



Nevada Governor's  
Office of Science,  
Innovation and  
Technology

## Nevada **STEMList** of Recommended STEM Programs

### Governor's Office of Science, Innovation and Technology

Thank you for your application for inclusion on Nevada's STEMList of Recommended STEM Programs. This list is used by schools, teachers, school districts, the Nevada Department of Education, and grantors to make spending decisions. Inclusion on this list means your program embodies research-based attributes of high-quality STEM programming, as described in the Nevada STEMList Rubric and determined by OSIT's State-wide team of STEM-expert reviewers.

A Developing rating earns conditional inclusion on the STEMList for one year while we collect additional information from your program. If we are unable to raise your scores in one year, your program will be removed from the STEMList. If we are able to increase your scores to an overall Model rating, your program will stay on the STEMList for five years.

A Model rating earns inclusion on the STEMList for five years!

Find more information about STEMList, including the Nevada STEMList Rubric and a current list of recommended programs, visit our website: [https://osit.nv.gov/STEM/STEMList\(1\)/](https://osit.nv.gov/STEM/STEMList(1)/)

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Defined has been rated as Model. Please see the scores and comments below for more information. Please reach out to OSIT with any questions or concerns.

#### **Comments from Reviewers**

Reviewers appreciated the thorough and organized application package. The program was high quality, which can be difficult for an online STEM program. Reviewers noted that the program could be used as-is for novice educators, and the supplemental materials, instructional strategies, protocols, and editing features would allow more experienced educators to enhance instruction. Reviewers noted that many of the high-quality attributes came from the supplemental materials and modification options; the as-is program does lack some of the features of high-quality STEM experiences such as students engaging in decision making or grounding the learning in local contexts. Reviewers do recommend making the implementation strategies and assessment look for's easily accessible on the main lesson interface for teachers who might not otherwise access these materials.

## **Ratings**

### A Focus on Underrepresented Students

Overall Category Score: Model

#### 1a. Equity in STEM

- Model: Equity is clearly identified as a prominent area of focus in the program's mission, vision, content and strategies.
- Model: The program has implemented evidence based, specific strategies to recruit, relate to, engage, and instruct underrepresented students in STEM, including professional development for program staff.
- Model: The program provides substantial evidence from a rigorous evaluation that its equity strategies have successfully engaged and instructed students from groups underrepresented in STEM.

#### 1b. Cultural Identity and Student Interest

- Model: The program has leveraged feedback from community collaboration to design experiences that specifically respond to participants' cultural identities, values, and interests.
- Model: The program demonstrates how it collaborates with community- based partners and families in order to leverage these interests and identities in the context of the learning.

### Nevada-Specific

Overall Category Score: Model

#### 2a. Place-Based Instruction

- Model: The program's instruction relies on local Nevada place-based materials, data, phenomena, history, positions, or issues.

#### 2b. Alignment with NV's Workforce Needs

- Model: The program clearly and effectively articulates how the knowledge and skills acquired by learners are directly related to identified in-demand STEM occupations and pathways in Nevada to those future careers.
- Model: The program uses the Nevada STEM Network Asset Map and Regional Strategic Directions to identify STEM program gaps, and describes how the program adds important new context or skills that are relevant to Nevada.

#### 2c. Replicability

- Developing: The program describes potential for success in repeating, extending, or scaling the program structure in differing communities and/or populations, but is unable to provide specific guidance for replication.

#### 2d. Partnerships

- Developing: The program has begun developing relationships with local STEM partners or sponsors, or has employees in the area who market and support the program.

## HQ STEM Instruction and Programming

Overall Category Score: Model

### 3a. Real-World Application

- Model: All learning goals and activities depend on participants explaining real-world phenomena or developing solutions to current and local problems using the practices from STEM education fields. Learning contexts are consistently relevant to participants' cultural identity and interests. Phenomena and authentic problem-solving drives the learning.
- Model: The program enriches participant experiences through complex, interdisciplinary real-world contexts. The program designs experiences to help students make implicit and explicit connections across disciplines.

### 3b. NVACS Alignment

- Model: The program demonstrates a clear understanding of the complexity within NVACS, and lessons are designed to move students toward mastery of NVACS.

### 3c. STEM Workforce Skills

- Model: STEM workforce skills, such as collaboration, communication, innovative thinking, and grit, are embedded in authentic problem solving experiences.

### 3d. Student Experience

- Developing: Participants define and solve problems given to them by facilitators.
- Model: Students engage in meaning-making by experiencing phenomena, conducting investigations, and exploring problems that mirror tasks a STEM professional encounters in their jobs.
- Developing: Experiences are guided by the program facilitator, and students have some voice and choice in their learning path.

### 3e. Innovation Culture

- Model: The program consistently utilizes strategies and methods that require participants to engage in creativity practices to explore a scenario or problem, ideation, and develop iterative solutions.
- Model: The program supports participants in developing their own engineering identities through structured use of engineering practices and the engineering design process.

### 3f. Assessment

- Model: Assessments measure participant STEM identity, interest, and motivation in addition to content knowledge and skills. Facilitators adjust learning experiences, based on assessment data, to shape an enduring STEM identity.
- Model: Facilitators rely on observations and interviews taken while participants engage in authentic learning experiences to evaluate participant understanding, growth, and/or program outcomes.
- Model: Participants receive and apply ongoing feedback from facilitators, peers, and potentially the experience itself.

### 3g. Sustainability

- Model: The program and the organization have a long-term track record of providing and sustaining high-quality programming.

### 3h. Continuous Improvement

- Model: The program regularly evaluates program content, engagement, and progress toward goals, and shows growth in each area.
- Model: The program identifies program strengths and deficits based on evaluation trends. The program demonstrates how it has made positive changes based on evaluation data.

### 3i. Program Support

- Model: Ongoing, strategic training is used to build staff (and volunteer) capacity in STEM best practices.
- Model: The curriculum or program provides ongoing training to users regarding how to implement the materials, as well as STEM best practices.
- Model: PD embodies STEM Best Practices described throughout this rubric.