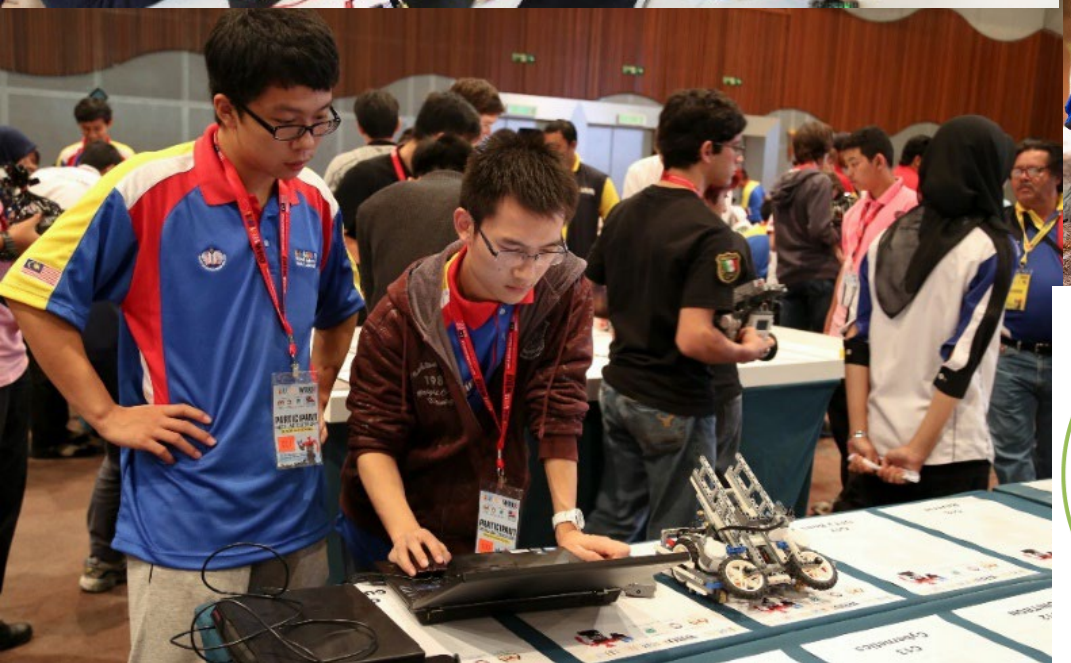
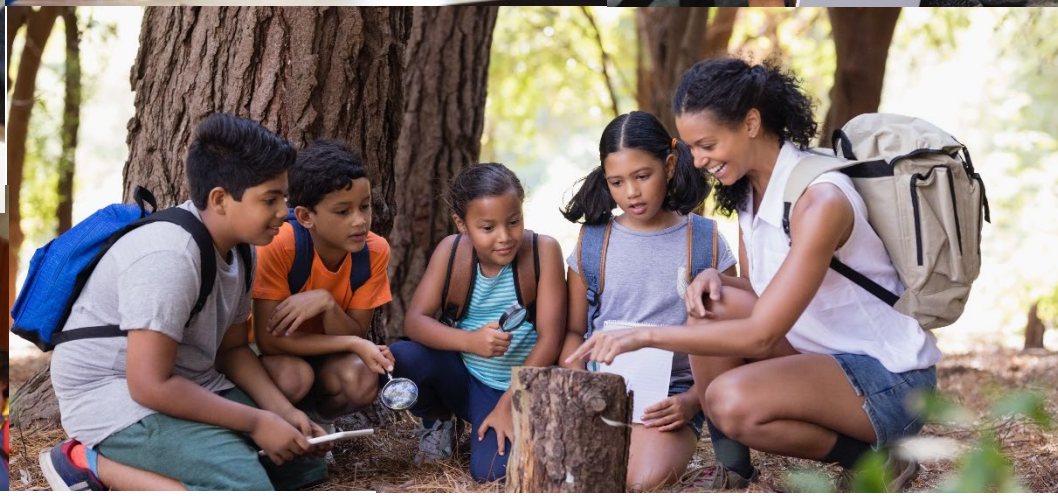
Updated APR 2025

Nevada Governor's Designated STEM School Framework





Nevada Governor's Office of Science, Innovation and Technology

STEM Definition

Nevada State Definition of STEM

Education that focuses on active teaching and learning, centered on relevant experiences, problem solving, and critical thinking processes. STEM education emphasizes the natural interconnectedness of science, technology, engineering, and mathematics, and their connection to other disciplines, to produce informed citizens that possess and apply the necessary understandings to expand Nevada's STEM-capable workforce in order to compete in a global society.

Nevada STEM Rubric

The rubric below contains the attributes of a STEM School and is divided into 3 categories:

1. The School
2. The Classroom
3. The Community

The following pages summarize the characteristics of schools at each level. The rubric below describes each attribute at an Exploratory school, a Developing school, an Established school, and a Model school.

Model

Established

Developing

Exploratory

Scoring Guide

Effective school year 2025-2026

Schools that meet the criteria of a Model, Established, or Developing School will receive the Governor's STEM School Designation.

Model Schools receive an overall score of 105 points or more.

Established Schools receive an overall score between 67-104 points.

Developing Schools receive an overall score between 33-66 points.

Exploratory Schools receive an overall score of 32 points or fewer.

Model

Established

Developing

Exploratory

A Note on STEAM

STEM or STEAM?

The Nevada Governor STEM School Designation is inclusive of schools practicing STEAM. The attributes described in the Nevada STEM Framework are applicable to STEAM as well as STEM.

As with STEM, STEAM describes a pedagogy that focuses on skill development as well as the learning process itself. Both STEM and STEAM describe discovery learning that is tied to real-world problem-solving and relies on integrated subject areas to allow authentic context and application of learning. Schools with a STEAM vision rather than a STEM vision will focus equitably on teaching STEM *and* art skills and processes. STEAM also emphasizes empathy, diverse perspectives, creativity and aesthetic design principles. At the highest ratings (Established and Model), the Nevada STEM Framework describes this type of learning. For example, schools rated as Established or Model utilize interdisciplinary or transdisciplinary learning models, which rely on empathy and understanding real-world problems through multiple lenses. The highest-quality STEM schools will embody key attributes of STEAM.

The Governor's STEM School Designation is inclusive of STEAM, STREAM, STREAMERS, STREAMLERS and so on. The STEM School Designation is not intended to celebrate schools that uphold science, technology, engineering, and mathematics above or at the expense of other subject areas. Rather, the STEM School Designation celebrates schools that value the learning process, student identity development, real-world experiences, and workforce connections, regardless of the subject area.

When reviewing the Nevada STEM Framework, STEAM is not called out specifically. However, STEAM schools can use STEAM-based evidence to demonstrate the attributes described in the Framework. For example, the School Category describes having professional learning plans that include STEM training. STEAM schools will have arts-trained educators on campus as well. Additionally, in the Community Category of the Framework, schools are evaluated on industry partnerships and how STEM professionals interact with students. A STEAM school will have formal partnerships with STEAM industry and promote careers such as graphic artists or front-end web developers. While the Framework does not specifically address STEAM, the attributes are inclusive of STEAM and were developed based on the latest research regarding STEM *and* STEAM educational experiences.

Category I: The School

1.1 STEM Mission and Vision

The school's **STEM** mission and vision guide decision-making at the school.

Attribute	Exploratory	Developing	Established	Model
1.1.1 Mission & Vision*	The School's mission and vision statements do not mention STEM. A few teachers or administrators have discussed increasing the school's STEM focus, but the school has not articulated anything formally. STEM support is limited to a small number of staff. **1 point**	The school has recently established a STEM mission and vision, or a core group of teachers and administrators at the school have begun formally redesigning its mission and vision to include STEM. STEM engagement is growing among staff, but universal staff buy-in has not occurred. **2 points**	The school's mission and vision are centered in STEM, and the mission and vision drive leadership's decision-making. **3 points**	The staff, students, and the community, guided by a formal strategic plan, have been working toward the STEM vision for at least two years. **4 points**
1.1.2 Impact on Classrooms	Administrators and some teachers have begun to think about how to align classroom instruction to a STEM mission and vision. **1 point**	Classroom instruction is aligned to the STEM mission and vision in some classrooms. **2 points**	Classroom instruction is aligned to the STEM mission and vision in most classrooms. **3 points**	Classroom instruction has been aligned to the STEM mission and vision in all classrooms for at least two years. **4 points**

Category I: The School

1.2 Leadership

School leadership provides opportunities for successful widespread STEM implementation.

Attribute	Exploratory	Developing	Established	Model
1.2.1 Leadership	STEM is a cause advocated for by a passionate teacher or small group of staff. The principal is permissive but uninvolved. **1 point**	The school's leadership team, including teachers and administrators, drives small-scale or pilot STEM initiatives at the school. **2 points**	The school's leadership team, including teachers and administrators, is seen by staff and the community as the school's STEM champions and are knowledgeable, involved in, and drivers of all STEM initiatives. **3 points**	The school's leadership team, including teachers and administrators, has been driving the school's STEM initiatives for more than two years, and is known by staff, family, and the community as STEM champions. **4 points**
1.2.2 Collaboration & Planning	Teachers have limited time to collaborate. **0 points**	Administrators provide time, resources, and protocols for teachers to collaborate on STEM instruction. **1 point**	Administration has prioritized collaboration and reflection by providing ongoing time, resources, and protocols for STEM instructional planning. Core teachers and specialists collaborate and align instruction. **2 points**	Administration has prioritized collaboration and reflection for STEM instructional planning, to the degree that all aspects of the school showcase a culture of collaboration and reflection. **3 points**
1.2.3 Professional Learning	Educators identify opportunities for and participate in STEM professional development on their own. **1 point**	Optional school-sponsored group professional development is provided occasionally to educators that is aligned to the school's STEM mission and vision. **2 points**	The school has provided STEM-related professional development to all educators. **3 points**	The school has a STEM professional development plan which includes ongoing STEM professional learning for all educators. **4 points**

Category I: The School

1.3 An Explicit Focus on STEM for All

The school is intentional in ensuring all students engage in STEM.

Attribute	Exploratory	Developing	Established	Model
1.3.1 Reflection	The school has not yet reflected on STEM participation at the school. **1 point**	The school is considering how to increase STEM participation by all students. **3 points**	The school has developed a plan to increase STEM participation by all students. **5 points**	The school has ensured the budget, schedule, and communication plan support STEM participation for all students. **6 points**
1.3.2 Classroom Strategies	Teachers may be using evidence-based strategies for scaffolding and differentiating instruction, but strategies are not specific to STEM learning. **0 points**	Some teachers implement evidence-based strategies for scaffolding and differentiating instruction so that all learners can be successful in STEM. **1 point**	Most teachers implement evidence-based strategies for scaffolding and differentiating instruction so that all learners can be successful in STEM. **3 points**	Teachers have been trained on and implement evidence-based strategies for scaffolding and differentiating instruction so that all learners can be successful in STEM. **5 points**

Category I: The School

1.4 The School Budget

Sustained funding for STEM enriches inquiry and learning.

Attribute	Exploratory	Developing	Established	Model
1.4.1 Funding Allocation	There is no sustainable funding plan for STEM education. **0 points**	Funds for STEM education were acquired circumstantially or happenstance. Sustainable funds are not available. **1 point**	Funds allocated in the school's budget for STEM education appear sustainable. The school is actively seeking additional funding. **2 points**	The school has a history of funding STEM education that goes beyond the previous school year and a long-term budget plan that prioritizes funds for high-quality STEM resources and programming. **3 points**
1.4.2 Uses of Funds	Funds are not spent on STEM initiatives. **0 points**	Funds for STEM education are targeted to small-scale specific initiatives (ex: new laptops). Only some classrooms or students benefit from STEM funding (ex: updated chemistry labs). **1 point**	most funds for STEM are allocated for professional learning, high quality STEM programs on OSIT's STEMList, experiential learning, and/or hands-on materials. most students benefit from the STEM funds. **2 points**	All funds for STEM are allocated for professional learning, high-quality STEM programs on OSIT's STEMList, experiential learning, and/or hands-on materials. All students benefit from the STEM funds. **3 points**

Category I: The School

1.5 The Schedule

The school schedule supports STEM learning for all students.

Attribute	Exploratory	Developing	Established	Model
1.5.1 Schedule	Elementary:			
	The school schedule does not allocate time for STEM during the school day. **0 points**	The school schedule allocates time for sporadic STEM learning. For example, during rotating STEM specials or STEM events. **1 point**	The school schedule allocates time for ongoing STEM learning in the general education classroom. **3 points**	The school schedule requires STEM integration into ELA and mathematics instruction. **5 points**
	Middle and High School:			
	The school offers STEM courses or electives. **0 points**	The schedule is designed so that every student can enroll in a STEM course, but it is not required. **1 point**	The schedule is designed so that all students are enrolled in at least one STEM course while at the school (for example, a one semester STEM exploration course). **3 points**	All students are enrolled in at least one STEM course each year (for example, a STEM elective, CTE course, or integrated STEM core subject class). **5 points**

K-8 and K-12 Schools will be scored on both "Elementary" and "Middle and High School," and an average of the two will be used for scoring.

Category II: The Classroom

2.1 Problem-Based Learning

Students apply their learning in authentic, age-appropriate problem-solving contexts.

Attribute	Exploratory	Developing	Established	Model
2.1.1 Context	Learning is not connected to real-world contexts, and/or students do not apply grade-level knowledge or skills to explain phenomena or solve problems. **0 points**	Students occasionally apply grade-level knowledge or skills to explain phenomena or solve problems. **2 points**	Students regularly apply grade-level knowledge and skills to explain relevant phenomena and solve meaningful problems. **4 points**	Students regularly identify, define and solve relevant and authentic (local and global) problems. Students design empathetic and diverse solutions to the problem. **6 points**
2.1.2 Instructional Model	Teachers lead instruction through lecture and some hands-on activities. **0 points**	Teacher provides opportunities for students to apply knowledge and skills to new situations, to answer questions, or to complete tasks. **2 points**	Students have multiple opportunities to determine their learning path within teacher-provided parameters. **4 points**	Students engage in complex and evolving thinking over time.* Teacher acts as facilitator. **6 points**
2.1.3 Disciplinary Integration	Students experience disciplinary instruction**, wherein content areas are learned separately, or learned within a topical theme. **0 points**	Students occasionally experience multidisciplinary instruction** that crosses two or more subjects/courses. **1 point**	Students experience interdisciplinary instruction** that crosses two or more subjects/courses throughout the year. **2 points**	Students experience transdisciplinary instruction** that crosses subject areas/courses several times across the year. **3 points**

2.1.1 and 2.1.2 describe the "STEM shift."
*Visit nextgenstorylines.org for more information.
**For more information regarding integration, see pages 14-23 in a Guide for Transdisciplinary STEM Learning and Teaching.

Category II: The Classroom

2.1 Problem-Based Learning

Students apply their learning in authentic, age-appropriate problem-solving contexts.

Attribute	Exploratory	Developing	Established	Model
2.1.4 Standard Alignment	STEM learning prioritizes themes or projects rather than grade-level expectations (standards, grade-appropriate rigor, NGSS 3 Dimensions). **0 points**	Instruction is aligned to grade-level standards and has grade-appropriate rigor and student choice*, but STEM learning is not typically Three Dimensional**. **1 point**	STEM instruction is aligned to grade-level standards, has grade-appropriate rigor and student choice*, and is typically Three Dimensional**. **3 points**	Comprehensive grade-level standards have been meaningfully organized into year-long pacing that ensures all students work toward mastery of all grade-level NGSS expectations through STEM experiences. **5 points**
2.1.5 Collaboration and Teamwork	Students may work in pairs or in groups, but meaningful opportunities to develop teamwork and collaboration skills are limited. **0 points**	Students are working together on a task or project. **2 points**	Students learn and work in groups with defined roles and shared responsibility. **4 points**	Students learn, work, and make substantive decisions in teams with roles, which mimic real-world STEM jobs. Students work collaboratively throughout the process. **5 points**
2.1.6 Engineering Design Process	Elementary and middle school only:			
	Engineering is absent or takes the form of construction tasks, such as building spaghetti towers or bridges. **0 points**	Students engage in the engineering design process as a rigid process or apply the engineering design process to obscure contexts. **1 point**	Students understand and engage in the engineering design process as a fluid and authentic problem-solving strategy. **2 points**	Students apply learning from multiple disciplines to the engineering design process as a fluid and authentic problem-solving strategy. **3 points**

*Student choice includes steps to take during investigations, use of tools, team member roles, learning goals, and more.
**Visit https://www.nextgenscience.org/three-dimensional-learning for more information about Three-Dimensional Learning.

Category II: The Classroom

2.2 Culture and Mindset

Classrooms and students value innovation, creativity, critical thinking, flexibility, and adaptability.

Attribute	Exploratory	Developing	Established	Model
2.2.1 Mindset	Students are driven by grades and external motivators, rather than by innovation and risk-taking as an opportunity for personal/academic growth. **0 points**	Students are learning strategies and protocols for growth mindset, but it's not yet tied to STEM or internalized. **1 point**	Students and teachers work together to celebrate diverse thinking, view both conflict and failure as opportunities for growth, and utilize the iterative process as a means for creativity and risk-taking. **3 points**	Students have internalized and taken ownership of celebrating diverse thinking, viewing both conflict and failure as opportunities for growth, and utilizing the iterative process as a means for creativity and risk-taking. **5 points**
2.2.2 Focus on Process Over Product	Students receive final grades and scores on their work, but do not regularly receive meaningful feedback from teachers. Students do not have opportunities to revise or iterate their work based on feedback. **0 points**	Students receive and reflect on meaningful feedback from teachers or peers, but don't typically integrate reflections and feedback into new iterations of thinking or work. **1 point**	Students integrate self-reflection, new learning, and feedback from teachers, peers and guests into multiple iterations of their work. **3 points**	Students integrate self-reflection, new learning, and feedback from teachers, peers and guests into multiple iterations of their work during sustained inquiry and can articulate the evolution of their thinking. **5 points**
2.2.3 Application Awareness	Students are not able to explain what they are learning or doing. **0 points**	Students can articulate what they are learning or doing. **1 point**	Students can articulate what they are learning and the context to which they are applying their learning. **2 points**	Students can articulate what they are learning, how they are applying their learning, and why it's important to their future or the community. **3 points**

Category II: The Classroom

2.3 Technology

Classrooms and students value technology as integral tools for meaning-making.

Attribute	Exploratory	Developing	Established	Model
2.3.1 Digital Citizenship	Students and educators have not considered digital citizenship yet. **0 points**	Students and educators know what digital citizenship means but have little opportunity to develop it. **1 point**	Students develop digital citizenship in authentic ways. **2 points**	Students have opportunities to develop digital citizenship and practice responsible use of technology in multiple settings. **3 points**
2.3.2 Technology for Learning	Students use teacher-selected technology as a substitute for traditional tools. For example, taking notes online rather than in a paper notebook. **0 points**	Students use technology to present or demonstrate understanding, rather than for knowledge construction. Students learn how and why to use a variety of technology. **1 point**	Students use technology throughout the learning to enhance knowledge construction. Students have opportunities to select technology based on learning goals and assignments. **2 points**	Students self-select and use technology to manage tasks and/or create new technology products, such as apps. Students consider and engage an intended audience. **3 points**

Reference the Nevada State Standards for Computer Science and Integrated Technology and Nevada's STELLAR Pathway to AI Teaching and Learning guide for more information about these attributes.

Category II: The Classroom

2.4 College and Career Readiness

Instruction supports student career exploration and preparation.

Attribute	Exploratory	Developing	Established	Model
2.4.1 STEM Pathways	Elementary and middle school only:			
	Student learning is not linked to STEM career opportunities. **0 points**	Students learn about STEM career opportunities and pathways during special events or career days. **1 point**	Teachers link student learning to STEM career opportunities and pathways through classroom instruction. **3 points**	Students understand how learning relates to STEM career opportunities and pathways. The school connects students with STEM extracurriculars. **5 points**
2.4.2 STEM Pathways	High school only:			
	School staff understand appropriate course selection will help prepare students for opportunities in a STEM career, but STEM pathways have not yet been identified. **0 points**	The school offers standalone STEM courses, communicates post-secondary STEM options to students, and is developing STEM pathways at the school. **1 point**	The school offers a variety of courses to support students in meeting college and career prerequisites, including AP, IB, DE, and CTE programs and helps students identify secondary and post-secondary pathways. **3 points**	The pathways available at the school support students in advancing their STEM career goals and enrollment in STEM AP, IB, DE and CTE programs reflects the school's demographics. **5 points**
2.4.3 STEM/STEAM Seals	The school does not promote the STEM or STEAM seals. **0 points**	The school advises students on the requirements for earning a STEM or STEAM seal. **1 point**	The school's STEM pathways result in a STEM or STEAM seal upon graduation. **2 points**	Most graduating seniors receive a STEM or STEAM seal. **3 points**
	Visit https://osit.nv.gov/STEM/SB_241/ for more information about the STEM and STEAM seals.			

Category II: The Classroom

2.5 Assessment

Assessment* is relevant, performance-based, and provides students with real-time feedback.

Attribute	Exploratory	Developing	Established	Model
2.5.1 STEM Data	Data regarding student achievement in STEM is not collected. **0 point**	Data regarding student achievement in STEM is collected consistently and strategically by some teachers. **1 point**	Data regarding student achievement in STEM is collected consistently and strategically by most teachers. **3 points**	Data regarding student achievement in STEM is collected consistently and strategically and used to drive instruction by most teachers. **5 points**
2.5.2 Assessment Format	Student assessments are tied to completing an activity versus demonstrating foundational skills or explaining big ideas. **0 point**	Students are assessed in a vacuum (i.e. individual skills and understandings are assessed without application). **1 point**	Assessment includes real-world and appropriate application of learning. **3 points**	Assessment relies on application of learning to related real-world problem-solving situations. **4 points**
2.5.3 STEM Interest and Awareness	Data regarding student interest and identities in STEM is not collected. **0 point**	Data regarding student interest and identities in STEM is collected consistently and strategically by some teachers. **1 point**	Data regarding student interest and identities in STEM is collected consistently and strategically by most teachers. **2 points**	Data regarding student interest and identities in STEM is collected consistently and strategically and used to drive instruction by most teachers. **3 points**

*For the purposes of this framework, STEM assessment includes integrated content understanding as well as skills and practices. Examples include, but are not limited to, assessing students' ability to: design investigations, collaborate, explain phenomena, design solutions, use mathematics to identify a problem. **Assessments such as MAP or SBAC are not STEM assessments.**

Category III: The Community

3.1 Family Engagement

Families and schools work together to further STEM education.

Attribute	Exploratory	Developing	Established	Model
3.1.1 Family Participation	The school's family engagement opportunities do not have a STEM focus. **0 points**	The school offers an annual opportunity for families to learn about STEM and participate in STEM activities. **1 point**	The school offers multiple STEM experiences for families. **2 points**	The school offers multiple ways for families to engage in STEM both on and off campus. **3 points**
3.1.2 Communicate with Families	The school's communication with families lacks STEM content. **0 points**	The school communicates with families regarding STEM, but communication is infrequent. **1 point**	The school communicates with families regularly throughout the school year with frequent updates about STEM initiatives at the school. **3 points**	The school makes concerted efforts to ensure all families receive information about STEM initiatives at the school and in the community. The school differentiates communication to ensure that all families are reached. **5 points**

Category III: The Community

3.2 Business, Industry, and Community Engagement

Business, industry, community, and the school collaborate to further STEM education.

Attribute	Exploratory	Developing	Established	Model
3.2.1 Industry Participation	Business and community members occasionally support the school's STEM learning experiences with donations or services. **1 point**	Business and community members occasionally participate in the school's activities in some way, including as a STEM expert to present information to the students or staff. **2 points**	Business and community members partner with the school to regularly offer two or more of the following: funding; classroom resources; guest instruction; learning experiences; or career connections. **3 points**	Business and community partners collaborate with the school to develop STEM learning experiences. **5 points**

Category III: The Community

3.3 Student Engagement with the Community

Students and the community work together to develop STEM relationships and interests.

Attribute	Exploratory	Developing	Established	Model
3.3.1 Student Participation	Students engage with the community on or off campus during the school day. **1 point**	Students engage with the community while learning about local problems and opportunities. **2 points**	Students learn about their community and propose solutions or ideas to a public audience. **4 points**	Students partner with the community to co-develop solutions to local or global problems. **6 points**
3.3.2 Community Collaboration	The community is not invited to view student work at a showcase or other event. **0 points**	The community is invited to view student work at a showcase or other event. **1 point**	Students present the results of their work to the community and receive feedback and answer questions. **2 points**	The community advises students during the planning, creation, and presentation of their work. **4 points**
3.3.3 Work-Based Learning	High school only:			
	Students do not have work-based learning opportunities. **0 points**	The school is developing a plan to incorporate work-based learning opportunities. Some students may have special opportunities to experience work-based learning. **1 point**	All STEM courses include age-appropriate work-based learning experiences. **4 points**	Students engage in age-appropriate work-based learning experiences on and off campus. **6 points**
	Work-based learning experiences include job shadowing, simulated workplaces, clinicals, internships, industry tours, guest speakers and mentorships. Visit https://doe.nv.gov/offices/craleo/cte/work-based-learning/ for more information about work-based learning.			

Appendix A: Examples of School Artifacts

1.1 Mission Vision	• The school's Mission and Vision with an obvious STEM component or focus • Evidence of a visible articulation of the mission in the school and online • A STEM Strategic Plan in which the STEM mission and the vision have been articulated • Agendas and meeting minutes from staff meetings discussing, developing, and implementing or adhering to the STEM mission and vision • Evidence of community understanding and support of the vision on social media, traditional media, school events, volunteerism • List of clubs and extracurriculars offered at the school
1.2 Leadership	• School mission, vision, or school improvement plans • Record of administrative actions in support of STEM • Professional learning plan and schedule • Meeting agendas and minutes • PLC schedule • Teacher planning forms or agendas
1.3 STEM for All	• School mission, vision or school improvement plans with an emphasis on addressing engagement in STEM • A strategic plan that includes specific strategies and programs to engage students in STEM • Professional learning for STEM instructional strategies • Enrollment data for STEM courses and clubs
1.4 The Budget	• School and classroom budgets • Funding partnerships • Sustainability plan
1.5 The Schedule	• School and class schedules • List of course offerings • Sample student schedules • Pacing and unit or lesson plans • Grade level and vertical planning • Regularly occurring and varied student presentation events

Appendix B: Examples of Classroom Artifacts

2.1 Problem-Based Learning	• Exemplar STEM Lesson Plans, demonstrating:
	  • Engineering
	  • Collaboration
	  • Real-world contexts
	  • Community partnerships
	• Exemplar assessments
	• Year-long pacing guides
	• Student work samples
	• Samples of feedback cycles

2.2 Culture & Mindset	• Classroom discussions and dialogue • Feedback on student work/thinking • Iterations of student work • Visual messaging in the classroom • Mindset training agendas • Grading rubrics with an emphasis on reflection and iteration
2.3 Technology	• Student products, including work created with technology and technology created by students • Lesson plans • Availability of technology resources (supply lists) • Classroom/student websites, including blogs or platforms such as Google Classroom or Canva • List of all technologies and how students use them
2.4 College and Career Connections	• Career connections embedded in lesson plans • Career, pathway, and activity information, fliers, advertisements, etc. • College and career goals crafted by students and staff • Students willingly and openly discuss career options in a way that reflects STEM practices • Course lists • List of work-based learning experiences and description of participant group • Graduation data
2.5 Assessment	• Formative and summative assessments aligned to the standards • Data analysis structures in place (may be Student Learning Objectives, NEPF Goal Setting Tool, Plan-Do-Study-Act, etc.) • Student assessments, including iterations of student work • Analysis of student assessment data

Appendix C: Examples of Community Artifacts

3.1 Family Engagement	• Family event outcomes and data • Communications to families • Regularly occurring communication/outreach materials regarding STEM • Social media posts and interactions • Agendas and minutes of STEM planning meetings involving families • List of family STEM events or opportunities
3.2 Community Engagement	• Letters of commitment or Letters of Partnership • Community engagement plan • List of partners and their roles • Outcomes of partnerships • Testimonials from students or partners about their experiences working together
3.3 Student Engagement	• Mentorship or internship program plans, fliers, rosters, etc. • Showcase or presentation fliers • Student work resulting from community partnerships