Careers in Geology

Archeologists - Study the evidence of ancient people, societies, and cultures by analyzing their artifacts at historic sites through excavation and careful examination.

Atmospheric Scientists - Study weather processes, global and regional climate, solar radiation and its effects, and the role of atmospheric chemistry in ozone depletion, climate change, and pollution.

Avalanche Specialists - Assess snowpack stability, monitor avalanche hazards and risk, study snow properties and snowpack profiles, assess terrain and weather conditions, and spend a lot of time in mountains skiing.

Conservation Officers - Enforce federal, provincial, and territorial regulations governing the protection of wildlife, fisheries, and natural resources. They run conservation programs and raise public awareness of conservation laws.

Exploration Geologists - Study, explore for, and develop mineral resources. They determine the history of mineral deposits, including gold, diamonds, and copper, and find environmentally safe ways of disposing waste materials generated by mining activities.

Engineering Geologists - Apply geological data, techniques, and principles to the study of rock, surficial materials, and surface and ground water. They investigate geologic factors and natural hazards that affect structures such as bridges, buildings, airports, roads and dams.

Environmental Geologists - Study the interaction between humans and the solid Earth, hydrosphere, atmosphere, and biosphere. They solve problems associated with pollution, waste management, urbanization, and natural hazards, such as flooding, earthquakes, and landslides.

Geologists - Study the materials, processes, and history of the Earth. They help locate and develop natural resources, and study hazardous natural phenomena such as earthquakes, tsunamis, landslides, and volcanoes.

Glaciologists - Study glaciers and ice sheets. They investigate the nature and impact of past and future climates on glaciers in the Arctic, western Canada, Greenland, Antarctica, and elsewhere.

Hydrogeologists - Study the occurrence, movement, and quality of surface and subsurface waters. They are concerned with sustainability and contamination of groundwater, and provide consultation in waste management, environmental impact assessment, and site remediation.

Marine Geologists - Investigate the seafloor from the coast to the abyssal depths. They also study the processes by which sediments are deposited in oceans. Their work provides valuable information on past climate and sea-level change and on Earth history back more than 100 million years.

Meteorologists - Study climate and atmospheric phenomena. They try to accurately predict the weather, monitor storms, and track climate change. They issue forecasts of weather, air quality, and Sun intensity.

Mineralogists - Study the chemistry, atomic structure, and physical properties of minerals to understand the processes of mineral formation and alteration. Some mineralogists become gemologists who focus on precious and semi-precious stones, such as sapphires, emeralds, and diamonds.

Mining Engineers - Design mines and plan mining operations. They apply their knowledge of soil and rock mechanics, transportation systems, and machinery to ensure that mines function efficiently.

Museum Curators - Prepare, archive, and care for paleontological (fossil) specimens. They create informative displays and exhibits for the public, arrange loans of rare fossils, and prepare publicity material for museums and websites.

Oceanographers - Study the physical, chemical, and biological aspects of oceans. They spend many hours at sea or under water, as well as in laboratories and using computers. Physical Oceanographers focus on ocean temperature, density, and turbulence, and on waves, tides, currents, and ice conditions,

Paleontologists - Study fossils to understand past life forms and their changes through time (evolution). Paleontology is the biological part of geology.

Petroleum Geologists - Explore for and are involved in the development of oil and natural gas resources. Petroleum Engineers develop techniques and equipment to recover and process oil and natural gas. They may work on offshore drilling platforms and travel to all corners of the world.

Planetary Geologists - Study planets and their moons in order to understand the evolution of the solar

Seismologists - Study earthquakes and analyze the behavior of earthquake waves to understand seismic hazards and to interpret the structure of the Earth.

Structural Geologists - Analyze rocks that have been folded and faulted by Earth forces. They help search for oil, gas and mineral deposits by mapping out rock formations.

Volcanologists - Study dead, dormant, and active volcanoes. They may monitor volcanoes to detect evidence of a looming eruption.