NOTES -History of our Earth

Geologic Time Scale

* How History is Broken Up!

Largest to smallest divisions of time

**Eon** – All of our history is in one Eon

**\_\_\_\_\_\_\_\_** – (3-4 of them)

**Period** – (14 of them)

**\_\_\_\_\_\_\_\_** – (6 of them only in the 2 most current periods)

* EON

\_\_\_\_\_\_\_\_\_\_\_\_ DIVISION OF TIME

ONLY (1)

COVERS ALL OF TIME

* ERA

(3)

– BASED ON DIFFERENCES IN \_\_\_\_\_\_\_\_\_\_\_\_

- END WITH MASS \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* PERIOD

(14)

- BASED ON EXISTING \_\_\_\_\_\_\_\_\_ AND \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ EVENTS

(MOUTAIN BUILDING AND PLATE MOVEMENT)

* EPOCH

(7)

Only found in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Era –it is the most recent of the fossil records

Information is most complete

**Precambrian Time (Era)**

* The \_\_\_\_\_\_\_\_\_\_ division of time (furthest back)
* Most of Earth’s history occurred in this time
* Not really considered an Era but a \_\_\_\_\_\_\_\_\_\_\_\_
  + Because it took in so much time
  + 551,000,000 to 4,600,000,000 years ago
  + (551 – 4600 MYA)

**Precambrian Time (Era)**

* Simple \_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_ celled organisms – \_\_\_\_\_\_\_\_\_\_\_\_and bacteria
* Several phases of mountain building
  + \_\_\_\_\_\_\_\_\_\_\_\_ were moving

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Era**

* Second oldest time division
* Broken up into 7 Periods
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Mountains began to form
* First appearance of:
  + \_\_\_\_\_\_\_\_\_\_, amphibians, land plants and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Mesozoic Era**

* The (3rd) division of time
* Contains the following Periods:
  + Triassic – \_\_\_\_\_\_\_\_\_\_\_ first appearance
  + Jurassic - birds and \_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Cretaceous – first \_\_\_\_\_\_\_\_\_\_\_\_\_\_ plant
* Age of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Atlantic ocean began to form
* Rocky Mountains began to form
* Dinosaurs became \_\_\_\_\_\_\_\_\_\_\_\_\_(near the end)
  + Dinosaurs were really not around that long.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Era**

* The Era we are currently in
* Is broken up into periods and Epochs

Tertiary Period

* + Paleocene, Eocene, Oligocene, Miocene, & the Pliocene Epochs

Quaternary Period

* + Pleistocene and Holocene Epochs
  + We are in the Holocene Epoch currently
* \_\_\_\_\_\_\_\_\_\_\_ occurred – this could be proof of why the dinosaurs died out????
* Formation of the Grand Canyon
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ first appeared

Extinctions

Permian Extinction

* Occurred about 245 MYA (245,000,000)
* Happened between \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Time and the Paleozoic Era
  + Happened at the end of Proterozoic Period/ beginning of the Permian Period
* Extinctions set a division between Eras
* Extinction of:
  + 50 % of all animals
  + 95% of all water (marine species)
  + Many trees
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Geologists think this Extinction could have been caused by:
  + Global wide spread \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + Lowering of sea levels
  + Rapid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at times
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Eruptions - change the atmosphere
  + Major fluctuations of temperature
* Pangaea was forming at that time

Cretaceous – Tertiary Extinction

* Also Called the \_\_\_\_\_\_\_\_ Extinction
* Occurred Between the Cretaceous and Tertiary Periods
* Reason why we started a new Era at this point (a way of making divisions)
* About half of all life died out
  + Including Dinosaurs, families of: fish, \_\_\_\_\_\_\_\_\_\_\_, sponges, sea urchins, and many other water organisms

Pleistocene Ice Age

* Most current Ice Age
* Happened only 1,800,000 – 10,000 years ago (1.8 MYA – 10,000 years)
* Much of the Earth’s Temperate Zones were **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** covered by glaciers during cooling periods
* Then warmed during interglacial periods, when glaciers retreated
* Did not likely cause a Mass Extinction