

Transcript of Alicia Oickle, Green Mining Chemist

The coolest part about my job is... using science to make mining greener!

I'm an industrial research fellow in green mining, which means that I am looking at greener ways of taking metals out of the ground. We need metal for everything, we use it in our day to day lives—for cellphones, cars, wiring, those are just a few examples. My usual day is spent in the lab, working on small-scale tests where we're using beakers and solutions to try and pull the most amount of metals that we can out of the samples that we get in. The traditional mining techniques have room for improvement in the pollution that they produce, so we need to minimize that if we can, as well as the environmental effects. What we're looking at are closed loop systems that don't have a waste stream, or they're more environmentally friendly in the long haul. The goals of our green mining research are to be able to extract those metals, take those metals out of the ground, efficiently, but also cost-effectively.

In high school, I took Chemistry, Biology, English, Calculus, Pre-Calculus, all of those just to keep my options open. I had a chemistry teacher that actually had a Master's in Chemistry which was a huge effect on me because she was passionate about what she was doing, and she could teach it in a relatable level. So from there I decided to make a switch and do Chemistry for a BSc. at university. When I was in about my third or fourth year I wasn't quite sure if I was going to keep going with Chemistry. I actually changed my direction, but then I found another professor that was sort of guiding me into liking Chemistry again, and then from there I went to grad school. So that was about a five-year period where I did my PhD, and from there that's how I came here. It was really about people, they don't really necessarily realize that they have that much effect on you, but they can just sort of change the vein of where you're going with your life and your career.

My advice for you is to keep your options open, and take as many different courses as you're interested in all those different fields, and you don't have to know it all right now, you'll figure it out as you go along.