# JUST ADD WATER

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A week of hands-on science projects changed the way Jose Galang, a junior at Juan Diego High School in Draper, thought about science.

"I used to think that scientists were really smart people just doing research and experiments by themselves," he said. "I never realized there were so many people working together to solve problems."

Galang was among nine high school students who participated in the National Science Foundation funded-iUTAH (http://iutahepscor.org/) summer research institute (http://iutahepscor.org/education/summer_institute.shtml) July 11-15, 2016. The institute brought together high school students, secondary education teachers and undergraduate students to conduct research on water sustainability in Utah under the direction of faculty, postdocs and graduate students from universities across the state.

The group got a firsthand look at what research looks like in several disciplines. On the first day, they recorded observations about the conditions along Emigration Creek and collected water samples. The second day, they learned how to trace the origin of fruits and vegetables by analyzing isotopes in the water content. The third day, they divided into groups across the valley and conducted social science research by surveying people about their access to water. The week culminated in a poster session, where participants presented their work and findings.

"This program provides a really unique opportunity to bring together students and educators from all along the STEM pipeline," said Louisa Stark, director of the iUTAH Summer Research Institute and U professor. "There was a lot of peer mentoring going on between the high school students and undergraduates and among the secondary education teachers and the university faculty."

Mitzy Ocampo, a junior at West High School, decided to apply to the program after learning about it at a Latinos in Action conference. LIA is a Utah-based nonprofit organization dedicated to bridging the education gap in the Latino community.

"Most of the opportunities presented at the conference were for internships and programs you could do in the future," she said. "I wanted to live right now in the present, and this was one of the few opportunities I could do now."

When Ocampo goes to college, she'll be the first in her family to do so.

"I didn't think science was a possibility for me," she said. "But now, maybe I could explore it more in-depth."

Ocampo's favorite part of the week was conducting surveys under the direction of Utah State University environmental and society professor Mark Brunson.

"Doing the surveys forced us to come out of our shell," Ocampo said. "in a normal science class, we would just be inside the classroom. I learned that scientists do so much more than work in a lab. They have to go out and sometimes get rejected by people."

Even though some people didn't want to take the survey, Ocampo was pleasantly surprised to see the diversity of people who were willing to take the surveys, and by the end of the day, they had about 130 completed surveys.

There's a good chance the data collected by the group will eventually be used in a published research paper, said Rachel Gabor, postdoctoral fellow in the U's Global Change and Ecosystem Center who lead the water collection project.

Gabor was excited to get an entire new data set in one day and says the sample will help researchers understand how the impact of E. coli in the creek changes through the canyon.

"It's important to make our research accessible," Gabor said. "Our research is funded by the public and is used to inform decisions that affect the public, so it's important that they know about it and even get involved with it. I loved working with the students and teachers this week. Every chance I have to work with students makes me a better teacher."

This summer marked the fourth and final year of the iUTAH Summer Research Institute. Funding for iUTAH concludes in July 2017.