Help Wanted: Scientists looking to give back

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"Enthusiasm for science and science education. Desire to work with and inspire children and adult visitors from diverse backgrounds."

These are two of the elements in the position description for a science Interpreter at the Pacific Science Center in Seattle, Washington. It's a volunteer job that won't augment the applicant's bank account, but it does pay off in other ways, such as networking opportunities, access to cutting-edge research (and the researchers doing it), being active in science outreach and giving something back. Interpreters help draw museum visitors into the exhibits by answering questions, but also encouraging everyone to touch the starfish in the saltwater tide-pool or get the most out of the Butterfly House.

This mission of the non-profit center is to inspire "a lifelong interest in science, math and technology by engaging diverse communities through interactive and innovative exhibits and programs," and more than 900 volunteers help make that happen. Many of those working for free are professionals in the field who do so willingly and for a variety of reasons.

"Volunteering is an integral part of growing as a scientist because it's very, very easy to be swamped with what you're doing in lab. It's important not to lose sight of who you're doing your research for," says Corey Snelson, a neuroscience post-doc at the University of Washington.

A science communication fellow with the Pacific Science Center, Snelson went through the intensive training program to learn how to explain her research. Fellows are researchers and others in science-based professions who wish to serve as "science ambassadors" making science understandable and interesting. Individuals specializing in a specific area, such as infectious diseases (applications are being accepted for this cohort until May 9, 2013), go through a series of communications workshops to develop presentations based on their work that will encourage participants to interact with the science.

"As scientists, we're used to interacting with other scientists," Snelson says. "We put facts up on a screen and we talk about our facts and our data, which is interesting to scientists but little kids and their parents are not going to think that's very cool.

"I really just could not speak to non-scientists about my science. I remember one time my grandmother said, 'Tell me what this DNA stuff is.' And I was, 'Ahhhh, ummm… I don't even know how to start.'"

Volunteers at the Pacific Science Center must use everyday language to explain complex subject matter to the public. (Photo: John Keatley)

The everyday language employed to explain the simple to the complex leads museum visitors through the science being done by the Fellows, transforming that "research" into something anyone can understand. Snelson hopes it will also serve to spark an interest in science now or in the future.

For her, the communication skills have more a immediate application because they are also transferrable.

"I do a lot of lobbying around housing and homelessness issues here in Seattle, and this has actually helped that in a lot of ways," Snelson says. "Because I learned how to talk about my science, I can talk about this other complex issue."

It's Chelsea Rodriguez's job as the volunteer specialist at Pacific Science Center to help develop the volunteer pool that supports the extensive programming of the organization. She says it's the benefits of volunteering that keeps them coming back, whether for a six-month commitment or for a few shifts at an annual event, such as the Seattle Science Festival.

"A really big perk of volunteering is the social opportunities, especially for those Science Communication Fellows (who) are trained as a cohort so they have a chance to network, make connections and maybe continue those connections after they volunteer," Rodriguez says.

In addition to ongoing, free educational programs to keep their knowledge and skills fresh, volunteers enjoy free tickets to the museum, special exhibitions and IMAX movies. They also get a view of the science museum others don't see.

"We have a new exhibit opening in June called Imaginate," Rodriguez says. "It's all about imagination and creativity. We're working on doing a preview for our volunteers. They're able to do a walk-through of the exhibit before it opens to the public, have a chance to interact with staff who are involved with putting the exhibit up and get that behind-the-scenes feel for what it's like to work in the museum setting."

Some of those setting up the exhibition and maintaining the permanent installations include retirees from well-known international companies such as Boeing or current employees of Microsoft and the bio-tech businesses. And then there's the opportunity to meet any of the guests at the center or those who attend the special event.

"It's been a really rewarding experience for me and a great way to reach out to the next generation of scientists to help encourage them to go into this field," says Megan Stachura, a graduate student from the University of Washington School of Aquatic & Fishery Sciences who just earned her Master's degree and a communications fellow. "Outreach is a really great opportunity to give back to the community, sponsoring the research you are doing to help them understand why it's important and to inspire this next generation of scientists."

Stachura traces her interest in aquatic sciences to the ninth grade in her home state of Michigan. She spent time on a boat on Lake Michigan collecting samples and learning about the organisms that live there. The field research helped her realize that she didn't want to just work just in a laboratory or behind a computer, and she wants to help other girls find their own passions in science. Through the University's Women's Center Making Connections program, Stachura mentors several high school girls from underrepresented communities. The mission of the program is to "increase college enrollment and career exploration in the Science, Technology, Engineering, and Math (STEM) fields for underrepresented youth. The program provides resources for students in high school."

"I help them explore careers, study for the SAT and apply to colleges," she says. "Most parents of the girls have not gone to college, so they don't know the process of applying. I use my experiences to help them."

Stachura says she averages six to eight hours of volunteering a month, and believes that she gets more out of her volunteerism than she gives. In addition to learning about new fields of science through interacting with other fellows and volunteers at the Pacific Science Center, she says what she's learning now will help her with her future career and her interest in developing policy for fisheries.

Affecting public policy right now, as well as in the future, is an important part of volunteerism for Corey Snelson. By taking science out of the laboratories and professional papers presented in journals and at conferences, there is an opportunity to translate it into basic English that non-scientists can understand. It is

her belief that, when the importance of that science is understood, the trends of ongoing cuts to research funding and destructive legislation will be reversed.

“I would like legislative leaders to understand that the economic impact of science is very broad. When you support scientific initiatives, it’s not just supporting us. It’s also supporting the people who contribute to the economy,” Snelson says. “For legislative leaders, it all boils down to money. For every dollar that’s invested in science, you get a $2.15 return on that investment. This supports the economy.”

It is that passionate support of science that brings people together who would not otherwise encounter each other, says Chelsea Rodriguez. That passion supports over two dozen programs at the Pacific Science Center and the volunteers are “absolutely essential” to making all that science available.

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