Closed notes – Earth’s history ppt

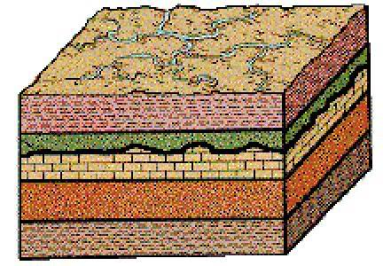
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - The study of the EARTH, rocks, and fossils.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - The idea that the earth has been shaped by \_\_\_\_\_\_\_\_\_\_changes (erosion, deposition) throughout history. These changes are \_\_\_\_\_\_\_\_ occurring. James Hutton proposed this idea and wrote Theory of the Earth. The \_\_\_\_\_\_\_\_\_\_\_ is the key to the \_\_\_\_\_\_\_\_\_\_. What’s going on \_\_\_\_\_\_\_\_\_ is what went on long ago
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - Changes in the Earth happen suddenly through events called catastrophes!!
* \_\_\_\_\_\_\_\_ \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ : In \_\_\_\_\_\_\_\_\_\_\_\_\_\_ rock layers, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ layer is at the bottom. Scientists use this law to relatively date the sedimentary rock layers. Draw a picture to explain Law Of Superposition.
* Why is \_\_\_\_\_\_\_\_\_\_ rock always younger than any rock it cuts through? In order for the \_\_\_\_\_\_\_\_\_

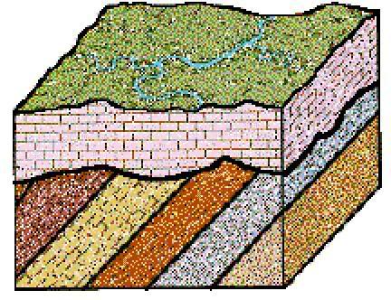
rock to cut through rock \_\_\_\_\_\_\_\_, the rock \_\_\_\_\_\_\_\_ around it must have \_\_\_\_\_\_\_\_ before the \_\_\_\_\_\_\_\_ rock could cut through it.

**Extrusion vs. Intrusion**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is an igneous rock layer formed when lava flows onto Earth’s surface and hardens.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_is an igneous rock layer formed when magma hardens beneath the Earth’s surface.

**Types of Unconformities**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -missing layer of rock in a sequence of parallel rock layers 
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -missing layer that exists between horizontal and folded rock layers



* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - A break in a body of rock along which one block slides against the other
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - Fossils of \_\_\_\_\_\_\_\_\_ that were \_\_\_\_\_\_\_\_\_\_\_ that lived in many areas and that existed only during \_\_\_\_\_\_\_\_\_\_ spans of time.
* This kind of fossil is important for figuring out when \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ were formed

**Relative dating v Absolute Dating**

* \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ - Using index fossils to compare the age of rocks works the same way!
* \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ : finding the \_\_\_\_\_\_\_\_\_ date of rock or fossil using scientific processes
* \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ is one way to do this. Finding the \_\_\_\_\_\_\_\_\_\_ of a substance means finding out how long it takes ½ of the radioactive isotopes (parent) to change to become stable (daughter).

**Fossils**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_ - traces or remains of \_\_\_\_\_\_\_\_\_\_\_ things from long ago. Takes many \_\_\_\_\_\_\_\_\_\_ such as shells, bones, and teeth. What allows this to happen? The \_\_\_\_\_\_\_\_\_\_\_\_\_ replace the remains forming a fossil.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ : Fossils that are the actual bodies or body parts of organisms are called original remains. They give \_\_\_\_\_\_\_\_\_\_ evidence of forms of life that lived long ago. Ice, amber, and tar have provided scientist this type of evidence
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Conditions have to be just right for a fossil to form in rock
* Must be \_\_\_\_\_\_\_\_\_\_\_ before decomposition; Rock fossils mainly only have the \_\_\_\_\_\_\_\_\_ remains not the soft remains because the \_\_\_\_\_\_\_\_parts decompose to quickly. ; Form in \_\_\_\_\_\_\_\_\_\_\_rock like sand or mud.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (describes rock formed under conditions of \_\_\_\_\_\_\_\_\_\_ heat or produced by the solidification of volcanic magma on or below the Earth's surface) \_\_\_\_\_\_\_\_\_\_\_contain fossils because the heat from which the rock came from would have \_\_\_\_\_\_\_\_\_\_\_\_ any fossil remains.

**Not original remains, impressions or traces**

* \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_ – organism dies and falls into soft sediment over time the sediment becomes rock and the organism decays, leaving a mold.
* \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_- stone fossil of a tree. Water passes through the cells of the tree depositing minerals which take the place of the cells producing a stone likeness.
* \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_- visible carbon left behind by an organism these can show soft parts in organisms.
* \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_- preserved footprints, trails, animal holes, and feces these fossils allow scientist to infer about what animals ate how fast did they travel.

**Ice Cores**

* **\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_-** Tubular sample of ice shows layers of snow and ice built up over time. Scientists analyze \_\_\_\_\_\_\_\_trapped in the ice to learn how the \_\_\_\_\_\_\_\_\_\_ has \_\_\_\_\_\_\_\_\_\_. Differences in air content at different levels shows how much \_\_\_\_\_\_\_\_\_ went up and down over long periods of time.

**Tree Rings**

* \_\_\_\_\_\_\_\_ varies; Dry years- \_\_\_\_\_\_\_\_ rings; Wet years- \_\_\_\_\_\_\_\_\_\_ rings
* Helps to determine weather patterns from the past.

**Geologic Time Scale**

* Divides Earth’s history into \_\_\_\_\_\_\_\_\_\_\_ of time defined by \_\_\_\_\_\_\_\_\_ events or changes on Earth.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – Earth’s history is divided into \_\_\_\_\_\_\_\_\_\_eons. Hadean , Archean, Proterozoic , Phanerozic (Current)
* \_\_\_\_\_\_\_\_\_\_ – Paleozoic , Mesozoic, and Cenozoic era are division of the Phanerozic eon.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - eras are divided into periods
* \_\_\_\_\_\_\_\_\_\_\_ - periods of the Cenozoic are divided into epochs.

**Important Events in Earth’s Past**

* \_\_\_\_\_\_\_\_\_ Mammals appear in the \_\_\_\_\_\_\_\_ Period of the Mesozoic era.
* \_\_\_\_\_\_\_\_\_\_ lived and became \_\_\_\_\_\_\_\_\_\_ during the Mesozoic era.
* \_\_\_\_\_\_\_\_ humans appear in the \_\_\_\_\_\_\_\_\_ era

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