Effects of Real-World Research Projects on Student Motivation and Problem-Solving Skills

TERESA MUSGRAVE, Tolar High School, MICHAEL HIBBS, Tarleton State University — High school students have difficulty with the application of science principles and with motivation to expand on their science education. We have conducted a project designed to address these issues by allowing the student to do real research using various tools in astronomy. Through the use of the Hands-On-Universe software and Tarleton State University's observatory, high school students have been able to define and research problems in astronomy. The effects of this research on the students is still under study, but preliminary indications are that students involved in this type of work develop better scientific problem-solving skills and are more motivated to work beyond the normal course load.