

Career Pathways in the Geosciences - Section Five	% of Ventures Scholars Interested in Career Area
<b>Astronomers</b> study celestial bodies, their movement, and location, using methods such as optical and radio astronomy.	28%
<b>Astrophysicists</b> investigate the physical properties and interaction of forces in space, including electromagnetic radiation and the dynamics of time and matter.	20%
<b>Atmospheric chemists</b> investigate the chemical processes occurring in the atmosphere, such as the relationship between CFCs and ozone.	18%
<b>Atmospheric physicists</b> study the effect of terrestrial, atmospheric, and space-based forces on the behavior of the atmosphere.	14%
<b>Atmospheric scientists</b> study weather processes; the global dynamics of climate; solar radiation and its effects; and the role of atmospheric chemistry in ozone depletion, climate change, and pollution.	12%
<b>Biological oceanographers</b> focus on life in the ocean and how chemical and physical processes affect it.	30%
<b>Chemical oceanographers</b> study the chemical composition of the ocean and its relationship to the lithosphere and biological processes.	17%
<b>Climate modelers</b> use mathematical techniques to simulate the interaction of physical forces on climate and climate change.	24%
<b>Economic geologists</b> explore for and develop metallic and nonmetallic resources; they study mineral deposits and find environmentally safe ways to dispose of waste materials from mining activities.	17%
<b>Engineering geologists</b> apply geological data, techniques, and principles to the study of rock and soil surficial materials and ground water; they investigate geologic factors that affect structures such as bridges, buildings, airports, and dams.	18%
<b>Environmental geologists</b> study the interaction between the geosphere, hydrosphere, atmosphere, biosphere, and human activities. They work to solve problems associated with pollution, waste management, urbanization, and natural hazards, such as	37%
<b>Geochemists</b> use physical and inorganic chemistry to investigate the nature and distribution of major and trace elements in ground water and Earth materials; they use organic chemistry to study the composition of fossil fuel (coal, oil, and gas) deposits.	30%

<b>Geochronologists</b> use the rates of decay of certain radioactive elements in rocks to determine their age and the time sequence of events in the history of the Earth.	16%
<b>Geologists</b> study the materials, processes, products, physical nature, and history of the Earth.	28%
<b>Geomorphologists</b> study the effects of Earth processes and investigate the nature, origin and development of present landforms and their relationship to underlying structures.	18%
<b>Geophysicists</b> apply the principles of physics to studies of the Earth's interior and investigate Earth's magnetic, electric, and gravitational fields.	22%
<b>Glaciologists</b> study the physical properties and movement of glaciers and ice sheets.	11%
<b>Hydrogeologists</b> study the occurrence, movement, abundance, distribution, and quality of subsurface waters and related geologic aspects of surface waters.	14%
<b>Hydrologists</b> are concerned with water from the moment of precipitation until it evaporates into the atmosphere or is discharged into the ocean; for example, they study river systems to predict the impacts of flooding.	13%
<b>Marine geologists</b> investigate the ocean-floor and ocean-continent boundaries; they study ocean basins, continental shelves, and the coastal environments on continental borders.	16%
<b>Marine geologists</b> investigate the ocean-floor and ocean-continent boundaries; they study ocean basins, continental shelves, and the coastal environments on continental borders.	26%
<b>Meteorologists</b> study the movement and energy distributions of the atmosphere, particularly with respect to their effect on weather.	22%
<b>Mineralogists</b> study mineral formation, composition, and properties.	14%
<b>Oceanographers</b> investigate the physical, chemical, biological, and geologic dynamics of oceans.	21%
<b>Paleoecologists</b> study the function and distribution of ancient organisms and their relationships to their environment.	15%
<b>Paleontologists</b> study fossils to understand past life forms and their changes through time and to reconstruct past environments.	27%
<b>Petroleum geologists</b> are involved in exploration for and production of oil and natural gas resources.	13%

<b>Petrologists</b> determine the origin and natural history of rocks by analyzing mineral composition and grain relationships.	7%
<b>Physical oceanographers</b> study the natural processes and dynamics of the ocean and its interaction with the solid Earth.	18%
<b>Planetary geologists</b> study planets and their moons in order to understand the evolution of the solar system.	24%
<b>Sedimentologists</b> study the nature, origin, distribution, and alteration of sediments, such as sand, silt, and mud. Oil, gas, coal and many mineral deposits occur in such sediments	7%
<b>Seismologists</b> study earthquakes and analyze the behavior of earthquake waves to interpret the structure of the Earth.	25%
<b>Soil scientists</b> study soils and their properties to determine how to sustain agricultural productivity and to detect and remediate contaminated soils.	11%
<b>Stratigraphers</b> investigate the time and space relationships of rocks, on a local, regional, and global scale throughout geologic time -- especially the fossil and mineral content of layered rocks.	9%
<b>Structural geologists</b> analyze Earth's forces by studying deformation, fracturing, and folding of the Earth's crust.	16%
<b>Volcanologists</b> investigate volcanoes and volcanic phenomena to understand these natural hazards and predict eruptions.	22%