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I work in the Astrobiology Program, which is the part of NASA that's interested in looking for life on other worlds. The work I do is mostly microbiology, because we think that if we are able to find life on other worlds, it is most likely to be something like the bacteria we have here on Earth. I try to figure out how the microbes that live here on Earth change their environment in ways that might be detected from far away in space. That kind of information will eventually help us to collect data from other worlds and use it to say whether or not there is life on those worlds.

### Areas of expertise:

- Exobiology
- Microbiology
- Chemistry
- Oceanography

### How I first became interested in this profession:

I was born in the Bahamas and lived there until I was six. I think I got my love of the ocean from that time. My dad tells me that I could swim long before I could walk, and that he used to take me out snorkelling on the reefs starting when I was four years old. When I was pretty young, I got really interested in space. Right about the time I was in fifth grade, Voyager 2 was passing Jupiter, and sending back all kinds of great pictures. I thought it was just the coolest thing.

### What helped prepare me for this job:

How did I get to NASA? I got a B.S. in chemistry, then Ph.D. in oceanography. As a freshman, I started working in a lab that studied how bacteria affect the chemistry of the ocean. I stayed with it all the way through graduate school. I then realized that what I was studying would be important for the Astrobiology program, which was just being created at the time. So I came to Ames right after finishing my Ph.D.

### My role models or inspirations:

Probably the two biggest influences on my becoming a scientist were my grandfather and my high school chemistry teacher.

### My education and training:

- B.S. in Chemistry, University of North Carolina
- Ph.D. in Oceanography, University of North Carolina

### My career path:

- Eight years as research assistant in microbiology (effect of bacteria on ocean chemistry), University of North Carolina
- Three years as research scientist, Astrobiology Department, NASA Ames Research Center

### What I like about my job:

One of the best things about my job, which makes it a lot of fun, is that it lets me go to some cool places, like Baja California in Mexico and Yellowstone National Park—but it can also be pretty exhausting at times. The other really neat part of my job is making new discoveries. Mostly these are little things (not the kind of stuff you would read about in the newspaper), but sometimes they can be pretty important. Either way, it's a really neat feeling, because you figured out how something works, and you're the only person in the world who knows about it! Probably the best thing about my work is that it lets me be really creative. Some people create art, music, or literature. My job is to create ideas—new ways of thinking about nature that help us to figure out how it works.

### What I don't like about my job:

Of course, in between field work and making new discoveries, there can be long periods when I'm just working in the lab or sitting in front of my computer. That can be boring sometimes, but it's important, too—and the good stuff makes my job really worthwhile overall.

### My advice to anyone interested in this occupation:

Always work on things that are interesting and exciting to you. Pick a field because you think it's cool, not because someone else tells you it's important. Also, remember that science is a way of studying the world around us, not a set of facts. Books are full of facts, but they are not intelligent or creative. It is the particular methods with which scientists study things that has let them fill those books up. The most important advances in science have always been made by people who had new and creative ways of thinking about things. So instead of just memorizing facts, learn to be a good problem solver—and don't be afraid to apply your creativity.