STEM Vision Statements

These issues were identified at the Forum and then consolidated into Breakout Topics for further discussion:

Topic 1 – Partnerships across sectors and collaboration organizing structure

- Business, Education, Government, UC, CSU cooperation and partnerships to support STEM

- Mentorship programs between government, contractors, businesses and school districts

- Coastal collaboration/network of curriculum K-16, projects, facilities, etc.

- Collaborate with Transition Town movement (green movement)

- STEM education leadership ACAD

- Interdistrict collaboration in STEM

- County Office of Education more involved in teacher preparation

- Credential partnerships between SLO and local school districts

- Textbook companies build in EEI—"green" technologies, STEM into hands-on, interactive curriculum for teachers

- Cooperation for students to create ways to impact community stewardship

- More opportunities to connect educators with community support

- Field trips: VAFB, Diablo, Oil platforms, Local Maker Faire, Family Science Nights

- Have enough partners and resources to provide students with real world opportunities

- Involve at-risk families

- Think outside the box
- Bring agriculture community into our discussion and develop the idea that farming is science

Topic 2 – Funding

- STEM Regional Collaboration across entire state
- STEM Grant Writers Collaborative
- Funding mechanisms made available through a coordinated clearinghouse
- Support from community stakeholders
- Common vision/assessment of tools and places to share

Topic 3 – Teacher Training and Support

- Access to technology
- Dedicated STEM lab at every elementary school with teachers trained to teach STEM
- Model STEM schools—elementary, middle and high schools—in our county
- Change in NCLB to allow science teaching in schools
- "Learn by Doing" teacher training
- Learn by Doing STEM problem solving, inquiry, hands-on approach
- Professional development presented by educators and experts in the field
- Inquiry-based learning facilitated
- Professional development for elementary teachers to support content, knowledge and instructional strategies to teach STEM
- Professional development of counselors on STEM careers
- Integrate curriculum K-12
- Integrate all curriculum areas in STEM education
- Teacher/STEM network
- Enhance the learning experience for each child:
  - Exposure to career possibilities,
  - art connected to STEM experience,
  - present to an authentic audience,
  - connect to CASRC curricula,

Topic 4 – Student Mentoring/Apprenticeships

- Students more involved in designing their education

- Research opportunities for high school students

- STEM Mentor Network

- Student mentoring—college students talking to high school students talking to middle school students talking to elementary students about STEM

- Involve teen educators in elementary education

- Student-led STEM initiatives to lead families to reduce carbon footprint by 10%+++

- Rotating speakers who want to motivate and inspire youth at assemblies

- STEM speaker series as a Career Building experience—K-12

- STEM showcases—School assemblies and County events

- Mentors available in all areas of interest (an Army of Mentors)—need to define the structure to accomplish this

Topic 5 – Project-based Learning

- Develop hands-on, engaging STEM activities at all levels—elementary, middle school and high school throughout the Central Coast

- More extracurricular activities/clubs like FIRST Robotics

- Broaden curriculum to encourage innovation

- Product development project-based learning opportunities for students driven by industrial experts

- Take it beyond the classroom

- Real world experience and applications (learn by doing)

- Internships

Topic 6 – Out-of-Classroom Learning

- More STEM science camps

- Establish Summer STEM Academy

- Opportunities (added later: "for students") to teach STEM topics in public settings

- Support for student field experiences (field trips) through an integrated network for professional development, lesson resources and funding

- Technology in classrooms K-12 updated

- Combine STEM and "green" technology and schools—build connections at school

- STEM education to help create green communities—post petroleum societies—alliance with Transition Towns

- Math through music focus

- Seek connections with performing arts and STEM

- After-school STEM programs—partnership with business—ROP and math and science, CTE and business partnership

- Build a SLO Discovery Center/Institute

- Opportunities for students and families in STEM in and out of school setting

- Parent learning events for STEM

Topic 7 – Promote STEM Image

- Make math and science more hip

- Atmosphere in schools that values learning, being bright—magnet schools

- Team effort to promote STEM

Topic 8 – Communication

- STEM clearinghouse website/database—business, community and organizations enter their offerings, resources, speakers

- STEM collaborative—calendar, regular meetings, grant partnering

- STEM event calendar in tri-counties to share information

- STEM network—disseminate research and development ideas

- Communication—blog, email group, etc.

- Publicity for STEM opportunities

- Media Coverage—recognizing successes in timely and valued fashion—county office liaison

- Cooperative events for STEM—inexpensive and collaborative

- Organization of accessible STEM resources

Topic 9 – Improve STEM instruction K-12

- STEM education in elementary and middle schools

- Elementary programs/competitions in STEM

- Small Central Coast advocacy groups – state and national policy

- People in the field talking face to face with students to open their eyes to what is available as careers

- More technology in classrooms

- Cooperation between schools

- Build an Infrastructure Academy for students to understand where their food, water and energy come from on the Central Coast

- Countywide K-12 robotics competitions and activities

- Structured support system (added: curriculum, teacher training, CTE/Technology mentors, etc.)

- STEM imbedded into daily curriculum (space for more individual tutoring as well)

- Meet the goals that the president identified around STEM education

Extras

- In 2-5 years—have the Central Coast become a national model for STEM pioneering business collaboration with educators and after school programs with some federal funding to assist…

- Coordinated partnership in STEM education with all stakeholders offering access to centralized resources

- Eliminate obstacles to STEM success

- Expand STEM, health and physical education

- Think Globally

- Alternative fuel sources

- Waste management that excludes landfills

- Solar panels that are more efficient than a blade of grass

- Fusion (erased)

- Wow (mom) moments

- A branded, managed structure of student level to student level to practicing STEM professional classroom STEM career vision visits; IT managed and stakeholder approved

- Area-wide STEM contest/fair