Priority[BLM1] ~~31~~[BLM2]**: Interest and Awareness**[BLM3]

Goal 1: Increase student, parent, and teacher interest in and awareness of STEM

      Strategies:

- Make Science Scores count more heavily in Teacher and Principal evaluations. Specifically, make Science Scores a component of primary school administrators' evaluations.[BLM4]
  - Who: SBE alongside every group named below. This effort should be a cornerstone of this initiative.
- Develop an ongoing, robust STEM marketing campaign targeting students, parents, teachers, business, and other community leaders
  - Who: Office of Science, Innovation and Technology (OSIT), STEM Advisory Council (SAC)
- Develop and increase awareness of STEM career pathways for students, parents, teachers, job seekers and employers
-
  - Who: Nevada Department of Education (NDE), Office of Workforce Innovation (OWINN)
  - Don't forget "STEM TEACHER" as a very important career pathway. It is often ignored, and then we wonder why we can't get good STEM instruction.
- Develop[BLM5] and promote a dedicated STEM website based on STEM/NPWR data as a one-stop integrated resource for students[BLM6], parents, job seekers and employers for students, parents, teachers, job seekers and employers
  - Who: OSIT
- Increase STEM outreach to students, parents, teachers, and other stakeholders regarding opportunities to learn about STEM and for STEM careers
  - Who: Higher education, K-12, OSIT, NDE Don't forget "STEM TEACHER" as a very important career pathway. It is often ignored, and then we wonder why we can't get good STEM instruction.
  -
- Develop and administer a survey to STEM stakeholders such as students, parents, teachers, and employers to establish a baseline and measure results
  - OSIT
- Informal Education Opportunities[BLM7]

Goal 2: The creation of a ~~citizenry~~ society that recognizes the importance of STEM education in creating a vibrant economy

      Strategies:

- Make Science Scores count more heavily in Teacher and Principal evaluations. Specifically, make Science Scores a component of primary school administrators' evaluations.[BLM8]

- o Who: SBE alongside every group named below. This effort should be a cornerstone of this initiative.
- Educate stakeholders about the STEM strategic plan
  - o Who: OSIT, SAC
- Work with local governments to incorporate STEM into urban and regional agendas
  - o Who: OSIT, SAC, higher education, K-12
- Increase corporate philanthropy in STEM to scale evidence-based, effective and coordinated programs
  - o Business community

Metrics:
1. 5th and 8th grade science scores are already available and provide a nationally recognized benchmark
1.2. Increased number of students participating in high-quality STEM programs P-12
2.3. Increased number of students taking calculus, physics, and other STEM-related AP exams, IB math and science exams
3.4. Increased number of students completing CTE pathways in STEM-related fields
4.5. Increased number of students enrolling in and completing postsecondary STEM degrees and industry-recognized certificates
5.6. Increased interest in STEM as reported on the ACT questionnaire
6.7. Website/social media traffic on STEMHub website

Priority[BLM9] **2: Quality and Scope**[BLM10]
Goal 1: Improve the quality and quantity of STEM education in Nevada schools[BLM11]

Strategies
- 5th and 8th grade science scores are already available and provide a nationally recognized benchmark
- Increase the use of hands-on, experiential STEM learning in all grades, with particular emphasis in grades 1-5
  - o Who: K-12, NDE, OSIT, Non-profits[BLM12]
- Increase the percentage of elementary schools that teach science three plus hours per week[BLM13]
  - o Who: State Board of Education (SBE), K-12
- Increase the percentage of high schools that require three years of science and four years of mathematics
  - o Who: SBE, K-12
- Increase the percentage of students taking and passing pre-calculus and calculus in high school
  - o Who: SBE, K-12
- Increase the number of internships, job shadowing, and summer research programs, and expand partnerships with local industry

- o Who: NDE, K-12, OSIT, Business, Regional Development Authorities (RDAs)
- Restrict the use of state funds (College and Career Readiness Grants) to evidence-based, proven programs and curriculum
  - o Who: SBE, K-12, Legislature, OSIT
- Develop and promote the creativity in STEM via STEAM and design
  - o Who: SAC, OSIT, Business, non-profit

Goal 2: Increase the quality and quantity of STEM professional development opportunities for teachers and administrators

Strategies

- Make Science Scores count more heavily in Teacher and Principal evaluations. Specifically, make Science Scores a component of primary school administrators' evaluations.
  - o Who:[BLM14] SBE alongside every group named below. This effort should be a cornerstone of this initiative, and will drive districts and school houses to invest their time and discretionary funds into good STEM PD programs.
- Offer a certificate or endorsement for STEM[BLM15]
  - o Commission on Professional Standards, RPDP, NSHE
  - o Offer a recruiting bonus for STEM Endorsement teachers entering the district

- Restrict[BLM16] the use of state funds (Great Teaching and Leading Fund) to evidence-based, proven programs and curriculum
  - o Who: SBE, K-12, Legislature, OSIT
- Increase the number of teachers receiving STEM high-quality and researched-based professional development
  - o Who: K-12, Regional Professional Development Programs (RPDP), Higher education, SBE, Legislature, OSIT, non-profits
- Ensure opportunities for all students to be taught by teachers and administrators[BLM17] that are well-versed in STEM and three-dimensional learning[BLM18]
  - o Who: K-12, NDE, SBE, higher education, non-profits
- Provide[BLM19] greater support to pre-service teachers and administrators studying STEM
  - o Who: Higher education, SBE Note, please see the UNR Daugherty Science Internship as an excellent example of a public, private partnership building STEM teaching skills for primary school pre-service candidates. Consider expanding / replicating this program.
  - o
- Continue *Teach Nevada* funding for students pursuing initial licensure in STEM fields
  - o Who: Legislature, SBE
- Expand the *Nevada Teach* program to UNLV
  - o Who: Higher education

- Provide externship opportunities for teachers at STEM businesses that give real-world context to teachers and count towards requirements for professional development.
  - Who: NDE, RPDP, K-12

Goal 3: Identify and scale best practices[BLM20]

Strategies
- Promote STEM Academies and STEM-designated schools
  - Who: OSIT, NDE, K-12, SAC
- Increase the number of schools that receive the Governor's STEM School Designation each year
  - Who: SAC, OSIT, K-12

Goal 4: Increase scope

Strategies
- Integrate STEAM and Computer Science programs, activities and curricula into STEM, both during the school day and after school[BLM21].
  - Who: SBE, NDE, K-12, Business and non-profit stakeholders
- Develop and adopt computer science standards for K-12 using K-12 computer science framework
  - Who: NDE, SBE
- Allow[BLM22] advanced/rigorous Computer Science courses (AP CS A and CS III) to count as science[BLM23] requirement for graduation, NSHE admission and Millennium Scholarship
  - Who: NDE, SBE
- Other Scope Aspects[BLM24]?

Metrics[BLM25]

1. Increased number of students completing postsecondary degrees and/or credentials in STEM disciplines.
2. Increased number of teachers completing initial licensure in STEM fields.
3. Increased number of teachers completing STEM-related, evidenced-based professional development.
4. Proficiency on assessments in 5th and 8th grades, and the ACT will improve.[BLM26]
5. Increased number of schools with a STEM-specific charter, have received a Governor's STEM School Designation, or are progressing toward a Governor's STEM School Designation
6. Increased percentage of schools that require 3 years of science/4 years of math, science in elementary school, computer science and engineering, and students taking math and physics in high school.

Priority 13[BLM27][BLM28]: Equity and Access[BLM29]

Goal 1: Promote equitable opportunity for STEM education across Nevada

Strategies

- Identify schools and programs with a proven track record of engaging females and underrepresented minorities in STEM, identify best practices involved, and disseminate information across the STEM community
  - OSIT, SAC
- Develop[BLM30] a coalition to identify and apply for federal grants that fund the development and scale of STEM programs that seek to increase equity
  - OSIT, SAC
- Increase[BLM31] the number of informal/after school STEM learning and programs
  - Who: K-12, NDE, Legislature, OSIT There are excellent Non-profits seeing lots of kids with high impacts. I think there should be a note here to ID the best and find ways to increase investment here to really magnify impacts in the near term.
  -
- Increase the opportunities for applied learning, internships and apprenticeships in STEM disciplines
  - Who: K-12, Business, OSIT
- Increase STEM mentorship, particularly targeting underrepresented minorities and females
  - Who: OSIT, Business, State and Local Government
- Increase dual enrollment programs within STEM disciplines and increase the number of teachers in schools who can teach these courses
  - Who: NDE, K-12, Legislature, Governor
- Promote and develop STEM distance education
  - Who: NDE, SBE, Legislature, OSIT
- Provide technical assistance/resources for STEM school development
  - Who: OSIT
- Collaborate[BLM32] with family engagement coordinators at the state and district levels to develop a family engagement plan targeting students from underrepresented populations.
  - Who: NDE[BLM33], K-12, non-profits

Metrics
1. Increased test scores of underrepresented and female students
2. Increased number of underrepresented and female students completing calculus, physics, and other STEM courses, STEM-focused AP and IB exams, and CTE pathways in STEM fields
3. Increased number of underrepresented and female students completing postsecondary STEM degrees and/or industry-recognized certificates
4. Increased number of schools with a STEM-specific charter, have received a Governor's STEM School Designation, or are progressing toward a Governor's STEM School Designation

Priority 4[BLM34]**: Alignment and Engagement**[BLM35]

Strategies

- Promote the delivery and quantity of STEM education that aligns with Nevada's industry and workforce needs
    - Who: OSIT, GOED, OWINN, Sector Councils, Governor's Workforce Development Board
- Align secondary and postsecondary STEM content and programs with workforce and economic needs
    - Who: NDE, K-12, Higher Education, GOED, OSIT, SBE
- Use NPWR and/or GOED data to identify workforce needs and gaps in the educational pipeline, and allocate resources to effective programs in K-12/higher education that lead to skills in targeted industry sectors
    - Who: OWINN, GOED, NSHE, OSIT
- Invest in programs that provide education and training for targeted occupations
    - Who: Legislature, OSIT, Governor, K-12
- Align STEM degree and certificate attainment with industry needs
    - Who: Higher education, K-12, Governor
- Increase training and educational opportunities at the worksite
    - Business, K-12, Higher education

Goal 2: Increase STEM education, workforce development and economic development coordination and cooperation amongst state and local government, higher and K-12 education, businesses, and other stakeholders

Strategies

- Increase communication and cooperation among government, business, and non-profit STEM actors and advocates in order to align efforts and avoid duplication and waste, using the STEM Advisory Council as a central hub for communication and coordination
    - Everyone
- Expand [BLM36]the STEM Coalition's STEM Ambassador program and increase mentorship opportunities
    - STEM Coalition, K-12, Business, OSIT
- Encourage the establishment of university presidents/K-12 superintendents' presences in the business community; incentivize faculty to engage in partnerships
    - SAC, OSIT, Business, Higher education
- Encourage the establishment of *educational liaisons* from business to formalize relationships with schools
    - SAC, OSIT, K-12, Business
- Promote local chambers' and regional economic development organizations' engagement by assisting with brokering and maintaining industry-school/university partnerships
    - SAC, OSIT, GOED

- Develop and promote teacher summer externships at New Nevada businesses
  - SBE, NDE, Legislature, Business, K-12, OSIT
- Increase opportunities for internships and apprenticeships
  - K-12, Business, DETR

Goal 3: Promote the effective leveraging of state and federal funding such as funding found in the Every Student Succeed Act (ESSA)

Strategies

- Include STEM as a main component of the state's Every Student Succeed Act (ESSA) plan
  - NDE, Governor

Metrics

1. Increased investment in programs that provide training for occupations that are aligned with the state's economic development plan.
2. Reduction in workforce shortages in targeted occupations.
3. Increase in the number of schools reporting a collaboration with a business.
4. Increase in the number of classroom visits by STEM professionals
5. Increase in the number of STEM field trips
6. Increase in the number of internships/apprenticeships/externships