Where do whales go a changing ocean? That’s what Elizabeth Vu is trying to figure out. Elizabeth's current work focuses on the distribution of baleen whales during different seasons and various habitats by listening to the sounds they make. Elizabeth conducts her research in the local waters of the Southern California Bight and is working with vast environmental datasets from interdisciplinary NOAA and Scripps research programs.

What inspired you to work in your current field?
I want to be able to inform the public and policymakers how endangered species may be affected the rapidly changing ocean environment. Specifically, I want to understand where and why baleen whales may travel to feed or mate. I also use acoustics as a tool to study whales. I was inspired to work with acoustics because it is non-invasive and can provide additional insights to whale ecology that we hadn’t discovered using traditional research methods.
Please describe the path that led you to where you are now:
I am the daughter of Vietnamese immigrants who wanted me to succeed in school and pursue a more traditional path of medicine. I attended UC Berkeley and started to take “pre-med” science courses. However, I never officially became “pre-med” and instead spent more time outside, learning about the interdisciplinary field of environmental science.

While I was at UC Berkeley, I received the NOAA Hollings Marine Science Scholarship which supported me during my junior and senior years. I also studied abroad in Sydney, Australia, learned to scuba dive, and sailed on my first research cruise. Then, I completed an internship in Woods Hole, MA and was exposed to whale acoustics. The life of fieldwork, working on boats, and doing real-world science got me hooked!

I hope that my path may serve as an example of how one can receive a science education and not feel constrained to go to medical school (unless you really want to go! That’d be great, too). There are many paths you can take with a science-based education.

What experiences helped prepare you for your career?
Field work (for my research discipline) involves going out on research cruises and collecting acoustic data. I have seen and done so many fun things on these cruises, such as watching humpback whales breach in the sunset, and being surrounded by magnificent Antarctic icebergs. I’ve also had many long days of hard work. Little sleep and equipment breaking down make for stressful days on the water. Whether magical or stressful, these experiences make the job fun and exciting!

Please share any funny/inspiring stories or favorite things about your career:
When I am working on a research cruise, I love that I can see both the sunrise and sunset over the ocean in one day. Unless you live on an island or an isthmus, you don’t usually experience that!

Do you have advice for middle school and high school students interested in a career in science?
First and foremost, do not be afraid of science! I am a big fan of advocating science to those who may not necessarily want to pursue research science due to the illusion that it is boring or hard. Also, I believe in interdisciplinary education. In order to solve complex global problems, you need rigorous interdisciplinary training. Oceanography is interdisciplinary; it’d be hard to study the ocean without knowing about the physics, biology, chemistry, history, and economics of the system you’re studying.
It is very important to get a basic science education (whether or not it is called “marine”). The basic principles of science and biology don’t change on a fundamental level whether you study whales, or plants, or microorganisms. Therefore, if you get a good education studying any one ecosystem, you can still become a marine biologist!

Finally, get outside and enjoy the natural world. Spend some time observing the wonderful, bizarre environment around you and ask yourself questions about the things you see. Go with a buddy; it’s always fun to nerd out with like-minded friends.

Are there any resources you would recommend for students looking at a career in ocean and earth science, especially at UCSD and SIO?

Look for internships! REU, MPL, and WHOI SSF offer summer research internships that are invaluable. They are the best way to get exposed to projects and to wet your feet in the realities of participating in the scientific process.

Favorite quote?
“If the world were merely seductive, that would be easy. If it were merely challenging, that would be no problem. But I arise in the morning torn between a desire to improve the world and a desire to enjoy the world. This makes it hard to plan the day.”
-E.B White