Ellen Gray

Editor and Team Lead for NASA's Earth Science News Team

What is your current occupation?

I am the Editor and Team Lead for NASA's Earth Science News Team. My job title is Senior Outreach Specialist, and I work for a company called KBR that is a contractor for NASA. I lead a team of four science writers and three video producers to create public-friendly articles and videos about NASA and NASA-funded Earth science research for the nasa.gov website and for social media. We're part of the agency's Office of Communications, and are essentially in-house journalists.

What is your educational background?

I have a Bachelor's of Science and a Masters of Science in Geological and Environmental Sciences from Stanford University, in their co-terminal degree program. After working for a few years as a lab manager at UC Santa Cruz, I went back to school and did a Masters in Science Writing from Johns Hopkins University in Baltimore, Maryland.

As for informal education, my career as a science writer has involved a lot of learning on the job. Writing is a skill you only really learn by doing, and I have benefited from supportive colleagues who have helped me grow as a writer and communicator. I also taught myself basic video and audio editing skills through various projects.

A key message for students is that the geoscience workforce is dynamic, and boundaries between sectors and occupations are fluid. How has this been true in your career?

My geoscience career really began as an undergraduate at Stanford where a summer research project for my advisor, Adina Paytan, turned into a part time lab assistant job and a Masters thesis. I hadn't expected to love it as much as I did. By being a part of the lab, I became part of a small community of undergrads, grad students, and others who were supportive as I found my feet and developed as a scientist. It's a community I'm still in touch with, fifteen years later, and includes two of my closest personal friends.

My first full time job after graduation was as Adina's lab manage at UC Santa Cruz, responsible to maintaining the lab space, supplies and inventory, safety, and general lab work. It was a big job and I learned so much about logistics and management while also still supporting a variety of research projects. I also had the opportunity to go on a number of field collection trips all over the world, which were definitely a high point and gave me a deep appreciation for field work. This one job had so many different facets to it, and the people I met through doing it really helped me clarify my own path.

Having that first hand experience both in the lab and in the field served me well when I made the transition to a writing career. Writing has been a love of mine since I was a kid. As a lover of non-fiction books about science, as well as fiction, when I was thinking about where I wanted to be long term, and I wasn't sure that I was focused enough to pursue a PhD and an academic career, science writing and science journalism seemed the perfect fit.

I went back to grad school for my Masters in Science Writing, an intensive year of both science and writing courses, as well as paying part of my way with a teaching fellowship for which I taught an undergraduate science writing class. My choice of school was made based on moving back East to be closer to my family. Moving home was my backup plan if it took a while to find a job.

But around graduation time in spring 2011, I applied for a junior science writing position at NASA's Goddard Space Flight Center and got it. The position was to do communications for three upcoming satellite missions that would be launching in 2011, 2013, and 2014. My science background was definitely a plus when interviewing, and gave me confidence as I embarked on learning about a whole new area of Earth science—that done from space, and the engineering to make it possible. I worked on missions through 2015, then transitioned internally to the Earth Science News team in 2015, which covers newly published research papers and on the ground reporting with researchers in the field — a return to one of my favorite parts of doing science! After five years, when my predecessor moved on, I took over as Editor and Team Lead.

One big thing I've learned from being on both the science and the outreach and communications sides of the fence is that good scientists can also be good communicators, and good science communicators need to have open minds like good scientists. Like scientists, communicators experiment with new ways of sharing science with people in accessible ways, especially in the realm of social media. Sometimes this means trying things outside of the box to see if works, it means leaning in to visual story telling and clear writing.

On the flip side. I have met, and trained, NASA scientists who are excellent communicators. At a certain seniority level, these same scientists are called upon to explain their research, and sometimes the research of their colleagues, to reporters from the New York Times, Washington Post, CNN, and other major news outlets, and at leadership levels to Congress, the Presidential Administration, the United Nations, as well as the international science and space community who are innovating and building instrumentation to do brand new science.

One thing that the most successful scientist communicators have is the support and expertise of professional communicators at their institution, whether government or university. We help them hone their language and messages, we do practice runs before big events, we help our scientists navigate the changing media landscape when reporters call, and we develop imagery and storytelling techniques that will reach people. We also take the pressure off and produce the day-to-day content so that they don't have to do two jobs at once! Communicating science takes both skillsets and is a team effort.

Where do you see your sector moving in future years? How would you advise students to prepare to be competitive job applicants and successful employees?

Science journalism is a competitive field for the same reason journalism jobs in general are competitive: the internet has changed the industry and there are fewer jobs at newspapers and more traditional news outlets across the board. Working in the communications office of a professional science organization or publication, including government agencies, are a little more accessible, though budgets for communications tend to be small.

The best way to prepare to be competitive and successful is really the basics: hone your writing (and/or video) and storytelling skills, and be up to date on social media, though you don't need to be an expert on everything. Unfortunately, science journalism in general is one of those fields where employers will often want to see that you have published writing or video samples. Internships are a good way to get those, or writing a story for the university or local paper. Science writing graduate programs are another route and also have good networks for finding internships and getting published while you're in school.

What is the role of networking in your sector? Do you have advice for a student who is just beginning to build their network? What is the best way for students to get their foot in the door?

The science writing community is on the smaller side, so networking is important and can lead to jobs. The National Association of Science Writers is a national professional organization that is a good starting point. Most cities have a local chapter as well. Joining gives you access to job posting boards and opportunities to meet other science writers at events, which in turn can give you leads on jobs. Internships can also be important in the field. For example, many of our new hires in Earth Science communications at NASA have been former interns with us. The job is often demanding, and hiring a known quantity is a route often taken. Cultivating relationships at

internships and past jobs in non-writing positions is also important because a good recommendation can go a long way.

What does a "typical" day of work look like for you?

A typical day consists of some combination of reading and responding to email, meetings, and solving problems. I check in with various teams and collaborating groups at various scales depending on the day of the week. Most of these are for planning upcoming work, which can include both content production and outreach events. I evaluate story pitches and assign them. I have weekly news meetings to ensure my team's stories are on track or adjusting as necessary, and also reporting up what is going to be published through the news room. I participate in story development at various stages. Right now for me that means editing what my team writes, helping to develop visuals, and leading multi-part communications projects. When I was writing more, it meant interviewing scientists, developing visuals, writing articles, and working with others on the team on collaborative projects as needed. A typical day can involve anything from one to two of these things to all of them. Email and meetings are a constant. Communicating with other about what my team is doing is also a big part of my job.

What is the best part of your job?

The best part of my job is talking to scientists and learning about what they're doing. Being a science communicator means constantly learning new things about the world and getting to talk to people who are doing cool things and making important contributions to our understanding of it. I work with a wide range of researchers who work on climate change, water availability, the ozone hole, changes in the atmosphere; engineers that build satellites; scientists who build tools to help manage disaster response for hurricanes, fires, floods and landslides — the list goes on. I've gone to rocket launches, I've flown on research airplanes measuring atmospheric gases and studying rain and snowfall. The variety and breadth of subjects and people I get to meet is wonderful, and especially wonderful is making sure their stories and their research are shared with others.

Do you have any other comments or advice for students looking to enter your sector of the geoscience workforce?

Be persistent. It may take a few tries to get where you want to be, but give it a good couple tries and listen to feedback you get along the way.

Ask for help. Ask for help or advice from professors, from people who work in your university press office, from colleagues at your current job or the student career center. There's probably more people around you than you think who would be willing to give you hand when you're struggling.

Apply for everything. The worst thing they can say is no, and then you move on to the next thing.

There’s more than one job out there. If an internship or job is a bad fit or has a bad work culture, or you’re ready to move on, you can leave and find something else. It can be scary, but your health and well-being should not be sacrificed for your job.