

# Career Spotlight

## Geologist

*A geologist is a scientist who studies the solid and liquid matter that constitutes the Earth and terrestrial planets. Geologists usually study using an approach involving mathematics, physics, chemistry, and biology as well as other sciences.*



### EDUCATION

Although a Bachelor's degree is required for entry level employment, many geologists earn Master's and/or Doctorate degrees. The advanced degrees provide a higher level of training, often in a geology specialty area such as paleontology, mineralogy, hydrology or volcanology. Advanced degrees will often qualify the geologist for supervisory positions, research assignments or teaching positions at the university level. Geologist, Kitty Milliken, Ph.D., was asked the question, "What advice do you have for students entering high school?" She responded, "Take a lot of math. Math is incredibly important in science. I wish I'd taken even more math in college than I did, and I had a math minor!"

### WHEN MATH IS USED

Math is becoming increasingly more useful to geologists. Mathematical geology can be an essential aid in formulating models and scientific theories to bring together different geological phenomena. Geomagnetic field models are used in navigation, geophysical surveys, oil production, and in scientific studies ranging from upper atmosphere to the Earth's deep interior.

### POTENTIAL EMPLOYERS

Geologists work in a variety of settings, including natural resource companies, environmental consulting companies, government agencies, non-profit organizations, and universities. Many geologists do field work at least part of the time. Others spend their time in laboratories, classrooms, or offices. All geologists prepare reports, do calculations, and use computers.

### FACTS

- Geologists, unlike most scientists, are exposed to a lot of time outside
- Most geology graduates with a strong academic background have no trouble finding employment
- Most geologists with a Ph.D. spend 40 hours a week at work and another 10-20 hours working at home

### CITATIONS

<http://en.wikipedia.org/wiki/Geologist>

<http://www.bls.gov/ooh/life-physical-and-social-science/geoscientists.htm#tab-5>

<http://geology.com/articles/what-is-geology.shtml>

<http://www.lmci.state.tx.us/shared/WhyStudyThis/Interviews/milliken.html>

<http://www.springerlink.com/content/m5103h75471h8146/>

### MATH REQUIRED

- College Algebra
- Geometry
- Trigonometry
- Calculus I and II
- Linear Algebra
- Differential Equations
- Statistics

Low-end Salary: \$47,250/yr

Median Salary: \$89,700/yr

High-end Salary: \$187,200/yr