**Types of fossils notes**

**Type of rocks**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** Formed from hot liquid magma cools and hardens over time, turning into rock
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_–** Formed when other rocks are changed by high heat, pressure, and chemical reactions within the Earth’s layers
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -** Formed when combinations of rock fragments, seashells, and chemicals are composed in layers and hardens over time

**The Earth’s Story**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Uniformitarianism** | **Catastrophism** | **Modern Theory** |
| **Theory** |  |  |  |
| **Explanation** | **We believed the same things we experience in our lifetime now such as storms, tornadoes, forest fires, etc. also existed in the past throughout history** | **Our planet has evolved due to randomized changes that happen inconsistently throughout our history…(catastrophes)** |  |

To study geologic change involves **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** Using fossils to study past life is called **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**How fossils form**

* Conditions have to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_for fossils to from in rock
  + the organisms remains must not be significantly disturbed by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or destroyed by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + It must be buried within \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rock
  + Usually \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (like skin, muscle, fat, and organs) decay too fast, which is why most fossils only show \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (bones, teeth, shells) of plants and animals.
  + Fossilization is extremely \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. As a result to this, often times many organisms die and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Original Remains**

* Fossils that are the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of organisms are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \*Original remains are found in places where conditions prevent the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to occur
* \_\_\_\_\_\_\_\_\_\_\_ – best preserver of prehistoric life. Ice has preserved original remains of things such as a 10,000 year old mammoth which have been found with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_ – formed from the sticky substance inside trees that flows like syrup. If an insect is caught in the sap, the sap will cover the insects entire body and harden.
* \_\_\_\_\_\_\_\_\_ – thick, oily pool of liquid. Things such as saber toothed cats and other animals were trapped and preserved

Some fossils are not original remains or actual body parts, instead they are impressions or traces made in rock.

**Types of rock fossils**

* A **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is a visible shape that was left after an animal or plant was buried in sediment and then decayed away.
* A\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is an object that is created when sediment fills a mold and becomes rock.

**Petrification**

The process in which \_\_\_\_\_\_\_\_\_\_\_\_\_\_ pass through and replace the organisms cells with minerals which produces a stone-likeness to the object.

This mostly happened when trees\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and are covered in mineral rich sediment in a body of water. Over time the minerals fill the tree cells and harden over time

**Carbon Films**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is found in every living thing. Sometimes when a dead plant or animal decays, a visible carbon layer is \_\_\_\_\_\_\_\_\_\_\_\_\_\_. Carbon films show the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of these organisms that are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ seen in other fossils

**Trace Fossils**

* Preserved evidence of animal activity or movement

Examples of trace fossils:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – which tells us the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of animal and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ made by animals buried in sediment
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – preserved animal \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Ice Cores**

* One big thing they tell us is the connection between \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ long time ago.
* When looking at ice core samples, scientist use \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as indicators of past life.
* This helps us analyze and determine past levels of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which helps us understand temperature

**Tree Rings**

* The width of a tree ring tells us about \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_throughout a season
* If the tree ring is thick, then we had a good growing season (a lot of rain)
* If the tree ring is thin, the tree did not receive a lot of rainfall and didn’t grow as much