



Cleveland Heights High School science teacher set for polar research expedition in Alaska

Published: Friday, June 17, 2011, 8:00 AM



Ed Wittenberg, Sun News

By



Jim Miller/Special to Sun News

Jim Miller, who teaches 10th-grade biology at Cleveland Heights High School, is inside a "pig," a device used to clean the inside of the Trans-Alaska Pipeline, while in Fairbanks, Alaska. Miller will work with other teachers and scientists from Cornell University for two months this summer in Barrow, Alaska, on a polar research expedition.

Jim Miller, a science teacher at Cleveland Heights High School, always has been interested in field experiences.

"It's the best way to learn," he said. "Then I bring all my experience back to class. I think that's what it's all about."

This summer, Miller will work with scientists from Cornell University in Barrow, Alaska, for two months observing minute life forms in the thawing permafrost.

He was selected as one of only 12 teachers, out of 250 applicants, in a nationwide search to participate in PolarTREC, funded by the National Science Foundation.

It's an educational research experience in which K-12 teachers participate in polar research. TREC is an acronym for Teachers and Researchers Exploring and Collaborating.

"PolarTREC is an amazing program," Miller said. "They take teachers and place them with scientists in the field in polar regions, either Arctic or Antarctic. I was open to either one."

Miller, of Fairview Park, leaves for Alaska June 20 and will return Aug. 15.

First time in polar region

The past three summers, Miller has traveled to other continents through Miami University's Earth Expeditions program. It's a global education and conservation program offering graduate courses worldwide.

Three years ago, he learned about rainforests in Costa Rica, a country in Central America. Two years ago, he went to Belize, also in Central America, to study coral reefs.

Last summer, he traveled to Namibia, a country in Africa, to learn about cheetah conservation.

"The programs I've done in the past were mostly in hot regions," he said. "So I thought I would broaden myself and do one of the polar regions."

Barrow, where Miller is being sent, is the northernmost city in the United States. He said temperatures there range from 25-60 degrees during the summer.

"But it's cold and windy, right on the Arctic Ocean," he said. "We will have days with 24 hours of sun, which will take a lot of getting used to."

Miller traveled to Fairbanks, Alaska, in February for a week of training with the other teachers involved.

"It was the first time I had been there," he said. "It was about 20 (degrees) below zero, and we got two feet of snow — which is not typical — while we were there."

Online connection

Miller will be part of a research team in an authentic scientific expedition in the Arctic. It's a program that allows teachers to experience firsthand what it's like to conduct scientific research in some of the most remote locations on Earth.

"I am staying at a science consortium, so there will be multiple schools doing research at the same time," he said. "So it will be interesting to see what other students have going on and to bring it back to the community and the schools."

While there, teachers and researchers will share their experiences with scientists, educators, communities and students through the use of various Internet tools.

"I will do a couple connect events where people can connect with me," Miller said. "I'm hoping to connect with schools that have summer school going on, anywhere."

"I will also be journaling daily while there, so people can follow and ask questions."

Afterward, teachers and researchers will continue to share their experiences with the public and create instructional activities to transfer scientific data, methodologies and technology to classrooms.

"I plan to do a curriculum with my class, which I'm developing now, and will do a presentation to any community groups that are interested," Miller said.

'I'm really excited'

Miller has been teaching biology at Heights High for five years. He also has been the school's head swim coach for nine years.

A native of Castalia, near Sandusky, Miller earned a master's degree in education from Ashland University and a bachelor's in environmental studies from Allegheny College in Meadville, Pa.

"I just want to get the most out of (the experience)," he said. "I'm really excited to go out there . . . it will be an absolutely great opportunity."

To follow Miller's expedition or ask questions, visit polartrec.com/expeditions/microbial-activity-in-thawing-arctic-permafrost.

See more news from Cleveland Heights and University Heights at cleveland.com/cleveland-heights or cleveland.com/university-heights.

Contact Wittenberg at

(216) 986-5896 or ewittenberg@sunnews.com

More Cleveland-Heights stories

Return to Cleveland-Heights home page

© 2011 cleveland.com. All rights reserved.