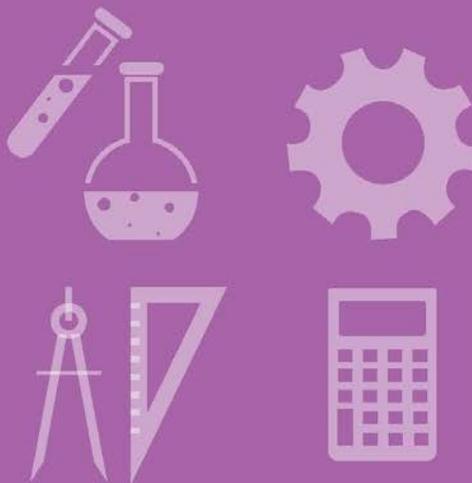


# STEM SCHOOLS DESIGNATION FOR UTAH



Utah STEM Action Center with the Governor's Office of Economic Development  
In partnership with the  
Utah State Office of Education



## Utah STEM Schools Designation

### Purpose:

***Utah's STEM definition - "STEM education is the intentional inclusion of science, technology, engineering, and mathematics, and their associated practices, to create a student-centered learning environment in which students investigate, engineer solutions to problems, and construct evidence-based explanations of real-world phenomena."***

The Utah STEM Schools Designation program was developed to define the criteria and elements necessary for a school to create a comprehensive STEM learning environment for their students. The STEM schools designation program will allow schools to engage in discussions with faculty and community partners around STEM education as a lens for strong instruction for students to prepare them for college and career readiness. The designation also serves as an indicator for members of the public who are looking for STEM school experiences in Utah K-12 education. Schools that have identified a passion for STEM education will benefit from the opportunity for both reflection and recognition through this program.

In order to support local initiatives that are attempting to meet the requirements of STEM education in Utah, the Utah Legislature is supporting designation of STEM schools. Utah Code 63M-1-3204 States in part that:

*"The STEM Action Center as funding allows shall: work cooperatively with the State Board of Education to designate schools as STEM schools, where the schools have agreed to adopt a plan of STEM implementation in alignment with criteria set by the State Board of Education and the board;"*

### Eligibility:

Applicants must:

- Be a current school in the state of Utah that serves the K-12 student population
- Have been in existence and serving a student population for at least the two previous school years. *(This is required so the schools can provide evidence of implementation of the elements as required in the portfolio.)*
- Standards-based instruction aligned to the Utah Core Standards is central to instruction.
- Submit the pre-application by the intended deadline indicating intent to apply.

Utah STEM School Designation Criteria  
Pilot Year Model

**STEM Schools Review Criteria:**

After eligibility is confirmed and technical specifications are met, each application will be evaluated using the following Ten Dimensions of STEM School Designation:

1. Curriculum: Problem-Solving Rigorous Learning (7 Elements including *Problem-Solving Learning*, *Student Cooperation*, and *Engineering Design Process*)
2. Leadership (4 Elements including *Career Exposure* and *STEM Instructional Leadership Team*)
3. Assessment (2 Elements including *Student Learning Outcomes* and *Use of Assessment to Inform Instruction*)
4. Professional Learning (3 Elements including *Staff Engagement in Relevant Professional Learning Opportunities* and *Staff Reflect on Their Work*)
5. Teaching (4 Elements including *Teacher Differentiation of Instruction Based on Learning Needs* and *Staff Spreads Practices*)
6. Student Engagement and Equity (7 Elements including *Student Autonomy* and *Extracurricular Activities*)
7. Community (3 Elements including *Family Involvement* and *Service Learning*)
8. Facilities (2 Element including *Technology Use* and *Allocation for Physical Resources to Support STEM Learning for Students*)
9. Strategic Alliances (3 Elements including *Partners Support Instruction* and *Provide Resources* and *Staff Establishes and Maintains Partnerships*)
10. Advancement and Sustainability (2 Elements including *Development of a Five-Year Plan on Goals and Benchmarks for Community Strengths*)

**Review Process**

There is a three-tier review:

1. **Portfolio Review**, the program coordinators at the STEM Action Center will convene selection committees, which include STEM Action Center Board Members, university experts, industry partners, mathematics/science education researchers, district level personnel, administration, and classroom teachers. These committees will review the application for the Ten Dimensions of STEM School Designation and associated artifacts to make a recommendation for scores from each award category for recognition in one of the four designation categories at the state level. To ensure consistency, all-state selection committee members will score their applications using the review criteria and scoring information presented in this application packet.
2. **School Site Visits**, STEM Action Center will convene site visit committees, which include STEM Action Center Board Members, university experts, industry partners, mathematics/science education researchers, district level personnel, administration, and classroom teachers. The school site visits will be conducted to follow up on specific elements and questions generated from the portfolio review. School site visits will only be conducted for schools that are being considered for Gold or Platinum STEM School Designation based on their portfolio review outcomes. The school will be notified 4-weeks in advance and will work with STEM Action Center staff to create a schedule for the visit that meets the needs of the committee.
3. **Utah School Board of Education Approval**, the STEM Action Center will make a recommendation for STEM School Designation awardees to the Utah State Board of Education. These schools will receive final approval from the Utah State School Board of Education for STEM School Designation.

Utah STEM School Designation Criteria  
Pilot Year Model

**Designation Levels:**

Each school will indicate a level of implementation for all of the proposed elements. The STEM School Designation award levels will be granted at the following point values:

<b>Designation</b>	<b>Point Range</b>
No STEM School Designation for schools that are still in development phase of STEM mission and programming	0 points – 69 points
Bronze STEM School Designation	70 points – 80 points
Silver STEM School Designation	81 points – 90 points
Gold STEM School Designation	91 points – 99 points
Platinum STEM School Designation	100 points and above

*\*As this is our pilot year, we do not expect to have many schools achieving gold or platinum. This is due to the new availability of the rubric identifying elements for STEM schools combined with schools providing evidence of existing work. As the STEM School Designation continues, we would project seeing more schools reaching this level of implementation in the future.*

**Directions**

The rubric articulates how each criteria will be evaluated at one of four levels of implementation. Schools will provide evidence and artifacts in a portfolio model with accompanying narrative for each of the elements in alignment with their implementation. This word document will allow you to make edits to create a comprehensive portfolio.

**Written Response**

The applicant will utilize this word document to create a written response for each of the elements in the Ten Dimensions of STEM School Designation.

**Technical Specifications for the Written Response**

It is important that each of the Ten Dimensions of STEM School Designation be discussed in the order in which they are presented in this application and that each dimension prompt is answered separately. Use of the STEM School Designation Application Template is required. The template is preformatted to ensure the following requirements are met:

- The appropriate element prompt is provided before each element response;
- The response is formatted on a 8.5 by 11-inch page with 1-inch margins on all 4 sides;
- Element responses are provided in 12-point font;
- Element responses can be double-spaced or single spaced within the defined page limit; and
- At the bottom margin of each page: school name and page number.

Utah STEM School Designation Criteria  
Pilot Year Model

The written response to the Ten Dimensions of STEM School Designation:

- Each element narrative response must not exceed 3 pages (with prompt included); and
- Must be saved as a single file and uploaded into the online application Google Drive Folder and shared with STEM Action Center program lead, Sarah Young ([sarahyoung@utah.gov](mailto:sarahyoung@utah.gov)).

1. For each element you will select one of the following levels of implementation that is currently happening for the current school year.

Non- Existent = 0 points	Developing = 1 point	Existing = 2 points	Exemplary = 3 points <i>(In addition to all 'Existing' indicators)</i>
The school does not include and/or does not have evidence of this element in practice at this time.	Work is in progress to develop this element within the school. This element is included in the school's STEM planning document. A school is able to indicate a maximum of five elements for the "Developing" implementation level, as we recognize that change takes both time and resources.	These indicators articulate the evidence that this element exists within the school community. All indicators must be met to qualify for the "Existing" implementation.	These indicators articulate the evidence that this element is exemplary at the school community. All indicators must be met in addition to all the indicators in the existing category to qualify for "Exemplary" implementation.

2. Your rating will be followed by a narrative that needs to describe how your school meets all of the indicators at your level of implementation. Your narrative should reference the artifacts that you have included in your portfolio as evidence of your implementation.

**Artifact Materials**

Artifact materials provide supporting evidence for the narrative responses to the *Ten Dimensions of STEM School Designation*. The application may include artifacts such as lesson plans, samples of student work, assessment items or publications (your own, or those you wish to cite in support of your written narrative).

**Technical Specifications for Supplemental Materials**

Artifact materials:

- **must not exceed 10 pages per element;**
- must be labeled with school name, file name, and display page numbers;
- should be specifically noted within the written response;
- should include a list of citations or references if any research articles or materials are discussed in the written response; and
- may be submitted in the following formats: Adobe Portable Document Format (.pdf), Microsoft Word (.doc or .docx), Rich Text Files (.rtf), or Image Files (.gif, .jpeg, .jpg, .png).

Utah STEM School Designation Criteria  
Pilot Year Model

**Pilot Year Timeline:**

<b>Release of Utah STEM Schools Designation Pilot Program</b> <i>Designation Criteria, Applications, and all supporting documents for the process.</i>	August 15, 2015
<b>Pre-Assessment Due to STEM Action Center</b> <i>The pre-assessment materials will include an application that asks schools to identify stakeholders who will be helping in the application process and complete an initial overview of school evidence for criteria.</i>	October 1, 2015
<b>Full Portfolio Due STEM Action Center</b> <i>The full portfolio will comprise of the completed rubric with proposed implementation levels accompanied by artifacts, evidence, and a narrative for each element.</i>	December 18, 2015
<b>Review of Portfolios for STEM Schools by Utah STEM Stakeholders</b> <i>The review of the portfolio will be completed by representatives from multiple STEM stakeholder groups, including K-12 STEM teachers and leaders, USOE, STEM Action Center, Industry partners, etc. Feedback will be given on strengths and areas for improvement.</i>	January 2016
<b>Site Visits Scheduled and Completed for Schools seeking Gold or Platinum STEM School Designation</b> <i>Site visits will be day long visits of review teams looking at evidence in alignment with portfolio and will consist of observation and interviews.</i>	February – March, 2016
<b>STEM School Designation Awards Ceremony</b>	April 2016

This will be an annual application cycle that would be available to schools each school year. Once awarded, the designation will be active for 3 years before a school would need to reapply to maintain or ascend to a new designation level.

The designation will be noted with STEM designation seal to be available for the school to use in promotional materials. In addition the school would be listed as a designated STEM school on the STEM Action Center website for community reference. At this time, there is no additional funding to be awarded for STEM School Designation.

**Future Goals for the STEM Schools Designation Program:**

1. Review community feedback from pilot year to improve upon rubric, application, and process.
2. Look at development of specific rubrics for elementary and secondary level schools.
3. Work with an external evaluator to look at STEM school outcomes for both academics, attitudes, and interest.

<i>Element</i>	<i>Non-Existent – 0 points</i>	<i>Developing – 1 point</i>	<i>Existing – 2 points</i>	<i>Exemplary – 3 points (In addition to all "Existing" indicators)</i>	<i>Total</i>
<b>1. Curriculum: Problem-Solving Rigorous Learning</b>					
1a. Interdisciplinary Instruction Helps Students Make Interdisciplinary Connections					0
<b>1b. Problem-Solving Learning</b>					0
1c. Student Cooperation					0
1d. Connections to the Real-World and Current Events					0
1e. Engineering Design Process					0
1f. Standards and Core Course Sequence					0
1g. Cognitively Demanding Work					0
<b>2. Leadership</b>					
2a. Career Exposure					0
2b. College and Career Readiness Skills					0
2c. STEM Instructional Team Leaders Support Instruction					0
2d. Staff Has Sense of School Ownership and Participates in Decision Making					0
<b>3. Assessment</b>					
3a. Student Learning Outcomes (SLOs) Process					0
3b. Use of Assessment to Inform Instruction					0
<b>4. Professional Learning</b>					
4a. Staff Engagement in Relevant Professional Learning Opportunities					0
4b. Professional Development Resources					0
4c. Staff Reflects On Their Work					0
<b>5. Teaching</b>					
5a. Code of Behavior and Values					0
5b. Teacher Differentiation of Instruction Based on Learning Needs					0
5c. Staff Spreads Practices					0
5d. Common Planning Time and Individual Planning Time are Incorporated into the Schedule					0
<b>6. Student Engagement and Equity</b>					
6a. Support for Social and Emotional Needs of Students					0
6b. Belief That All Students Can Learn					0
6c. Student Participation in Decision-Making					0
6d. Extracurricular Activities					0
6e. Representative Population					0
6f. Student Autonomy					0
6g. Students Reflect on Their Learning					0
<b>7. Community</b>					
7a. Family Involvement					0
7b. Service Learning					0
7c. School Establishes and Maintains Community Presence					0
<b>8. Facilities</b>					
8a. Technology Use					0
8b. Allocation for Physical Resources to Support STEM Learning for Students					0
<b>9. Strategic Alliances</b>					
9a. Partners Support Instruction and Provide Resources					0
9b. Partners Help Establish and Maintain Community Presence					0
9c. Staff Establishes and Maintains Partnerships					0
<b>10. Advancement and Sustainability</b>					0
10a. Development of a Five-Year Plan on Goals and Benchmarks for Community Strengths					0
10b. Development of a Five-Year Plan on Goals and Benchmarks for Improvement					0
<b>TOTAL:</b>					<b>0</b>