

**We as humans, love to understand
about the world around us, nature,
deserts, the universe, etc.**

This is called

EARTH SCIENCE

It assumes that natural events or phenomena can be
explained through careful
observation and explanation.

and it has many branches

OCEANOGRAPHY

- It discusses the ocean around our earth that covers 71% of our planet
- The oceanographers use big ships with special instruments to study the sea
- They use soundwaves to find stuff in the ocean





Meteorology

- It discusses the earth's atmosphere
- Scientists use radars and satellites to predict the weather, it also helps with studying the climate and fixing problems like global warming
- Meteorologists work on weather observation to measure factors like wind and temperature
- That will help them make weather and climate maps



ASTRONOMY

- It discusses space
- We study stuff like the sun, planets, etc. using special telescopes and other instruments
- Recovers and space probers and telescopes like the Hubble telescope added new info
- Ancient Babylonians charted the positions of planets 4000 years ago



ENVIRONMENTAL SCIENCE

- It discusses nature and the natural resources and how to use it efficiently
- It tries to deal with problems like pollution
- Many fields of study contribute to it



GEOLOGY

- It discusses the origin, history, processes, and structure of the solid earth aka rocky land
- It explores the crust of the earth lookin for resources
- It studies factors like earthquakes and volcanoes
- It studies fossils and the earth from the past



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Why do we study earth science?

1. It helps us to predict disasters by observing the natural forces
2. The origin of the universe and our role in it
3. Evolution of life
4. Finding good resources



Branches of geology

1-physical geology

- Deals with the nature and properties of materials that make up the earth, and it studies the processes that formed the planet



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2-Hydrology

- It deals with water and its atmosphere, it's conservation/distribution, especially at the sea-bed surface level

3-Historical geology

- It deals with the record/timeline of earth's development in both physical and biological manner

4-Mineralogy

- It deals with minerals on the chemical/physical scale

5-petrology

- It deals with rocks and their composition, origin, structure and classification

6-petrography

- It deals with the lab analysis and the MICROSCOPIC investigation of rocks

7-Paleontology

- It deals with fossils and remains



8-structural geology

- It deals with the deformation on rocks and their distribution across a 3D space

9-stratigraphy

- It deals with the composition, relative positions, arrangement, succession of rocks to determine their history

10-geomorphology

- It deals with the land formation, configuration, development of topographical features, and the evolution of earth's surface, and the factors dealing with it



HOW GEOLOGY HELPS IN MOST OF OUR LIVES

- it helps us find resources like metals, oils, etc
- it helps us predict natural disasters and how to be safe
 - it helps us building structures safely and how to set foundation
- it helps with studying the history of the planet using rock aging and fossils
- geology helps us to know what our earth needs and with that we can protect it and the environment



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