

# Who Becomes a Space Scientist?

Space is so vast that there's a lot out there to explore. Some space scientists study planets or moons in our solar system, some study the sun or other stars, some study galaxy structure or black holes or dark matter, and some study the structure of the whole universe! What questions do you have about space? It's likely there are scientists wondering about the same things, or maybe even designing an investigation to answer those questions.

Chanda Prescod-Weinstein is a theoretical astrophysicist who studies something called dark matter. Dark matter is invisible matter that makes up around eighty percent of our universe! Prescod-Weinstein and other astrophysicists want to know what dark matter is made of and why there is so much of it in the universe. To answer these questions, Prescod-Weinstein is looking for evidence of something called axions. Axions are subatomic particles—that means particles even tinier than atoms. Scientists have predicted that axions must exist, but nobody has found evidence of them yet. To figure out what evidence of axions might look like, Prescod-Weinstein does theoretical calculations (math that we think describes the real world). Then she can design investigations to find the evidence her calculations predicted. Finding evidence of axion particles would help her answer her questions about dark matter.

Prescod-Weinstein also thinks about who gets to do science, particularly physics like she does, and how she can help ensure that young people from diverse identities are welcomed to pursue science, if that is their passion. She uses many different terms to describe her



**Chanda Prescod-Weinstein is a theoretical astrophysicist.**

own identity, including Black, Jewish, and queer. She remembers wondering if there were any Black women doing physics when she was first interested in space science.

She says, "I did not know about any Black women working in physics when I was a high school student. A thing that's very exciting for me is that I can be that person for someone else. And that enriches my work." It also enriches the physics community, and science in general, to have a diverse group of people working together. Because of her work encouraging diversity in science, Prescod-Weinstein was given the 2017 LGBT+Physicists Acknowledgement of Excellence Award.

Growing up, Prescod-Weinstein had a lot of questions about space. As she worked hard in school, she realized that she wanted to be the one to investigate those questions. Even when she felt discouraged by others, she worked hard to achieve her goals. As a scientist, she has helped shape the search for dark matter. She has also helped to change what younger students imagine when they think about who is studying physics and space.