

Out-of-this-world experience

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RATHDRUM - Sophie Milam spent eight months living in a Mars simulation for a NASA program, but inquisitive local students brought her down to Earth on Wednesday.

Milam was among six people chosen from 700 who applied to conduct research in the simulation in Hawaii from October to June. She spoke about her experience to students in Dave Johnson's summer robotics camp being held at North Idaho STEM Charter Academy.

"Life on Mars is a lot like life on Earth and fairly normal - other than you have to wear space suits to go outside," Milam said after her presentation. "The atmosphere on Mars is very thin, so all the air we got was through a ventilation system. You have no real contact with the environment and you can't have a bunch of windows because you're shielded from radiation."

The 27-year-old, who lives in Smelterville and recently received her master's degree in mechanical engineering from the University of Idaho, was named by Forbes magazine among the top "30 Under 30" in Science for 2015.

Eighth-grader Daniel Simmons said he considers Milam to be a role model.

"She loves her work and knows what she's doing," he said.

Simmons said he admires Milam for her dedication to research.

"Staying secluded for so long would be hard for me," he said. "I'm more of a social butterfly."

In Hawaii, Milam lived in a dome on the desolate slopes of Mauna Loa under the University of Hawaii's HI-SEAS (Hawaii Space Exploration Analog and Simulation) program. The research gained insights into psychological, social and biological challenges of isolation and confinement.

"We learned how to cook with freeze-dried foods," she said. "We learned a lot about living ultra-sustainably."



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Sophie Milam, a recent graduate of the University of Idaho, far right, shows students of ZeroRobotics at North Idaho STEM Academy the parts of a rover she built during her eight months as the chief engineer on the HI-SEAS mission, a NASA program aimed at simulating time spent on the planet Mars, during a presentation at the Rathdrum school on Wednesday. Students pictured from left are Basquiat Nelson, Christopher Hartman and Josh Hudlet.

Milam said, just like on Earth, there were both down times and workout times.

"And you still had to put up with personalities and quirks," she said. "We crammed building friendships into eight months."

Adjustments had to be made throughout the mission.

"We ran off of solar power so if it was a cloudy day you couldn't cook," she said. "You can't cook at night because you don't want to waste energy, so you do it during the day when there's a surplus of energy."

Milam said it was a once-in-a-lifetime opportunity, but she was also glad to leave the Mars mock-up. On June 13, the six explorers "returned to Earth" by taking a plunge from an Army Chinook helicopter over the Kona side of the Big Island with support of the Army's Golden Knights parachute team.

"I was fine during the whole mission, but eight months is a long time to go without seeing friends, family and my dog, Charlie," she said.

Johnson said he couldn't resist the opportunity to invite a science hotshot in our backyard to speak with the students.

"She got closer to Mars than probably anyone these kids will meet," Johnson said. "I want them to be introduced to as many people who work in the space program as possible."

Milam said the experience has prompted an interest in developing an engineering outreach program for youths.

"By staying in math and science, you can experience cool adventures," she said of her message to kids.

Milam said she believes life can exist on Mars.

"I would go if I could, but I don't believe that will happen in my lifetime because the technology isn't there," she said. "But the next generation has a good chance of being able to be a part of that."

Milam said she's not entirely bummed about receiving a one-way ticket to Mars, however.

"Earth is fantastic," she said.