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Teacher will bring experience of Greenland

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The sun did not set, the temperature never climbed above freezing and Craig Beals ate calorie-laden gourmet meals while losing weight.

Such is life atop the summit of Greenland's two-mile-thick ice cap.

That's where Beals spent five weeks in June and July studying climate change at a National Science Foundation research station.

He lived in a tent, got two minutes of water a week for bathing and came home 15 pounds lighter after consuming more than 5,000 calories a day.

"I thought it was kind of like summer camp for science geeks," said Beals, who teaches earth science at Senior High.

He was one of a dozen science teachers across the country to be chosen this year from 250 applicants for an expedition through PolarTREC, a program of the Arctic Research Consortium of the United States.

PolarTREC, or Teachers and Researchers Exploring and Collaborating, pairs teachers with scientists conducting research through the National Science Foundation.

At Summit Station in Greenland, scientists spend summers hunting for clues to the planet's climate history in the ice cap.

As snow turns to ice, whatever was in the atmosphere when the snow fell becomes captured in the ice.

Studying that material can tell scientists what was happening in the world at the time the ice formed.

"It's pretty amazing what they can find," Beals said.

Beals worked with Barry Lefer, an assistant professor at the University of Houston in Texas who studies air quality as well as climate change.

One of Beals' duties was to help launch a bright-orange blimp that measured weather and atmospheric conditions every hour.

He also expended a lot of energy keeping warm - that's how he lost weight while eating like a king - although he had an easier time acclimating to the subfreezing temperatures than did some others.

Beals struggled more with the constant daylight than he did with the cold. It was hard to sleep with the sun shining 24 hours a day.

"Your body is so confused because it's light out," he said. "It wants to be tired, but it doesn't know what to do."

Now that he's back in a place with both day and night, Beals said his body shuts down as soon as the sun sets.

He plans to incorporate what he learned on the expedition into his earth science curriculum at Senior, and he hopes to give presentations about the trip to Billings elementary-school students.

Beals brought home a trunk of artifacts for the presentations, including two small chunks of ice that were drilled out of the ice cap. The ice cores date back 1,100 years.

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