Published in Utah State Engineer – Oct. 2, 2017 – It's hard not to get excited about science and engineering after a weeklong, research-themed summer camp in the mountains. This summer, more than 40 middle school students from across Utah came to Logan for the 2nd annual Gear Up Engineering Camp. The event offers a snapshot into engineering, the “E” in STEM (science, technology, engineering and math).

The camp is part of a seven-year project funded by the U.S. Department of Education and USU’s College of Education & Human Services. Dr. Kurt Becker, a professor of engineering education, is a co-investigator on the project. He says part of improving engineering education programs starts with understanding what motivates young people to pursue STEM degrees.

"The camp gives us an opportunity to interact with students and learn what aspects of STEM interest them.” said Becker. “We want to understand what changes their minds about pursuing STEM careers.”

Environmental engineering undergraduate student Darianne Wiley helps a camper test a water sample.

Becker says peers, parents and a variety of factors can influence how teens choose a major. By evaluating participating students’ goals and perceptions early in the camp experience, Becker and his colleagues can evaluate how their interest in STEM changes over time.

As part of the Gear Up program, students worked with engineering students and faculty conducting water quality research in the Bear River watershed. They hypothesized about what impacts water quality, collected data from streams and presented their findings in a poster session.

“We want them to start thinking about big-picture problems,” said Becker. “That’s what engineers do. Hands-on research shows participants what engineers do every day.”

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