

Geoscientists

SOC: 19-2042 • Career Profile Report

■ Key Facts

\$99,240

Median Salary

25,100

Employment

+3.0%

Growth Rate

■ Requirements & Salary Range

Education: Bachelor's degree

■ Automation Risk Assessment

Low Risk - 8.0% probability of being automated in the next 10-20 years.

This job is relatively safe from automation due to its creative, social, or complex problem-solving requirements.

■ Work-Life Balance

7.5/10 - Good work-life balance

■ Personality Fit (RIASEC)

Higher scores indicate better personality fit for this career type.

Realistic	6.2/10	Investigative	9.4/10
Artistic	5.6/10	Social	6.4/10
Enterprising	4.8/10	Conventional	6.4/10

■ Top Skills Required

Communication skills, Critical-thinking skills, Outdoor skills, Physical stamina, Problem-solving skills

✓ Strengths

- High Demand
- Flexible Work
- Continuous Learning

■ Challenges

- Burnout Risk
- Rapid Technological Change

■ What They Do

Geoscientists study the Earth to **understand its composition, processes, and history, and to assess natural resources and hazards**. They collect and analyze geological data, conduct fieldwork, and develop models to predict changes or locate resources. Their work is critical in environmental management, energy exploration, and natural hazard assessment.

This career is well suited for individuals who enjoy research, observation, and understanding Earth systems.

What Do Geoscientists Do?

These professionals analyze geological materials, interpret data, and advise on the use and management of Earth's resources.

Common responsibilities include:

- Collecting and analyzing rock, soil, and mineral samples
- Conducting field studies and site surveys
- Using GIS, remote sensing, and modeling tools for data interpretation
- Investigating natural hazards such as earthquakes, landslides, or floods
- Advising on resource extraction, land use, and environmental protection
- Preparing reports, maps, and presentations for stakeholders
- Collaborating with engineers, environmental scientists, and government agencies

Key Areas of Geoscience

Geoscientists may specialize in particular fields or applications:

- Mineralogy and Petrology: Studying rocks and minerals
- Geophysics and Seismology: Analyzing Earth's physical properties and seismic activity
- Hydrology and Environmental Geology: Investigating water resources and environmental impact
- Natural Resource Exploration: Locating minerals, oil, and gas
- Geologic Mapping and Field Research: Surveying and recording geological data

Skills and Abilities Needed

Geoscientists combine scientific knowledge, analytical skills, and practical fieldwork abilities.

Core Professional Skills

Personal Qualities That Matter

Education and Career Pathway

This role typically requires formal education and field experience:

- Bachelor's Degree (minimum): Geology, earth science, or related field
- Master's or Doctoral Degree (optional but common): For advanced research or specialized roles
- Internships or Field Experience: Hands-on work in research, exploration, or environmental studies
- Certification (optional): Professional geologist license or specialty certifications
- Continuous Learning: Staying current with new technologies, research methods, and environmental regulations

Where Do Geoscientists Work?

They are employed in organizations that study, manage, or utilize Earth resources:

- Environmental Consulting Firms
- Energy, Oil, and Mining Companies
- Government and Regulatory Agencies
- Research and Academic Institutions

- Engineering and Infrastructure Firms

Work environments include offices, laboratories, field sites, and industrial locations.

Is This Career Difficult?

This career requires strong analytical, observational, and fieldwork skills. Geoscientists must interpret complex data, conduct research in diverse environments, and provide accurate recommendations.

Who Should Consider This Career?

This career may be a strong fit if you:

- Enjoy scientific research and studying the Earth
- Are detail-oriented and analytical
- Can work in field and laboratory settings
- Have strong problem-solving and critical thinking skills
- Want a career exploring natural resources, hazards, and Earth processes

How to Prepare Early

- Take courses in geology, environmental science, physics, and mathematics
- Participate in field studies, research projects, or internships
- Develop skills in data analysis, GIS, and modeling software
- Gain experience with scientific research methods and reporting
- Explore advanced degrees or certifications for specialization

Geoscientists analyze the Earth's composition, processes, and resources, providing essential information for environmental management, resource exploration, and hazard assessment.