	
DATE OF SITE VISIT:	
VISIT TEAM CHAIR: JOB TITLE: EMAIL:	
VISIT TEAM MEMBER: JOB TITLE:	
VISIT TEAM MEMBER: JOB TITLE:	

Rating Framework

The rating framework is based on a four-point scale and is used to evaluate each indicator. These definitions are to be used to determine the correct rating for each indicator.

4 - EXEMPLARY	All components of the indicator are fully met and are fully integrated throughout the institution. The institution is exemplary in the indicator and goes above and beyond what is expected. The institution should be recognized for the exemplary work and receive a Commendation.
3 - ACCOMPLISHED	Most components of the indicator are mostly met and are fully integrated throughout the institution. The institution is accomplished in the indicator and meets the minimum requirement.
2 - DEVELOPING	Some components of the indicator are met. The institution is in the process of developing a plan to meet the expectations of the indicator.
1 - EXPLORATORY	Few or none of components of the indicator are met. The institution is exploring plan development to meet the expectations of the indicator. The institution will be required to make the indicator an Area for Continuous Improvement and report to Array Global on their progress.

Standard 1 Institution

The institution is well equipped to inaugurate and maintain a STEM/STEAM curriculum. Support of the staff and stakeholders help to assure the success of the program. All of the programs of the institution must recognize and include specific activities that embody the concepts of STEM/STEAM.

1.1 The institution has an established, widely promoted and advertised mission statement which supports STEM-focused learning outcomes.

SELF–STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
RATING: select rating	RATING: select rating
LIST ITEMS OF EVIDENCE: ☐ ☐ ☐	ITEMS OF EVIDENCE: ☐ ☐ ☐
COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

1.2 The institution administration supports STEM-focused learning outcomes by providing collaboration and professional development opportunities for teachers and staff members.

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RATING: select rating	RATING: select rating
LIST ITEMS OF EVIDENCE: ☐ ☐ ☐	ITEMS OF EVIDENCE: ☐ ☐ ☐
COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

1.3 The institution administration develops a master schedule which allows for STEM integration, promotes cross-curricular activities, project-based and hands-on learning experiences, and explicit STEM integration.

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RATING: select rating	RATING: select rating
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COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

1.4 The institution administration includes, within its short and long-term budget plan, allocated funding for STEM-focused programming.

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LIST ITEMS OF EVIDENCE: ☐ ☐ ☐	ITEMS OF EVIDENCE: ☐ ☐ ☐
COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

1.5 Institution level planning supports participation from all learners, including outreach for underrepresented groups (ex: females, students of underrepresented backgrounds, students of limited resources, students with language proficiency deficits).

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COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

1.6 STEAM: The institution supports and promotes the STEAM process with integration of the arts and humanities.

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Standard 2 Instruction

The STEM/STEAM program is unique in its design, curriculum, school-wide integration, and activities. STEM/STEAM must be in line with the institution's mission and the program must enhance that mission. Staff members must be trained and monitored in the STEM/STEAM design and teaching strategies.

2.1 The staff members are trained in and demonstrate support for STEM-focused learning outcomes.

SELF–STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
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2.2 A clear scope and sequence of STEM instruction is clearly outlined, which demonstrates vertical alignment within grade levels and across grade levels.

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2.3 Interdisciplinary problem-based curriculum is utilized and STEM design practices are implemented naturally throughout all subject areas.

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LIST ITEMS OF EVIDENCE: ☐ ☐ ☐	ITEMS OF EVIDENCE: ☐ ☐ ☐
COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

2.4 Instruction facilitates exploration, creativity, collaboration, risk-taking, and a growth mindset for students.

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LIST ITEMS OF EVIDENCE: ☐ ☐ ☐	ITEMS OF EVIDENCE: ☐ ☐ ☐
COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

2.5 Evidence of lesson plans, implementing components of highly effective lesson planning, are present with STEM instructional elements clearly identifiable within the plan.

SELF–STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
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LIST ITEMS OF EVIDENCE: ☐ ☐ ☐	ITEMS OF EVIDENCE: ☐ ☐ ☐
COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

2.6 STEAM: Interdisciplinary curriculum and instruction integrates the arts and humanities for a STEAM focus.

SELF-STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
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LIST ITEMS OF EVIDENCE: ☐ ☐ ☐	ITEMS OF EVIDENCE: ☐ ☐ ☐
COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

Standard 3 Learning

For the STEM/STEAM program to be best integrated in the institution, students must demonstrate that the concepts of STEM/STEAM are evident in all of their work. Technology, higher level cognitive skills and application to real-world situations must be displayed throughout the classrooms and recognized by all learners.

3.1 Students demonstrate STEM-focused learning outcomes in support of the institution's mission.

SELF–STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
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3.2 Students are encouraged to work independently and collaboratively to find solutions in the STEM curriculum.

SELF-STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
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LIST ITEMS OF EVIDENCE: ☐ ☐ ☐	ITEMS OF EVIDENCE: ☐ ☐ ☐
COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

3.3 Students are frequently exposed to high-level cognitive tasks as well as high-level Depth of Knowledge questioning related to real-world situations.

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COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

3.4 Students use a variety of technology resources to explore complex and real world problems to integrate how STEM can be integrated in all content areas.

SELF-STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
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LIST ITEMS OF EVIDENCE: ☐ ☐ ☐	ITEMS OF EVIDENCE: ☐ ☐ ☐
COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

3.5 Evidence of STEM-based student work is displayed throughout student learning environments and technological platforms (bulletin boards in hallways and classrooms, websites, school social media, etc.).

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COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

3.6 STEAM: Students are regularly engaged in the STEAM curriculum through interdisciplinary tasks that integrate the arts and humanities.

SELF-STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
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LIST ITEMS OF EVIDENCE: ☐ ☐ ☐	ITEMS OF EVIDENCE: ☐ ☐ ☐
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Standard 4 Assessment

The STEM/STEAM curriculum and evidence of the results of the students' acquisition of the skills must be demonstrated by observation and other forms of assessment that validate that students are progressing in the learning objectives of STEM.

4.1 Students are able to apply interdisciplinary content knowledge to solve and offer elaborate explanations for complex, real world problems both written and orally.

SELF–STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
RATING: select rating	RATING: select rating
LIST ITEMS OF EVIDENCE: ☐ ☐ ☐	ITEMS OF EVIDENCE: ☐ ☐ ☐
COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

4.2 Students use technology to demonstrate content-knowledge proficiency and solutions for complex, real world situations.

SELF-STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
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4.3 Students demonstrate proficiency in STEM literacy.

SELF-STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
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4.4 Students are regularly assessed through a variety of methods and data is utilized to drive STEM instruction.

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COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

4.5 Students consistently demonstrate growth in high-level cognitive tasks tied to STEM-focused learning outcomes.

SELF-STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
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COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

4.6 STEAM: Students apply knowledge of the arts and humanities to develop the solutions/products of STEAM design processes.

SELF-STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
RATING: select rating	RATING: select rating
LIST ITEMS OF EVIDENCE: ☐ ☐ ☐	ITEMS OF EVIDENCE: ☐ ☐ ☐
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Standard 5 Connections

The STEM/STEAM program must be designed to show evidence that the instruction is useful in the current program at the institution. The program gives clear guidance and direction to all students for their education and career application after program completion.

5.1 Stakeholders demonstrate proficiency in the institution's mission and understand how STEM-focused programming connects to STEM career pathways.

SELF–STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
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COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

5.2 Resources are provided to help students identify institution level, secondary, and postsecondary programs of study and financial aid to assist with the pursuit of the pathways.

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5.3 Students participate in STEM-focused college and career pathways within the institution.

SELF-STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
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COMMENTS: Briefly describe why the institution assigned this rating.	COMMENTS: Briefly describe why the visit team assigned this rating.

5.4 Evidence of business and postsecondary partnerships, which are STEM-focused, exists.

SELF-STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
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5.5 Students are given access to before and/or after school STEM activities.

SELF-STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
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5.6 STEAM: Resources, career pathways, partnerships, and programming includes arts integration.

SELF-STUDY (completed by the institution)	**SITE VISIT** (completed by the visit team)
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