NASA SPACE EXPLORATION WORKSHOP ON CAMPUS

Last month, Dr. Ronald Rinehart and two of his students, Tori Wells (Elementary Education) and Tyler Brown (Physics Education), attended a conference at the Johnson Space Center in Houston, Texas. At the Space Exploration Educators Conference, they went to lectures and workshops led by in-service teachers and NASA affiliated scientists and designed to teach educators how to bring the ideas of space exploration into the classroom. Taking in everything they learned from NASA, Rinehart and his students will host one of their own. The workshop is free to UNI students.

“We decided our goal was to let our pre-service teachers see what space exploration means, not just space science, but with an emphasis on the explore part—how you get there and actually do the work of exploring space.” Speaking about how space science is taught in schools today, Dr. Rinehart explains further, “That exploration word is missing, so you learned that there are planets or you learned that there’s this or that or this other thing, but there’s no description of how we got there. How did we figure this stuff out? And I think that process piece is pretty essential if you want to come to appreciate the core of the discipline.”

According to Dr. Rinehart, teaching space exploration on top of space science is important. It’s about inspiring the next generation of space explorers, whether that is through manned exploration or through robotics. The workshop will help UNI education students become future teachers of space exploration.

In the workshop, pre-service teachers will learn how to help their students plan for a mission to Mars. This will be done in three stages, each drawing upon an interdisciplinary approach where students will use and develop not only math and science skills, but reading, writing, programming, and problem solving as well.

In phase one, students will learn to pack for their trip to Mars. In phase two, students will learn to construct simple rockets. The third phase is the robotic exploration of a large, simulated Mars-like terrain.

“We’re giving them some authentic challenges that NASA scientists actually have to face . . . we’re trying to introduce that,” Rinehart explains. “Still, it’ll also be fun and interesting . . . We’re hoping teachers will really find something meaningful that they can take back and do these kind of activities with their students. All three activities integrate. They pack for Mars, they launch for Mars, they land on Mars, and they explore Mars.”

Besides the robots used in phase three, the entire activity is very affordable. The workshop will include talking to the teachers about how they might apply for grants for their own future classrooms.

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Where: University Room, Maucker Union
When: April 22nd, 3:30-5:30pm

Tori Wells, Dr. Rinehart, and Tyler Brown at the Johnson Space Center