Great advice for beginning scientists, in 160 characters or less

Megan Frederickson
Associate Professor, Ecology & Evolutionary Biology
University of Toronto

1. If something bugs you about a fact or theory, it doesn't necessarily mean you don't understand it - it could be that the fact or theory is wrong.
2. In science experiments, replication is crucial but also tedious.
3. The stereotype of a scientist in a white lab coat holding a pipette is misleading. Science can be done by anyone, anywhere.

Jay Rosenheim
Professor, UC Davis, Entomology and Nematology
UC Davis, Entomology and Nematology

1. Put aside the fancy experiments, and spend some time simply observing your study organisms.
2. Choose your research question carefully.
3. Don't expect any initial experiment to work. Instead, see it as an opportunity to learn from your mistakes. It will work the 2nd or 3rd try.

Katharina Ullmann
Crop Pollination Specialist
Xerces Society for Invertebrate Conservation

1. Remember that there are many different types of careers in the sciences - academia, non-profits, industry, etc.
2. Talk to your professors and TAs to seek out experience doing research.
3. Make time to explore your different interests - both inside and outside of the sciences.

Paul Ginsberg
Lab technician - Turelli lab
UC Davis, Evolution and Ecology

1. Starting in a lab can be intimidating. Asking questions is the best way to keep yourself from getting overwhelmed, and to learn from people in your lab.
2. Keep your ultimate goals in mind. It is important to maintain perspective and remember how your work contributes to your research goals.
3. Seek out help. You will run into problems when you try new experiments. Oftentimes, someone around you has had the same problem and can help.
Marjorie Weber
Center for Population Biology Postdoctoral Fellow (soon to be faculty at Michigan State University)
U.C. Davis (soon to be MSU)

1. *It is not about being smart or working all the time. Success in science is about persistence, creativity, and loving what you do.*
2. *Don’t fight the rollercoaster: there will be good times and bad times. Don’t try to push away the bad times. It is all part of the ride.*
3. *Prioritize fun everyday. Science (like most careers) is a pie eating contest where the prize for winning is more pie. Enjoy the pie.*

Maureen Stanton
Vice Provost - Academic Affairs
Professor- Evolution & Ecology, UC Davis

1. *Are you suited to be a scientist? If you are drawn to the unknown and excited rather than intimidated by all of the things humanity doesn't understand, you ARE.*
2. *As you proceed in research, don’t be afraid to expose the soft underbelly of your ideas and interpretations early and often. Get feedback!*

Rick Karban
Professor
UCD

1. *This is a career that you’ll love. Seek out supportive people. Don’t lose track of yourself, your professional goals, and especially your personal goals.*
2. *Be willing to fail, say dumb things. Research shows this generates the best ideas. Ignore the premium others place on sophistication.*
3. *Find things that are fun and exciting. When you do, you’ll work harder and enjoy what you’re doing.*