



Please indicate certification type:	
STEM School Certification	
STEM Program Certification	

Indiana Department of Education STEM Certification Evaluation Rubric

NOTE: Essential Elements are identified in gray

NOTE: Essential Elements are	Domain 1: Culture									
Element	Investigating 0 points	Developing 1 point	Approaching 2 points	Innovating 3 points	Element Score	Evidenced By: (Examples listed below. You may choose your own evidence to support your score).	References			
1.1 Decision-Making	Does not yet meet minimum indicators for developing	Decision-making regarding planning and implementing the school's STEM program is the work of a school team, comprised of administrators, and teachers, and includes the opportunity for feedback on the program from at least 50 percent of the STEM program's certified staff	Decision-making regarding planning and implementing the school's STEM program is the work of a school team, comprised of administrators, and teachers, and includes the opportunity for feedback on the program from at least 75 percent of the STEM program's certified staff	Decision-making regarding planning and implementing the school's STEM program is the work of a school team, comprised of administrators, and teachers, and includes the opportunity for feedback on the program from at least 95 percent of the STEM program's certified staff		Required: Roster of team members identifed by role (i. e., Admin, Teacher, etc.) Mechanism for collecting STEM program feedback by certified staff Additional Evidence: Meeting schedule Detailed meeting minutes Meeting agenda(s)	8, 9, 10, 22, 23			
1.2 Learning Modalities	Does not yet meet minimum indicators for developing	The school's STEM program's has an explicit plan for continuity of STEM learning regardless of modality (inperson, remote, or hybrid) including one of the following: 1. Integrated STEM lessons in the context of solving a real world problem. 2. Students work in a team either synchronously or asynchronously. 3. A variety of methods are used to assess STEM learning.	The school's STEM program's has an explicit plan for continuity of STEM learning regardless of modality (inperson, remote, or hybrid) including two of the following: 1. Integrated STEM lessons in the context of solving a real world problem. 2. Students work in a team either synchronously or asynchronously. 3. A variety of methods are used to assess STEM learning.	The school's STEM program's has an explicit plan for continuity of STEM learning regardless of modality (inperson, remote, or hybrid) including each of the following: 1. Integrated STEM lessons in the context of solving a real world problem. 2. Students work in a team either synchronously or asynchronously. 3. A variety of methods are used to assess STEM learning.		Required: •School's Continuous Learning Plan •Explicit plan for STEM learning that addresses various learning modalities	20			
	Does not yet meet minimum indicators for developing	Common work time is provided, on a monthly basis, where teachers, in the STEM program, plan integrated STEM learning opportunities as an interdisciplinary team	Common work time is provided, on a bi- weekly basis, where teachers, in the STEM program, plan integrated STEM learning opportunities as an interdisciplinary team	Common work time is provided, on a weekly basis, where teachers plan, in the STEM program, integrated STEM learning opportunities as an interdisciplinary team		Required: •Meeting/master schedule •Sample Integrated STEM Lesson Plans •Meeting minutes reflecting interdisciplinary planning Additional Evidence: •Roster of participants •Detailed meeting minutes documenting the planning	4, 6, 8, 9, 10, 14, 15, 18, 23			
1.4 Sustainability Plan	Does not yet meet minimum indicators for developing	There is a two-year STEM certification sustainability plan in place including funding sources for both technology and STEM curriculum and training needs due to staff turnover	There is a three-year STEM certification sustainability plan in place identifying funding sources for both technology and STEM curriculum and training needs due to staff turnover	There is a five-year STEM certification sustainability plan in place identifying funding sources for both technology and STEM curriculum and training needs due to staff turnover		Required: •Technology plan •Curriculum funding plan •Training plan (Documentation should include a plan to sustain programming/equipment/training for the 5-years of certification.)	8, 9, 10, 14, 23, 24			

1.5 Measurement of Students' Attitudes/interests	Does not yet meet minimum indicators for developing	Informal methods are used to measure students' attitudes toward STEM and/or interest in STEM classes/career pathways and the school's STEM program is revised, as needed, based upon analysis of this data	Formal measurement of students' attitudes toward STEM and/or interest in STEM classes/career pathways are measured on an annual basis and the school's STEM program is revised, as needed, based upon analysis of this data	Formal measurement of students' attitudes toward STEM and/or interest in STEM classes/career pathways are measured at least two times per school year and the school's STEM program is revised, as needed, based upon analysis of this data	Required: •Example of survey used, such as Student Attitudes toward STEM (S-STEM) Survey AND/OR STEM Semantics Survey AND/OR Locally created survey •Detailed description of revisions based upon data analysis •At least one full year of survey data •Test of Science Related Attitudes (TOSRA) •At least one full your of survey data Additional Evidence: •Career Interest Questionnaire	23, 26
1.6 Student/Parent Feedback Data	Does not yet meet minimum indicators for developing	Student or parent feedback regarding STEM integration is only collected on an informal basis and the school's STEM program is revised, as needed, based upon analysis of this data	There is a formal collection of student and parent feedback regarding STEM integration on an annual basis and the school's STEM program is revised, as needed, based upon analysis of this data	There is a formal collection of student and parent feedback regarding STEM integration on an annual basis and the school's STEM program is revised, as needed, based upon analysis of this data	Required:	21, 23
1.7 STEM Instructional Feedback	Does not yet meet minimum indicators for developing	One of these indicators are documented: 1) Evaluation indicators have been determined, in the current local evaluation instument or through modifying the local evaluation instrument, for identifying targeted STEM instructional practices. 2) All evaluators are trained in observing targeted STEM instructional practices, using the local evaluation instrument 3) Evaluators incorporate feedback on targeted STEM instructional practices in formative and summative evaluations, using the local evaluation instrument	Two of these indicators are documented: 1) Evaluation indicators have been determined, in the current local evaluation instument or through modifying the local evaluation instrument, for identifying targeted STEM instructional practices. 2) All evaluators are trained in observing targeted STEM instructional practices, using the local evaluation instrument 3) Evaluators incorporate feedback on targeted STEM instructional practices in formative and summative evaluations, using the local evaluation instrument	All of these indicators are documented: 1) Evaluation indicators have been determined, in the current local evaluation instument or through modifying the local evaluation instrument for identifying targeted STEM instructional practices. 2) All evaluators are trained in observing targeted STEM instructional practices, using the local evaluation instrument 3) Evaluators incorporate feedback on targeted STEM instructional practices in formative and summative evaluations, using the local evaluation instrument	Required: • Documentation of training for evaluators with the evaluation document specific to STEM components. • Samples of feedback provided to teachers • List of identified indicators targeting STEM instructional practices from local evaluation instrument Additional Evidence: • Locally created evaluation tool	1, 12
1.8 Instructional Support	Does not yet meet minimum indicators for developing	At least 75 percent of teachers, in the STEM program, experience at least one of these forms of instructional supports, related to STEM instruction bi-annually: 1) peer observation 2) lesson study 3) critical feedback 4) coaching 5) modeling 6) action research 7) mentoring	At least 75 percent of teachers, in the STEM program, experience at least one of these forms of instructional supports, related to STEM instruction, on a quarterly basis: 1) peer observation 2) lesson study 3) critical feedback 4) coaching 5) modeling 6) action research 7) mentoring	At least 75 percent of teachers experience at least one of these forms of instructional supports, related to STEM instruction, on a monthly basis: 1) peer observation 2) lesson study 3) critical feedback 4) coaching 5) modeling 6) action research 7) mentoring	Required: •Summary of supports provided using teacher roster Additional Evidence: •Sample of teacher reflections (journaling) based on provided supports •Summary of survey responses based upon provided supports	5, 8, 9, 10, 11, 14, 16, 17, 18, 22
1.9 STEM Communications	Does not yet meet minimum indicators for developing	Communication tools (e.g., website, newsletters, social media, webinars, meetings, etc.) are used two-three times per year to communicate about STEM education	Communication tools (e.g., website, newsletters, social media, webinars, meetings, etc.) are used eight-10 times per year to communicate about STEM education	Communication tools (e.g., website, newsletters, social media, webinars, meetings, etc.) are used two-three times per month to communicate about STEM education	Required:	8, 9, 10, 14, 17, 23

1.10 Equity	Does not yet meet minimum indicators for developing	Elementary: At least 50 percent of students participate in integrated STEM instruction/programming as part of core instruction Middle School and High School: STEM elective enrollment, including but not limited to AP/dual credit, is within 50 percent of school demographics HS STEM Program: STEM program enrollment, including but not limited to	Elementary: At least 75 percent of students participate in integrated STEM instruction/programming, other than related arts classes Middle School and High School: STEM elective enrollment, including AP/dual credit, is within 25 percent of school demographics HS STEM Program: STEM program enrollment, including but not limited to	Elementary: 100 percent of students participate in integrated STEM instruction/programming, other than related arts classes Middle School and High School: STEM elective enrollment, including AP/dual credit, mirrors school demographics HS STEM Program: STEM program enrollment, including but not limited to		Required: •Course offerings (MS/HS) •School schedule •STEM enrollment data with comparison to overall student body data (Special Education Status, Gender, race, economically disadvantaged, etc.) •Description of how STEM time is "protected" from pull-outs for special programming (Title I, Resource, Remediation, etc.) Additional Evidence:	1, 8, 9, 10, 14, 17, 18, 19, 25
		AP/dual credit, is within 75 percent of	AP/dual credit, is within 90 percent of	AP/dual credit, mirrors school demographics.		Curriculum maps	
Culture Score:		school demographics.	school demographics.		0	MS/HS STEM programming promotion plan	
			Domain 2: Curriculum				
	Investigating	Developing	Approaching	Innovating		Evidenced By:	
Element	0 points	1 point	2 points	3 points	Element Score	(Examples listed below. You may choose your own evidence to support your score).	References
2.1 Curriculum Integration	Does not yet meet minimum indicators for developing	At least 10 percent of planned, integrated STEM curriculum is evidence- based HS STEM program: At least 25 percent of planned, integrated STEM curriculum is evidence-based	At least 25 percent of planned, integrated STEM curriculum is evidence-based HS STEM program: At least 50 percent of planned, integrated STEM curriculum is evidence-based	At least 50 percent of planned, integrated STEM curriculum is evidence- based HS STEM program: At least 75 percent of planned, integrated STEM curriculum is evidence-based		Required: •Curriculum from IDOE approved list OR •Description of model that is the basis for teacher-created units and/or other providers (e.g., 5-E, PBL Gold Standard, etc.) OR •Research conducted to justify curriculum selection •Implementation plan	1, 7, 8, 9, 10, 14, 18, 23
2.2 Computer Science	Does not yet meet minimum indicators for developing	A computer science implementation plan has been developed that complies with IC 20-30-5-23	Elementary and Middle School: Standards-based computer science content is incorporated into the school curriculum for at least 50 percent of students High School: One computer science course is available to all students	Elementary and Middle School: Standards-based computer science content is incorporated into the school curriculum for 100 percent of students High School: Multiple computer science courses are available to all students		Required: Implementation plan Course list/guide Course enrollment/completion data Additional Evidence: Master schedule with protected time	1, 8, 9, 10
2.3 Employability Skills	Does not yet meet minimum indicators for developing	Employability Skills Standards, based upon the appropriate grade band, are integrated into the school curriculum for at least 50 percent of students	Employability Skills Standards, based upon the appropriate grade band, are integrated into the school curriculum for at least 75 percent of students.	Employability Skills Standards, based upon the appropriate grade band, are integrated into the school curriculum for 100 percent of students		Required: •Curriculum maps/program summary Additional Evidence: •Samples of unit/lesson plans •Samples of student products •Samples of rubrics	1, 6, 8, 9, 10, 11,
2.4 Equity	Does not yet meet minimum indicators for developing	General education teachers create STEM materials for diverse learners based upon their understanding of students' academic needs	Special education teachers and support services teachers (ENL, Interpreters, etc) provide accommodations and/or adaptations of STEM materials for diverse learners based upon their understanding of students' academic needs	General education teachers and appropriate special education teachers and support services teachers (ENL, Interpreters, etc) collaboratively plan for necessary STEM material development and refinement for diverse learners based upon their understanding of students' academic needs		Required: •Samples of collaborative lesson plans with planned supports •Description of collaborative work Additional Evidence: •Meeting agenda(s) •Guidance documents	2
2.5 Assessments	Does not yet meet minimum indicators for developing	At least 25 percent of teachers use a variety of assessment methods for students to demonstrate STEM learning HS STEM Programs: At least 50 percent of teachers use a variety of assessment methods for student to demonstrate STEM learning	At least 50 percent of teachers use a variety of assessment methods for students to demonstrate STEM learning HS STEM Programs: At least 75 percent of teachers use a variety of assessment methods for student to demonstrate STEM learning	At least 75 percent of teachers use a variety of assessment methods for students to demonstrate STEM learning HS STEM Programs: At least 90 percent of teachers use a variety of assessment methods for student to demonstrate STEM learning		Required: •Samples of assessments •Samples of feedback provided to students •Samples of rubrics Additional Evidence: •Samples of student products	8, 9, 10, 17, 23
Curriculum Score:			•	•	0		
			Domain 3: Instruction				
Element	Investigating	Developing 1 point	Approaching	Innovating 3 points	Element Score	Evidenced By: (Examples listed below. You may choose your	References
	0 points	1 point	2 points	3 points		own evidence to support your score).	

3.4 Technology in Instruction	Does not yet meet minimum indicators for developing	Students use a variety of technologies in innovative ways to enhance their STEM learning through investigations and problem solving (e.g., data collection/analysis, design, creation, virtual simulations, research and	Students use a variety of technologies in innovative ways to enhance their STEM learning through investigations and problem solving (e.g., data collection/analysis, design, creation, virtual simulations, research and	Students use a variety of technologies in innovative ways to enhance their STEM learning through investigations and problem solving (e.g., data collection/analysis, design, creation, virtual simulations, research and	Examples of student voice in roles Required: Examples of technologies used Samples of student products Data to support percentage of usage Additional Evidence:	1, 8, 9, 10, 14, 17, 23
3.3 Student Instructional Work Groups	Does not yet meet minimum indicators for developing	least 50 percent of classes, students work in groups as follows: 1) Students collaborate with peers based upon STEM project/intended outcomes 2) Each group member has at least one well-defined assigned role that is critical to successful project/goal completion 3) Accountability is measured and recorded for each individual as well as the entire group	50 percent of classes, students work in groups as follows: 1) Students collaborate with peers based upon STEM project/intended outcomes 2) Each group member has at least one well-defined assigned role that is critical to successful project/goal completion 3) Accountability is measured and recorded for each individual as well as the entire group	least 50 percent of classes, students work in groups as follows: 1) Students collaborate with peers based upon STEM project/intended outcomes 2) Each group member has at least one well-defined assigned role that is critical to successful project/goal completion 3) Accountability is measured and recorded for each individual as well as the entire group	Defined roles/responsibilities plans Accountability plans List of teachers implementing STEM approach and frequency of group work NOTE: Evidence provided must support the metric Additional Evidence: Group assignment processes Samples of rubrics	3, 8, 9, 10, 13, 14, 23
3.2 STEM Instructional Approach Implementation	Does not yet meet minimum indicators for developing	At least 10 percent of teachers use a STEM instructional approach in the context of solving a real-world problem or challenge At least two times per month and in at	At least 25 percent of teachers use a STEM instructional approach in the context of solving a real-world problem or challenge At least one time per week and in at least	At least 50 percent of teachers use a STEM instructional approach in the context of solving a real-world problem or challenge At least two times per week and in at	Required: •Samples of unit/lesson plans •Curriculum maps •List/calendar of teachers implementing PBL/IBL and frequency Additional Evidence: •Samples of student products Required: •Samples of unit/lesson plans	1, 3, 6, 7, 8, 9, 10, 14, 17, 23
3.1 STEM Instructional Approach Training	Does not yet meet minimum indicators for developing	challenge. HS STEM Programs: At least 50 percent of teachers have been trained in implementing a STEM instructional approach in the context of solving a real-world problem or challenge.	HS STEM Programs: At least 75 percent of teachers have been trained in implementing a STEM instructional approach in the context of solving a real-world problem or challenge.	HS STEM Programs: At least 90 percent of teachers have been trained in implementing a STEM instructional approach in the context of solving a real-world problem or challenge.	Required: Roster of participants Additional Evidence: Agenda(s) from PD/training session(s) (This element is about formal training.) Required:	8, 9, 10, 14, 17, 21, 22
		At least 10 percent of teachers have been trained in implementing a STEM instructional approach in the context of solving a real-world problem or	At least 25 percent of teachers have been trained in implementing a STEM instructional approach in the context of solving a real-world problem or challenge	At least 50 percent of teachers have been trained in implementing a STEM instructional approach in the context of solving a real-world problem or challenge	Required: •Summary/documentation of PBL/IBL training that has taken place	

	Does not yet meet minimum indicators for developing	A STEM Advisory Board is established consisting of at least one local community partner that provides feedback on the school's STEM program.	A STEM Advisory Board is established consisting of at least two local community partners, from different sectors, that provide feedback on the school's STEM program.	A STEM Advisory Board is established consisting of at least three local community partners, from different sectors, that provide feedback on the school's STEM program.		Required: •Roster of Community Advisory Board members •Community Partner planning feedback •Summary of revisions made based on STEM Advisory Board feedback Additional Evidence: •Detailed meeting minutes •Agenda(s) •Roster of participants •Copy of survey(s) (This element is about program planning)	1, 4, 11, 23
4.2 STEM Career Exploration	Does not yet meet minimum indicators for developing	Elementary and Middle School: At least 10 percent of STEM units have career exploration/information as a part of the curriculum High School: At least 10 percent of students have direct experiences with STEM professionals and/or professional STEM work environments quarterly HS STEM Programs: At least 50 percent of students have direct experiences with STEM professionals and/or professional STEM work environments quarterly	Elementary and Middle School: At least 25 percent of STEM units have career exploration/information as a part of the curriculum High School: At least 25 percent of students have direct experiences with STEM professionals and/or professional STEM work environments quarterly HS STEM Programs: At least 75 percent of students have direct experiences with STEM professionals and/or professional STEM work environments quarterly	Elementary and Middle School: At least 50 percent of STEM units have career exploration/information as a part of the curriculum High School: At least 50 percent of students have direct experiences with STEM professionals and/or professional STEM work environments quarterly HS STEM Programs: At least 90 percent of students have direct experiences with STEM professionals and/or professional STEM work environments quarterly		Required: •Curriculum summary •Documentation of participation Additional Evidence: •Samples of unit/lesson plans •Samples of student products	1, 4, 8, 9, 10, 11, 23
4.3 Community Engagement	Does not yet meet minimum indicators for developing	One to two local community partners are actively engaged in the STEM program	Three to four local community partners are actively engaged in the STEM program	Five or more local community partners are actively engaged in the STEM program		Required: • List of partners with description of participation/engagement provided by each partner Additional Evidence: • Pictures , flyers, etc. of school engagement (This element is about implementation of supports)	1, 4, 8, 9, 10, 11, 14, 22, 23
4.4 Extended Learning	Does not yet meet minimum indicators for developing	STEM activities such as robotics and engineering clubs, internships, and apprenticeships are available and accessible by at least 10 percent of students in an on-going basis and participation mirrors school demographics	STEM activities such as robotics and engineering clubs, internships, and apprenticeships are available and accessible by at least 25 percent of students in an on-going basis and participation mirrors school demographics	STEM activities such as robotics and engineering clubs, internships, and apprenticeships are available and accessible by at least 50 percent of students in an on-going basis and participation mirrors school demographics		Required: •Summary of opportunities •Transportation options •Latchkey options •Demographic summary of participants compare Additional Evidence: •Calendar of events	1, 11, 17, 18
4.5 Equity	Does not yet meet minimum indicators for developing	Provides at least one opportunity/mode, with an action plan, to inspire and inform under-represented student groups about careers in STEM fields.	Provides at least two opportunities/modes, with an action plan, to inspire and inform under-represented student groups about careers in STEM fields.	Provides at least three opportunities/modes, with an action plan, to inspire and inform underrepresented students group about careers in STEM fields.		Required: •Summary of opportunities •Action plan to inspire/inform under- represented students groups •Interactions with STEM professionals from ALL race, ethnic, and gender groups Additional Evidence: •Pictures of displays/posters in school common areas depicting under-represented groups	1, 8, 9, 10, 19
Partnerships Score:					0		
	Total Score	0 (out of 75)					
	.5.01	0 (0000170)					
	Key Terminology	I					
Term	Definition	Resources					
Computer Science	Computer science is defined by the content found in Indiana's Computer Science Standards	IC 20-30-5-23					

Continuity of Learning	The continuation of education in the event of a prolonged school closure or student absence.	PBLWorks			
		Developing a Community of Inquiry in Your Blended Classroom			
Culture	The way teachers and other staff members work together and the set of beliefs, values, and assumptions they share.	WestED			
Curriculum	The lessons and academic content taught in a school or in a specific course or program.	IDOE STEM			
Curriculum Integration	The materials and pedagogical strategies used by multidisciplinary teams of teachers collaborate to plan and present related lessons that center around a central theme, issue or problem.	ConnectEd			
Employability Skills	A group of essential abilities that involve the development of a knowledge base, expertise level and mindset that is increasingly necessary for success in the modern workplace. IC 20-30-5-14 states that, not later than July 1, 2019, each school within a school corporation shall include interdisciplinary employability skills standards established by the	IDOE Resources			
	department, in conjunction with the department of workforce development, and approved by the state board in the school's curriculum.	IC 20-30-5-23			
Inquiry-Based Instruction	A pedagogy that can be used to deliver lessons on a daily basis in the primary disciplines and beyond. It begins with the teacher presenting the students with a question to explore or having students develop their own questions. As the students investigate the question, they give priority to evidence that is gathered through research and exploring and formulate explanations to describe their findings based on evidence or data collected. Students connect explanations to their knowledge and current understandings in the discipline and then communicate and justify their explanations.	American Association for the Advancement of Science Resource			
Problem-Based and/or Project-Based Curriculum	Generally spans one to several weeks of instruction that should be delivered in an integrated manner including science, mathematics, and other disciplines to show authentic connections.				
Broblem Based and/or	A pedagogy that anchors the teaching of disciplinary content in the context of	Ford NGL			
Problem-Based and/or Project-Based Learning (PBL)	solving a real-world problem or challenge.	PBLWorks .			
Community Partners	Business, higher-education, community	Magnify Learning Georgia STEM/STEAM Model			
Community rattilets	organizations	Georgia STEINI/STEANT MOUEL			

STEM Education	STEM education is the integration of the science, technology, engineering and math disciplines with the goal of deploying problem/project/inquiry-based approaches to teaching and learning in the classroom, while developing critical thinking skills and creating pathways to postsecondary and career opportunities.	Six-Year Indiana STEM Strategic Plan			
	The integration of the science, technology, engineering and math disciplines with the goal of deploying problem/project/inquiry-based	Six-Year Indiana STEM Strategic Plan			
	approaches to teaching and learning in the classroom, while developing critical thinking skills and creating pathways to postsecondary readiness and career opportunities.	NRC Resource			
STEM Instructional Approach	Accepted STEM instructional approaches referenced in the Six-Year Indiana STEM Strategic Plan are: -Problem-based approaches -Project-based approaches -Inquiry-based approaches	Six-Year Indiana STEM Strategic Plan			
Under-Represented Students	Females, minorities, and students with disabilities	NSF Report			