**Flagstaff STEM City Executive Summary**

**January – December 2015**

**Business-School Connections**

Over 100 Connections were made during the 2015 calendar year. These Connections included over 60 businesses, government agencies or organizations. Many of the Connections are sustained partners we have cultivated for the past three years. However, new partners are added each year. Sixty separate classes/clubs and approximately 2,500 students were affected through long-term class mentorships, one-day class programming, or STEM club activities and fieldtrips. Approximately one-third of the Connections are monthly business mentors in 6th, 7th, and 8th grade science classes at Sinagua Middle School (SMS) through the “Scientists in the Classroom” program developed by Jillian Worssam. Ms. Worssam is an 8th grade science teacher at SMS who was also Flagstaff’s first *STEM teacher of the Year* in 2012. Mentorships were established by Ms. Worssam, the STEM City coordinator Mindy Bell, or through the Greater Flagstaff Chamber of Commerce’s “Skills for Workplace Success” program.

**NAU- School Connections**

STEM City had three NAU School of Earth Sciences and Environmental Sustainability undergraduate students as interns in the fall of 2015. They all increased the capacity of STEM City and worked with local teachers on different initiatives. Many NAU students and professors are engaged in long-term partnerships with teachers. A Global Engineering Outreach group is working on a three-year to date project at Killip Elementary School, and several others assisted (some for the third year) with the “Future City” program at Sinagua Middle School, gaining considerable media attention. Many NAU affiliated personnel assist with the FIRST Robotics tournaments in Flagstaff. NAU graduate students, alumni, and professors have assisted in guiding local field trips and leading investigations with students in classes.

**Present Grants**

*BioSEEK*

Initial funding from APS and the Flagstaff Community Foundation has been bolstered by present funding from the Arizona Community Foundation of Flagstaff to maintain our bioscience outreach program. STEM City provides six unique BioScience Education Enhancement Kits (BioSEEK) to local educators. Descriptions are under the Resources tab on the STEM City website.

*FlagstaffSCIES*

The Flagstaff STEM City Initiative for Environmental Science was established by Sarah Burcher, an NAU Graduate student with a SFAz GRF scholarship. Sarah created a website, built soil and water kits, and assisted a teacher in using the kits with her students. The kits are available for checkout by educators. Descriptions are under the Resources tab on the STEM City website.

*Engineering is Elementary Out-of-School Time Program*

Funding from the Arizona Community Foundation provided personnel time and materials to build two EiE kits for 3rd – 5th graders, and two for 6th – 8th graders. These are available for loan through STEM City. Descriptions are under the Resources tab on the STEM City website.

*SFAz + 8 Grant* with Coconino Community College

SFAz received an NSF grant to fund Engineering Pathways through eight rural community colleges in Arizona. STEM City coordinator Mindy Bell assists in providing engineering materials (including two additional EiE kits at each school) and field trip funds to FUSD middle School STEM teachers.

*iCREATE Grant* with NAU’s Center for Science Teaching and Learning

Partner on the iCREATE (Innovative Collaborative Research Experience and Technical Education) grant for NSF funding for adding both a community and a technology component to CTE bioscience education in northern Arizona.

*PLANETS Grant* with NAU’s Center for Science Teaching and Learning

Partner on the PLANETS (Planetary Learning at the Nexus of Engineering, Technology, and Science) grant with the CSTL, USGS Astrogeology Center, the Engineering is Elementary team at the Museum of Science Boston, and others, to create, test, refine and disseminate EiE kits with science-rich content in Flagstaff and beyond.

*STEM VISTA Grant* with NAU’s Civic Service Institute

Will host VISTA Leader at STEM City Center and collaborate on fulfilling goals of the 14 other VISTA members placed in schools and non-profits to increase STEM capacity.

**Community Engagement and Collaborations**

STEM City Center met and collaborated with many people and organizations involved in STEM-related programming.

* Arboretum at Flagstaff – advertise the Middle School Climate Change Curriculum provided by the Arboretum, field trip opportunities to the Arboretum, and summer camps at the Arboretum. Wrote a blog post on the “I’m Lichen It” project with the Arboretum and Susan Brown’s 7th grade classes at Northland Preparatory Academy.
* Arizona Project WET Water Festival – advertise for volunteers for this annual event for all 4th grade students in Flagstaff
* City of Flagstaff - partnered with Willow Bend and the City of Flagstaff on a successful Heritage Grant through Arizona Game and Fish
* City of Flagstaff Sustainability Department – advertise their Fix-it Clinics and their educational programming for the community
* Civic Service Institute at NAU – collaborated on successful STEM VISTA grant to support 15 members to increase STEM capacity in Flagstaff; hosted an Americorps Member; will host VISTA leader
* Coconino Association for Vocations, Industry, and Technology – served on the board selection committee, disseminated information to support renewing JTED funding
* Coconino County Education Services Agency – presented the STEM Teacher of the Year at the annual Teacher Education Week Award ceremony
* Flagstaff Commission on Excellence in Education – serve on this committee working to improve specific areas of need in Flagstaff’s educational system
* Flagstaff Arts Council – serve as judge on the Science Educator of the Year for the Viola Awards
* Flagstaff Public Libraries – promote STEM-related events at both the Flagstaff Public Libraries
* Flagstaff Unified School District – had key role in organizing the 3rd Annual Flagstaff Community STEM Celebration held on March 7, 2016 at the NAU Dome.
* Future City – Provided volunteers to assist with Future City program at Sinagua Middle School and judged Future City competition in Flagstaff
* Girl Scout’s Cactus-Pine Council – increasing publicity to Girl Scout efforts to promote STEM education in Flagstaff, presented at Girl Scout leaders, promoted Video Game Weekend workshop at NAU
* Grand Canyon Trust – serve on the Youth Engagement Committee to increase student citizen science opportunities for Flagstaff youth
* Greater Flagstaff Chamber of Commerce – serve on the Education and Workforce Committee
* Killip Elementary School – assist Killip in a variety of ways as they build their integrated STEM program
* Northern Arizona Leadership Alliance – serve on education committee
* Rodel Education Foundation – provided contacts for and attended their event
* Science Foundation Arizona - attended Tiered Mentoring (ENLIST) meetings
* Sustainable Economic Development Institute – presently co-chair the Education Committee for SEDI, working toward increasing the number of teachers applying for the TASC awards as well as building new initiatives for sustainability education; presented STEM Teacher of the Year award at their annual awards ceremony
* Teachers in Industry - Partnered with Martha Ostheimer and Julia Olsen on attempt to expand Teachers in Industry to Northern Arizona
* Willow Bend – partnered with Willow Bend and the City of Flagstaff on a successful Heritage Grant through Arizona Game and Fish
* The Wonder Factory – advertise events for The Wonder Factory
* United States Geological Survey – assisted in getting USGS maps and materials out to Flagstaff classrooms

**Marketing and Media**

* Arizona Daily Sun - Science and Research special edition, plus two guest articles
* STEM City Blog – 41 blogs
* Community E-letter – 28 newsletters
* Teacher E-letter – 20 newsletters
* Facebook Posts – ~ daily posts
* Twitter posts – ~ daily posts
* Instagram – initiated, ~ 20 posts
* Pinterest – over 200 pins in all STEM categories