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Osborn Elementary fourth graders study the weather

By Ian Dunn
Editor

When Osborn Elementary teacher Greg Peck retired two years ago, he made arrangements with two other teachers to continuing the weather monitoring he had been doing with his class. Fourth grade teacher Mike Camp decided to take it on, with Jackie Frazier helping.

The first part of their weather activities involves the Community Collaborative Rain, Hail and Snow Network or CoCoRaHS, which is a community based network of volunteers all around the country measuring precipitation, snow, rain and hail.

"It is kind of slick because you can look on that website and find different stations that have reported all across the country, rainfall or snowfall for any given day," Camp said. "My students do it and Jackie Frazier's class has been helping. There's a rainfall gauge out on the edge of the playground. They go out every morning and check the rain gauge. If there is no rainfall, they just leave it. If there is rain, they bring it in."

The rain and snow are measured. Students log the information into the website database. The students are also in contact with climate scientists who are doing research on historical climate change.

As part of that effort, students actually send in the water samples from the rainfall. On Oct. 3, two climate scientists, Dr. Adam Csank of Nipissing University in Canada and Dr. Ericka Wise of the University of North Carolina at Chapel Hill, came and visited the class, the only elementary class involved in the project. The scientists were in the area to make presentations to high schools in Brewster and Yakima, as well as Camp's fourth grade class.

"It's a little more fun because you have to be more hands on, but you do have to simplify a lot of the concepts," Csank said of presenting to younger students. "However, the students are very interested in everything. They especially liked taking the tree cores and tree cookies and seeing the rings themselves. When I was there, I took them out and taught them how to core a tree outside. Many of them enjoyed their chance at turning the core."

Csank said the water samples collected are sent to a mass spectrometry laboratory in Alaska to measure the isotopes in water. The area of interest is the northern and southern storms that come into Washington state.

"Storms that come in from the north pass over the Cascades and have a very strong shadow so it tends to be dry in your part of the state. Whereas, if storms come from the south, they come up the Columbia Valley and then you guys can actually get a lot more precipitation from those southern tracking storms than the northern ones. Whereas Seattle is going to get wet no matter what," Csank said. "What we're doing with those water samples, we can measure isotopic value of the water chemistry and we can tell if they are coming from the north or the south."

As part of their visit to Osborn, Camp said the scientists shared details about their research, the historical climate change study, and how climate change might be impacting rainfall in the Cascades.

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OSBORN: *Students enjoyed learning about climate research*

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"They came out to show the kids not only what they do with the water. They showed how they use the tree ring to determine historical climate change. They took the kids out to the big spruce tree on the edge of the playground," Camp said. "They took some cores. They had the kids use the bore."

The tree rings samples are used to measure isotope values in the wood of the tree rings.

"We can relate that to the isotope values in the precipitation the trees used. We're hoping to make a long term record of these north versus south tracking storms," Csank said. "The students seemed to be quite engaged and interested, even when we are telling them about storms."

Camp said the students were very respectful and did a great job of listening. They also enjoyed hearing about Dr. Csank's recent trip to a island off the coast of Greenland.

"Adam has been to an island off the coast of Greenland, where they have found a beaver dam, which is 3.5 million years old. It was made from larch trees that grew 3.5 million years ago," Camp said. "They were mummified tree rings. They weren't petrified. They were mummified because they were frozen in the ice. He brought those in. That was pretty amazing."

There are plans to continue with the weather project, Camp said, even though it has been hard to tie into the science kits they are trying to teach. But reading the rain gauge has been great for teaching the students about decimal places.

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