

## 1.1 – Guided Notes

### Objectives

- Describe two cultures that contributed to modern scientific study.
- Name the four main branches of Earth science.
- Discuss how Earth scientists help us understand the world around us.

### The Scientific Study of Earth

- **Earth science** the scientific study of Earth and the \_\_\_\_\_ around it
- Scientific study of Earth began thousands of years ago with careful \_\_\_\_\_.
- For many centuries, scientific discoveries were limited to observations of \_\_\_\_\_ that could be seen with the unaided eye.
- Earth science assumes that the causes of natural events, or phenomena, can be discovered through observation and \_\_\_\_\_.

### Branches of Earth Science

- Scientists have used \_\_\_\_\_ and hard work to build an immense body of knowledge about Earth.
- Most Earth scientists specialize in one of four major areas of study: the solid Earth, the \_\_\_\_\_, the \_\_\_\_\_, and the \_\_\_\_\_ beyond Earth.

### Geology

- **geology** the scientific study of the origin, history, and \_\_\_\_\_ of Earth and the processes that \_\_\_\_\_ Earth
- Geology includes many specialized fields of study, such as the study of earthquakes or \_\_\_\_\_, exploration for natural resources such as \_\_\_\_\_ and oil, and the study of Earth's history through the study of rocks and \_\_\_\_\_.

### Oceanography

- **oceanography** the scientific study of the ocean, including the properties and movement of ocean \_\_\_\_\_, the characteristics of the ocean \_\_\_\_\_, and the \_\_\_\_\_ that live in the ocean
- Like geology, oceanography includes specialized fields. Some oceanographers study ocean water. Others study waves, \_\_\_\_\_, and ocean \_\_\_\_\_. Still others study the ocean floor or the organisms that live in the oceans.

## **Meteorology**

- **meteorology** the scientific study of Earth's \_\_\_\_\_, especially in relation to weather and \_\_\_\_\_
- Using \_\_\_\_\_, radar, and other technologies, meteorologists study the atmospheric conditions that produce \_\_\_\_\_. They may use this information to prepare weather forecasts.
- Some meteorologists study \_\_\_\_\_, the patterns of weather that occur over long periods of time.

## **Astronomy**

- **astronomy** the scientific study of the \_\_\_\_\_
- Astronomy is one of the \_\_\_\_\_ branches of Earth science.
- Modern astronomers use Earth-based and space-based \_\_\_\_\_, as well as other instruments, to study the sun, the moon, the planets, and the universe.

## **Environmental Science**

- Environmental science is a relatively new field of Earth science that involves the study of the ways in which \_\_\_\_\_ interact with their \_\_\_\_\_.
- Environmental scientists study many issues, such as the use of \_\_\_\_\_ resources, \_\_\_\_\_, and the health of plant and animal species on Earth.

## **The Importance of Earth Science**

- Natural forces not only shape Earth but also affect life on Earth. By understanding how natural forces shape our environment, Earth scientists can better predict potential \_\_\_\_\_ and help save lives and property.
- The work of Earth scientists helps us understand our place in the \_\_\_\_\_.
- The study of Earth science can help people gain access to Earth's \_\_\_\_\_, and Earth scientists also strive to help people use those resources wisely.