TEACHERS IN SPACE

www.teachers-in-space.com June 2015

TIS Alumni Spotlight: Jill Weaver

Jill Weaver teaches 8th grade science at Valley View Junior High in Ohio. She has been proactive in taking inspiration from the TIS 2013 Flight Experiments Workshop, learning, fundraising, and implementing exciting STEM projects in her classroom.

In a letter to TIS, Jill shared: "Since our workshop I have been trained as a STEM Fellow and have been bringing project-based hands-on learning into my classroom. I have sponsored numerous projects on Kickstarter and Indigogo to gain electronic and robotic platforms and have started learning Arduino programming so I can teach my students. I attended an ARRL workshop last summer and it was instrumental in furthering my learning of robotics programming and coding."

Jill is in the process of studying for her Amateur Radio License, which will come in handy in future high altitude balloon launches.

"It has taken me several years and multiple grants from The Air Force Association but I finally have students working on a payload for an upcoming balloon launch" said Weaver.

The balloon launch will include a grant funded balloon and parachute and a spot tracker system.

She was able to secure school district funding for a very popular junior high afterschool robotics program. She will be coaching her school district's FIRST Lego League Team.

"In robotics club we have learned how to use various robotics platforms including Sphero, Ollie, Edison, Boe-Bots, Deltas, Cubelets and Sea Perch underwater ROVS" Jill stated.

For a culminating project students prepared and presented at a school board meeting and received rave reviews.

After learning about 3D printers during the TIS workshop, Jill wrote a grant and received two classroom 3D printers.

When her science classes studied earthquakes, she worked with her students to design a prosthetic limb for amputees injured in crushing accidents as the result of earthquakes. Student-designed prosthesis were tested by graduate students at the local university on an Instron machine to see how much weight the limb could support running and jumping as part of a physics unit about forces and motion.

This summer she will be part of an NSF-funded research experience for teachers where she will be working in a lab taking MRI data and interpreting it to build and model prototype joints and ligaments on a 3-D printer system.

She will have a busy summer as she was also selected to attend Glacier Institute in Montana as part of a climate research study for teachers the week of June 21-27.

Jill's favorite parts of the TIS Flight Experiments Workshop were wandering around NASA Ames and seeing college interns and young professionals working in the lab; meeting other passionate educators and networking; and launching a high altitude balloon and tracking its journey into the Stratosphere.

Late Registration Open for TIS Summer Workshop!

We are sorting through the applications and sending out notices to our teacher participants soon. If you still want to get in on the workshop we have a few spaces left. Just fill out late registration form at www.teachers-in-space.com

This year we will be hosting the event at the AeroInstitute in Palmdale, California, from Thursday August 6th, through Saturday, August 8th.

The workshop focuses on flight experiments with remote data sensors and how teachers can use these resources to bring STEM education into the classroom. Educators will have hands-on learning experiences with CubeSats, PocketQubes, other small satellites, and Arduino-based data sensors. Highlights of the workshop will include a tour of the SpaceX facility in Hawthorne California and more!

Attendees of this workshop receive a certificate for 20 hours of professional development time. $100 registration fee (non-refundable after June 6) includes admission to the 2-day workshop, tour of SpaceX factory, transportation from Palmdale to SpaceX and from SpaceX to LAX airport on Day 3.

Spacesuit Testing Update

Teachers In Space is scheduled with Zero-G to test the Final Frontier Design spacesuit November 18-19, 2015. This test is the first of many testing efforts. We are writing grants and seeking sponsorships to restart the Teachers In Space *Surviving Space* workshops. The *Surviving Space* workshops will coordinate with ongoing spacesuit testing opportunities following the model of the Flight Experiments workshops and Flight Experiment Design contests.

The initial test team for November is expected to include two members of the TIS team, one contestant from the 2014 essay competition, and one member to be chosen when funding is complete: by a sponsor, grant, or new competition.

Volunteers are working hard to make this happen. You can help by volunteering or by sending your creative suggestions for sponsors, grants, and other funding sources to info@teachers-in-space.com.

To continue offering programs so far below cost (this summer's workshop is only $100) TIS needs all the support it can get. All work is volunteer so every dollar goes directly to program costs. Donate here: http://teachers-in-space.com/donate/ Do you know a business that might be interested in sponsorship? Please send an email to info@teachers-in-space.com