What Can I do with a Degree in Geology?

Careers in the Geosciences

By Lisa Kayvon
2011
What Does a Geologist Do?

- Research
- Mapping
- Laboratory testing
- Report Writing
- Outreach
- Time outdoors
Specialized Fields

- Environmental Geology
- Engineering Geology
- Petroleum Geology
- Economic Geology
- Oceanography
- Field Geology
- Hydrogeology
- Seismology
- Science Writing and Editing
- Environmental Law
- Education
Environmental Geology

- Water and soil testing
- Pollution assessment and remediation
- Pre-construction research
Engineering Geology

- Work with engineers and contractors on planning and construction
- Rock and soil strength and stability testing
Petroleum Geology

- Field reconnaissance to search for potential sites
- Testing sites for presence/abundance of petroleum
- Oversee extraction drilling operations
Economic Geology

- Search and mine for economically viable resources – metals, minerals...
Oceanography

• Study ocean floor, geology, sediments, water, biology, ect.
Field Geology

- Make maps
- Monitor geologic activity
- Interpret geologic histories
Hydrogeology

- Monitor and assess surface and groundwater movement.
- Make recommendations for water wells and rights.
Seismology

• Study earthquakes and hazards associated with them.
• Create earthquake hazard maps for construction and planning.
Volcanology

- Study and monitor volcanic activity
- Utilize remote-sensing technology
- Predict volcanic hazards
Science Writing and Editing

- Research and write scientific articles
- Edit other’s articles for scientific journals.
Environmental Law

• Study and litigate aspects of human impacts on environment
Education

• 7-8th grade science
• High school Earth sciences
• College
Who Hires Geologists?

- Federal Government
  - United States Geological Survey
  - National Parks
- State and Local Governments
  - Department of Water Resources
  - City offices
- Large Corporations
  - Exxon/Mobil
  - Shell Oil
  - Law Firms
  - Geotechnical Engineering Firms
- Many Small, Private Consulting Companies
- Independent Consultants – work for yourself!
Salary and Job Outlook

- Average starting salary = $50,000-60,000 in San Diego (salary.com)
- Average professional salary = $150,000-160,000 (salary.com)
- Up to $200,000 or more in certain professions
- Salaries rising yearly
- Aging workforce = New positions!

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Where Do I Go From Here?

- Palomar’s Course Program/Offerings
  - AA in Geology
    - 35-38 credits
    - General Geology, Dinosaurs and Earth History, Geology of National Parks, Oceanography, Astronomy, Physics, Chemistry...
  - Transfer courses for lower-division coursework
    - General Geology, Dinosaurs and Earth History, Physics, Chemistry, Calculus

- 4-year University for B.S.
  - Local Schools: SDSU, UCSD
  - Many CSUs, UCs, and private colleges throughout state
  - Geology.com/colleges for 600+ throughout US

- Graduate Schools
  - M.S. needed for Petroleum, some education jobs
  - PhD needed for most college, research positions
Geology as a Major