

Teaming up for Science

Grants enable high school teachers to partner with PSU professors.

WRITTEN BY JOHN KIRKLAND



A deer observes professor Catherine de Rivera and high school teacher Jeffrey Buckingham as they count animal tracks left in sand placed at an under-bridge wildlife crossing in Wilsonville.

JEFFREY BUCKINGHAM, used to take care of injured animals as an Audubon Society volunteer. Now he teaches advanced placement biology at Beaverton High School, and for the next two years will be working with PSU environmental science professor Catherine de Rivera to study how to help animals survive in the urban environment.

“This is something I strongly believe in. I just love this realm of life science,” he says.

Buckingham is one of two local high school teachers recently paired with PSU professors as part of M.J. Murdock Memorial Trust’s Partners in Science program. The program grants \$15,000 per high school teacher to do graduate-level research. This is the 28th year of the program, and PSU has had at least one partnership in 22 of those years—a total of 63 teacher-researcher partnerships in all.

Partners in Science work occurs over the course of two summers. After the first summer, the partners develop posters showing their research and present them at the National Partners in Science conference in San Diego. After the second summer, partners return to the conference to deliver an oral presentation on their progress.

THE OTHER teacher starting a partnership this year at PSU is Heather Blair from David Douglas High School. She will be working with PSU biology faculty Anne Thompson studying ocean phytoplankton.

The partnerships are a win-win for all involved.

“I get an extra pair of hands in the lab,” says Thompson, who says she’ll put Blair to work analyzing 2,000 recently collected seawater samples taken from the Pacific Ocean.

“The work Heather is doing is high quality, so this will help us publish our research,” she says. Another benefit is the fact that Blair will be able to take those research findings and the methods used to achieve them back to her classroom at David Douglas. This helps make connections between the university and students who are just starting to get excited about science.

MEANWHILE, Buckingham will be working with de Rivera on a project that ultimately will help wild animals in the Portland metro area to survive the hazards of urban living. It will involve tracking animals—10 species in all—to see how they respond when they encounter roads, fences and other structures. Then, the researchers will compile suggestions on how urban planners can design ways for the animals to get from one place to another without being hit by cars. “All species need to move, whether it’s for food or mating or a change of habitat,” he says. “If we’re creating roads and fences and limiting their movement, their populations decline.”

Buckingham will use the experience to create a high school curriculum, and may involve his students in his field work.

De Rivera has worked with other high school teachers through Partnerships in Science.

“They’re eager to learn, and I like knowing that the work we’re doing will translate down to high school students,” she says. “And hopefully, some of them will come to PSU!” ■



High school teacher Heather Blair (left) works with professor Anne Thompson in recording data on phytoplankton life appearing in Pacific Ocean seawater samples.