Valerie Mikles

Physical Scientist, Senior Systems Engineer

What does a Physical Scientist do?

I work on weather satellites at the system level, which means I help make sure all the pieces come together so that what we launch meets the needs of the weather community.

How is it a space job?

My job in particular is with satellites in Low Earth Orbit. Being in space gives us a much better view of the Earth and helps us recognize global weather patterns.

What kind of impact does your job have?

Weather impacts us every day. The wrong environmental forecasts can have major repercussions on travel, agriculture, manufacturing, and more. The right forecasts can save lives.

What was one of the biggest challenges you've faced and overcome in becoming a Physical Scientist?

There were two big steps for me. The first was realizing that I could be a career scientist. I grew up thinking science was just something people did in their garages in their spare time. When I was a junior in high school, my physics teacher recommended me for a summer science program, and the whole trajectory of my future changed. I dove into physics, got a Ph.D. in astronomy, and that's when I hit the second obstacle—leaving academia.

What were your interests growing up?

Growing up, I wanted to be a dancer and a novelist. I'm grateful that art is still a part of my life, and it helps me feel balanced after a day of hard science. My motto in life is "I can be everything I want, just not all at the same time."

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What are some of the classes you should take to become a Physical Scientist?

I didn't take the direct path to reach this job, and there are plenty of science or engineering degrees that can get you here. Physics and math have given me a solid foundation. Some kind of scripting or programming language is essential for the modern scientist/ engineer. In college, I decided to never take a class I wasn't interested in. Don't go for the easy A, when you can go for the interesting A.