

Marine Scientists, The Next Generation

For most of us, there was an “aha” moment when we knew we wanted to make marine science our career. It may have been on a boat trip, a first trip to the seashore or even a field trip in a course taken just to satisfy a science requirement. We are the lucky ones. These experiences opened our eyes to the possibilities of studying nature in and around the ocean.

Not surprisingly, these opportunities are not available to a majority of junior high and high school students. In the classroom, there is no way that they can really get a feel for the excitement of collecting a sea urchin, flying a remotely operated vehicle, making water-quality measurements in the field, experiencing the power of tidal currents or observing the sensitivity of a salt marsh.

Nonprofit programs such as ours at The Zephyr Education Foundation were created to bring these hands-on activities to students so that they can experience marine science outside of the classroom.

To multiply the effect, we collaborate with principal investigators to present synopses of their projects, including their techniques, questions and results. This model also assists the scientists by providing a platform for them to accomplish the broader impact and public outreach requirements in grants funded by organizations such as the National Science Foundation.

In this manner, our partnerships with Woods Hole Oceanographic Institution and the Marine Biological Laboratory expose students to current research projects and their relevance. We can introduce students to the importance of the medical advances resulting from studying marine animals and the potential effects of climate change, to name just two things.

To explain how much easier it is to achieve the “wow factor” outside of the classroom, I use the ice cream story. Imagine that a class of students had heard of ice cream but had never seen or tasted it. It did not exist in their area. The teacher had gone to a workshop, made and ate some sundaes, and came back and told them how great ice cream is. Some students might be interested enough to make the effort to travel to where they could get it, but many would not.

If we could take the students to the source, they would all love ice cream and would want to make it themselves to take home.

Through our outreach programs, the Zephyr Education Foundation gives students this experience with marine science. Our students provide feedback comments from their trip, and an overwhelming percentage of them want to come back, intern or somehow otherwise continue studying marine science.

I am always delighted by their comments. Among the many “Incredible, I’d love to come back” comments, there are also some like “You don’t have to be the smartest kid in the class to become an oceanographer, do you?” That was after observing the many jobs that go into the scientific effort at the lab.

I am continually impressed by the many scientists who are strongly committed to outreach efforts with the next generation, but we can do more.

My suggestion is to visit your child’s class each year. But do not depend on schools to do all the work; there are too many competing interests. Involve yourself in programs such as ours to help show how the work that you do is exciting and important.

It is our obligation to provide these aha moments to the next generation. Imagine if we increased the number of interested students by a factor of two, or ten. Even if they do not become professional scientists, some will become government officials, school administrators or teachers, and all, most importantly, will become voters who can help decide the future of ocean policy.

If you are lucky, you will get to hear a comment like this one from a fifth-grade girl last summer: “This was the best day of my entire life.” ■