

The Rock and Fossil Record

Geology – The study of Earth’s _____.

Uniformitarianism:

- In 1788 _____ wrote *Theory of the Earth*, in which he wrote that Earth’s landforms are constantly _____. The clues to these changes are all around us.
- Hutton assumed that these changes result from processes (erosion, deposition, etc.) that remain _____, or do not change, over time.
- **Uniformitarianism** – A principle that states that the same geologic processes shaping the Earth today have been at work throughout Earth’s history.
- ***“The present is the key to the past”***
- According to uniformitarianism, all geologic change is _____ and _____.

Catastrophism:

- **In the late 1700's most people thought the Earth had existed for only _____ of years (we now know it is actually about 4.6 billion years old).**
- **This was not enough time for the gradual processes that Hudson described to have shaped the Earth.**
- **Uniformitarianism was not immediately accepted. Most scientists thought geologic change occurred from rare, sudden events called _____.**
Ex: Volcanoes, floods, violent storms, earthquakes, asteroid impacts

Catastrophism – A principles that states that geologic change occurs _____.

- **In 1830, _____ published *Principles of Geology* which reintroduced uniformitarianism. Hutton's ideas were more readily accepted after this.**

Modern Geology – A Happy Medium:

- **Today's scientists realize that most geologic change is gradual, but catastrophes do occasionally occur.**
- **A _____ of uniformitarianism and catastrophism is accepted today.**

Paleontology – The Study of Past Life:

Paleontology – The scientific study of _____ life.

- **Paleontologists study the preserved remains of dead organisms, or _____, to learn about past life.**