Partnering to Build
Nevada’s Citizens and Workforce
OUR MISSION

To promote leadership and collaboration among business, community, education, and government stakeholders to develop nationally recognized STEM education for ALL NV students.
ALL Nevada students are provided the inspiration and opportunity to attain the necessary skills in STEM to be productive in their personal, work and civic lives.

We look forward to the day when Nevada produces the skilled and innovative workforce required to develop an internationally competitive and diversified economy that attracts key industries to our state.
Our Members

Challenger Learning Center of Northern Nevada, Paul McFarlane, Lead Flight Dir. paulsmcfarlane@sbcglobal.net
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Sierra NV Journeys
Space Science for Schools, Inc.
Terry Lee Wells Nevada Discovery Museum
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Washoe County School District
Western Nevada College, Dr. Carol Lucey, President, lucey@wnc.edu
What is STEM Teaching and Learning?

• Higher-level, critical thinking
• Research, reading, writing, defending conclusions
• Making connections with other areas such as the arts
• Teamwork & collaboration
• Inquiry learning and problem solving
• Project based learning
• Real world applications
• Integration of subjects such as science, reading, arts, social studies, math, technology, and engineering
STEM Activities

- CC Reading Standards
- NG Science Standards
- CC Math Standards
- Arts, Technology, Social Studies Standards
It is critically important that Nevada adopts new science standards in 2013

• Teachers need to develop curriculum that includes multiple subjects, as required by the CC Math and Reading Standards and NG Science Standards.

• Nevada must be able to qualify for future federal grants for STEM education
How does STEM Education Impact our Economy?

“All jobs of the future will require a basic understanding of math and science.”

Bureau of Labor and Statistics
U.S. manufacturing companies report workforce shortages:
• 63% in Aerospace and Defense
• 45% in Energy
• 63% in Life Sciences.

“Almost one-third of U.S. manufacturing companies responding to a recent survey say they are suffering from some level of skills shortages.”

Nevada manufacturing suffers from a skilled workforce shortage

Brookings Report- Industries with Potential for Economic Growth

- Tourism, Gaming and (high tech) Entertainment
- Health and Medical Services
- Business IT Ecosystems
- Clean Energy
- Mining, Materials, and Manufacturing
- Logistics and Operations
- Aerospace and Defense

EVERY TARGETED INDUSTRY REQUIRES STEM SKILLS!
“At all levels of educational attainment, STEM job holders earn 11 percent higher wages compared with their same-degree counterparts in other jobs.”
STEM Skills are Highly Desirable

• Higher level thinking
• Team work
• Problem solving
• Innovative solutions
• Communication skills

SKILLS THAT ARE IN DEMAND ACROSS THE WORKFORCE, NOT JUST STEM JOBS
Students doing hands-on projects in class more frequently scored higher.

Students who reported doing science-related activities that are not for schoolwork scored higher than their fellow students.
Nevada’s Challenges

• Elementary science, among other subjects, became marginalized in Nevada (and nationwide) for low performing students in the push for reading and math achievement under NCLB.

• Some elementary teachers have reported that they are “not allowed” to teach science or have to focus on student test performance in reading and math

• Lack of sustainability when federal funds end--promising programs lost

• STEM teachers request more ability to communicate, share and collaborate with colleagues statewide

• community outreach organizations want more access to schools
“Rather convincing empirical evidence suggests that most children who are ‘turned off’ by mathematics and science have already arrived at that conclusion by the time they are in 4th grade. “

National Academy of Science, National Academy of Engineering, & Institute of Medicine. *Rising above the gathering storm, revisited: rapidly approaching category 5.*
What Can Nevada Do?

• Timely adoption of new science standards (current standards rated a “D” grade with Thomas B. Fordham Institute)

• ALL K-8 students get adequate time learning science and experiencing STEM practices throughout the curriculum

• Stronger content knowledge requirements in science and math for K-8 teaching licensure

• Identification and alignment of exemplary STEM teaching practices

• Increased exemplary teacher professional development

• Sustainability of promising programs

• More resources for teaching STEM

• More recognition of Nevada’s many “islands of excellence
STEM Coalition 2013 Initiatives

ONE : A centralized, upgraded website for

- teacher resources and “wish list” function
- STEM expert speakers bureau
- STEM teacher mentor bureau
- Links to other NV STEM websites
- Family and community information about informal STEM programs and events
- Recognition of exemplary STEM programs
STEM Coalition 2013 Initiatives

TWO: Statewide marketing initiative to raise awareness and support for STEM education and its relation to college and career ready students

THREE: Identification and dissemination of exemplary STEM practices and phase one plan for recognition
IMAGINE A STEM NETWORK

Islands of STEM Excellence

New STEM Programs
OUR KEY SPONSORS 2011-2012

• Newmont Mines
• Southern Nevada Water Authority
• NV Energy
• Barrick Gold of North America
• Nell J. Redfield Foundation
What Can YOU Do to Support Nevada STEM?