

NOAA Marine Science Career - Case Studies

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Hi! I'm Wendy. I study volcanoes.

I am called a Volcanologist (vol·can·ol·o·gist).

It is important to study volcanoes because they can be very dangerous. All volcanoes are different and people who live near volcanoes need to know how they may erupt. I am interested in learning how volcanoes work, and I would like to help people understand the threats of volcanic activity.

I am able to learn how volcanoes might erupt by observing the bubbles within the volcanic rock. Volcanic rocks contain bubbles because when they cool, small gas pockets are trapped within the rocks. The gases control how explosive a volcano can be. Imagine shaking up a bottle of soda and then taking off the top, it will explode. Volcanoes are very similar... the gas is dissolved (you can't see it) until the pressure is released and it explodes.

I travel to volcanoes to conduct fieldwork and collect rocks. When I study the rocks, I take many measurements and write down what I see. Then I look at slices of the rock (less than the thickness of a blade of grass) using a very powerful microscope. With the microscope, I am able to see the small bubbles in the rock. I then write papers and give presentations about what I have observed. I am able share what I learn with people all over the world.

Watching a volcanic eruption is always cool and is different each time. I have studied volcanoes in Ecuador, Russia, New Zealand, Iceland and here in Hawaii. The coolest thing I have done was to travel to the Kamchatka Peninsula in Russia where I got a ride in a helicopter to a remote volcano. While I was collecting rocks, the volcanic dome was smoking and releasing small ash pieces. Our field team had to be very careful because there was a constant threat of eruption.

In high school, I did not take earth science and I did not realize that the study of the solid material that makes up the earth (geology) was a possible career path. After watching many documentaries on volcanoes, I realized I wanted to be one of the scientists who are interviewed. It was something I had never really considered, but I knew I could do it because I was so interested in learning about them. I was also confident because a mentor believed in my abilities as a scientist, which helped me to have confidence to complete graduate school.

When choosing a career for your future, realize that you can do anything you want. Think about what you really enjoy and try to find a career in that area. You will always be successful if your job is doing what you love. Also, it will make your job easier!

