

# Alexander Dawson teacher Melissa Barker to help with Arctic research

Biology instructor to help study stream networks in Alaska

**By Amy Bounds,** Camera Staff Writer Posted: 02/18/2012 11:27:05 AM MST Updated: 02/18/2012 11:30:09 AM MST



Alexander Dawson School teacher Melissa Barker will soon have personal anecdotes to add to her science lessons.

Barker, a high school biology and environmental science teacher, is one of a dozen K-12 teachers in the country chosen to participate in the PolarTREC program. The program allows teachers to experience what it's like to conduct scientific research in polar locations, from the Arctic Ocean to Antarctica.

### On the Web

For more information on Melissa Barker's project, visit polartrec.com.

"I've always wanted to be involved in real science research, looking at critical issues," she said. "We



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spend a lot of time talking about the process of science in class.

Experiencing the process of science will allow me to really engage my students in understanding it."

Barker, along with researchers from the University of Alaska at Fairbanks and Idaho State University, on May 7 will start working at the Toolik Field Station in northern Alaska, which is 357 miles north of Fairbanks and 158 miles above the Arctic Circle.

The researchers are evaluating how changes in water and nutrient cycles on land can affect stream networks in the Arctic. They'll take measurements each day at different



Freshman Sage Thomas, right, listens as biology and environmental science teacher Melissa Barker explains Darwin's theory of evolution on Thursday, at Alexander Dawson School in Lafayette. Barker is one of 12 teachers nationwide chosen to participate in the PolarTREC educational research project. ( Jeremy Papasso )

sites, monitoring snow depth, soil temperatures and nutrients in water samples.

"We're looking at how nutrient cycling may change as climate changes," Barker said. "The research is so relevant to what I teach. I'm going to have all these great anecdotes. When I'm teaching about the carbon cycle, I can talk about it in the Arctic."

She will be at the research station, which is on the tundra, during the melt season. She said she will first access the research sites by snowmobile, then snow shoes and finally by foot.

"I'll be there when the snow is really melting and helping move nutrients from the land to the water," she said. "I'll be able to see drastic changes to the terrain."

One of the researchers who is working with Barker will come visit her classes at Alexander Dawson in March, talking to the students about what it's like to be a research scientist. Barker's students also will have the opportunity to follow her work in Alaska.

While on field expeditions, teachers and researchers will share their experiences with educators and students through online journals, message boards, photo albums, podcasts and real-time presentations from the field.

"This is going to be pretty exciting," Barker said. "I can hopefully make science come alive for my students."





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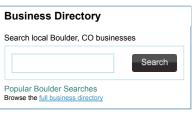




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