Molly Faber
NW Regional STEM Manager
Send me an e-mail

Upcoming Events:

Tuesday,
June 23, 2015
Governor's STEM Advisory Council
Executive Meeting
Monsanto, Huxley

Monday,
July 20, 2015
NW STEM Advisory Board Mtg.
Sioux Center

Northwest Regional Advisory Board Members
A special thank you to the Advisory Board of NW Iowa.

Kathleen Bottaro, Sioux City
Barbara Den Herder, Sioux Center

"It gives kids a hands-on inquiry based experience that lets them interact with technology in a similar way that real world professional do at NASA that work
The last week in May was an out-of-this-world experience for twenty-four 4th through 7th grade students in Osceola County.

Mars Rover STEM Camp, hosted by Iowa State University Extension and Outreach, provided students with a glimpse into the world of space exploration and navigation.

Held at Sibley-Ocheydan High, ISU Extension and Outreach Youth Coordinator, Michael Compton, and Prairie Lakes AEA Instructional Technology Consultant, Mike Anderson, transformed one classroom into Mission Control and an adjacent classroom into Mars.

Students attending the camp formed teams of 3 and were given various tasks to complete while their rover was on Mars. In order to complete the various tasks, students were given EV3 robots, GoPro cameras, one iPad to control the rover and one iPad to control the camera which sent live feed from the "Martian surface" as they remained at Mission Control.

Each task that was completed earned the team points.

The tasks ranged from taking photos of unique features, collecting soil samples, deploying a base and locating a stranded rover. As an added challenge, students performed the tasks on Mars during both daylight and nighttime conditions, courtesy of black lights set up in the classroom.

In addition, students were able to have a live Google Hangout sessions with Christine Fuller, an electrical engineer who works for NASA's Jet Propulsion Lab and Scott Maxwell, a former Mars Rover drive of 8 years. Fuller was in a lab at JPL and showed the students a robot that they were working on that could walk on glass and hoped to use in space one day. After sharing her experiences and work, she took questions from the students.

Maxwell gave a brief presentation about the current Curiosity rover and how it interacts and how it's programmed. He then spent the remaining 40 minutes answering the students' questions. Maxwell later e-mailed Compton and stated that the questions he was asked were some of the best he has ever heard from young people.

Mars Rover STEM camp has successfully taught students problem-solving skills, critical thinking skills, the value of teamwork and an understanding of what a career in space exploration might be like.

A 5th grade female camper summed up her experience, "I like the fact that we got to problem solve without the help of adults."
Real World Externships begin in Northwest

On Friday, June 12, teachers participating in the Real World Externship program attended orientation at Iowa Lakes Community College on the Spencer Campus.
The six-week Externship experience is a win for both the teacher and the business host. Teachers get an inside look and first-hand knowledge of what skills businesses are looking for when they are hiring new employees. Teachers create projects and hands-on activities to bring back to their classrooms in the fall in hopes of sparking interest in STEM and providing guidance for the future workforce. Businesses also benefit from hosting Real World Externs because teacher-externs bring a different perspective to the businesses. They often bring fresh, new and different approaches to tackling issues and problem solving.

Jason Lang, supervisor of the Real World Externship Program, led the orientation for teachers. Lang stated, "Our program gives teachers the opportunity to see the eventual outcome of the content, skills and techniques they teach in the classroom. However, we know it's not just the teachers that benefit from the experience. Our teacher's abilities to work independently, be infinitely create and offer new insight brings value to the externship host as well."

Within the Northwest region, four teacher-externs have been matched with businesses near their home school districts in order to help create a lasting partnership between industry and education. Throughout the orientation teachers discussed their goals, and concerns about their summer Externship adventure.

The 4 Teacher-Externs are:
Christine Haden, Sioux Center High School - Diamond Vogel
Brian Lawrence, Spencer High School - Rosenboom Machine & Tool
Tyler Robyn, Orange City - Rosenboom Machine & Tool
Kristine Turner, Estherville Lincoln Central - GKN Wheels

To find out how to get a tour or learn more about Real World Externships, e-mail Info@IowaSTEM.gov or mefaber@iowalakes.edu.

Want to stay connected and informed about events and opportunities?
Connect with NW STEM on social media to stay up to date on the latest events and opportunities throughout the NW region and all of Iowa!

Follow us on Twitter  Like us on Facebook

Opportunities for STEM Volunteering and Mentoring
Volunteer Iowa is excited to announce a new statewide volunteer recruitment system, Get Connected. Get Connected is user-friendly and has many innovative features, plus mobile technology. Get Connected will do more than just create matches among the service community and private citizens; it will also help to build lasting
If you were already using the state's online volunteer matching portal through [www.volunteer-iowa.org](http://www.volunteer-iowa.org), your agency's information has been transferred to the new system and you have probably already received several messages about it.

If you have not already done so, please take the time to attend the Get Connected 2.0 agency training, which will help you manage your profile and opportunities. You can [register for the training here](http://getconnected.volunteer-iowa.org/).

Please make sure to keep your agency information and volunteer opportunities up to date so potential volunteers can easily sign on to help out. Use this link to sign up or log into your account: [http://getconnected.volunteer-iowa.org/](http://getconnected.volunteer-iowa.org/).

Please make sure you choose STEM as a cluster so your opportunities will be part of volunteers searching for STEM volunteer opportunities.

If you have any questions, please feel free to contact the Iowa Commission on Volunteer Service at [icvs@iowa.gov](mailto:icvs@iowa.gov).

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**The Ties that Bind Iowa STEM**

*Who across Iowa makes up the fabric of our STEM network?*

That question is one of the factors being examined by Iowa's assessment consortium working under the National Science Foundation-funded Iowa STEM Education Evaluation (I-SEE) grant. The answer will strengthen ties across Iowa and help inform other states seeking to replicate the STEM Council's model.

The process is called Social Network Analysis (SNA), which measures and maps relationships and flow of information between individuals, groups and organizations. Iowa's SNA will identify partner connections, leaders, bridges, and clusters in the network, visually and statistically. So far, the SNA data reveals that partners in Iowa's STEM network average 31 connections with two degrees of separation on average, which is a very tight network. Moreover, Iowa's STEM network is nearly clique-free, where as many networks of this size are hobbled by cliques that inhibit information flow.

The next step for Iowa's SNA analysis is to use Geographic Information
Systems (GIS) strategies for deeper, more specific questions regarding the growth, limits and key players in the STEM network and how information is transmitted across the network. The data can be used to identify individuals for new leadership positions, connect people across STEM professions, identify key STEM people by region and profile engagement by sector-educators, business leaders, non-profits or government.

The full preliminary SNA will appear in the annual Iowa STEM Monitoring report due out in early August. For more information, send your contacts and curiosities to the SNA project leader for STEM, Andres Lazaro Lopez, Ph.D. Student, Department of Sociology at Iowa State University and research assistant for the Research Institute for Studies in Education (RISE) at alopez@iastate.edu.