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Jenks teacher visits the Arctic

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JENKS

"Walking on the Tundra is sort of like walking on partially deflated, wet, soggy basketballs," said Alicia Gillean, a Jenks West Intermediate teacher who spent her summer in the Arctic with scientists.

Gillean, Jenks West Intermediate's library media specialist, travelled to the Arctic, 150 miles north of the Arctic Circle, with a group called PolarTREC to study arctic ground squirrels with scientist from the

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University of Alaska.

"The scientists were beginning a three-year study of arctic ground squirrels' circadian rhythms," said Gillean. "These squirrels burrow and hibernate for seven months of the year. When they aren't hibernating, they are one of the only arctic animals which keeps a really rigid schedule.

"During the summer in the Arctic there are 24 hours of daylight, but the squirrels act like there is night. They go to bed at a certain time everyday and wake up at the same time. Most other animals don't, they tend to nap off and on. So the scientists were studying why."

The scientists shifted the schedules of a group of squirrels by 12 hours to study whether the schedule affected their energy.

"My days were a lot of trapping squirrels and collecting data," said Gillean. "Data tracked their body temperature when they were above ground thanks to light sensor collars."

PolarTREC covered most of Gillean's expenses including travel and boarding expenses, as well as equipment and clothing necessary for the Arctic.

"PolarTREC's goal is to pair teachers with polar researchers, with the idea that our students need to know about polar regions," Gillean said. "And what better way to know than to have first-hand experience through their teacher."

Gillean looks forward to using the collected data with students for the 2013-2014 school year.

"One of the things I am really excited about is the data piece, which is a big push with our new standards," said Gillean. "The new science standards require the kids to work with

real data. I got so much raw data from the light collars- from all of our work with the squirrels. The scientists are working with me to cut it down to a manageable level.

"I will show it to my students and they will have to come up with hypotheses, identify patterns and ask questions."

This will not be Gillean's first time using raw data in the classroom. Last summer, Gillean participated in a similar program called Teacher at Sea, where she studied Atlantic sea scallops.

"I did something similar with my data from Teacher at Sea," Gillean said. "It was so powerful. The kids were so excited. They all looked at the same data and came up with vastly different hypotheses- which is what happens in real science.

"I am excited to bring this back and show the students scientists don't just do that at sea, they do it in the Arctic, they do it in Oklahoma, they do it everywhere."

Gillean will also be able to speak to students about misconceived perceptions.

"There were so many things about the Arctic that I didn't know about," she said. "For example, you might not think about bugs there because it's cold, but the permafrost causes stagnant water so mosquitoes for instance are a huge concern.

"Everything I had thought about the tundra was wrong. I had imagined the Arctic as desolate, but in the summer it is vibrant and alive. It turned green practically overnight. I've never seen that many wildflowers in my life."

Gillean's Arctic blog can be found at **PolarTREC.com/Expeditions/Arctic-Ground-Squirrel-Studies/Journals**.