**Geologic time**- Earth’s history is divided into time units that make up the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

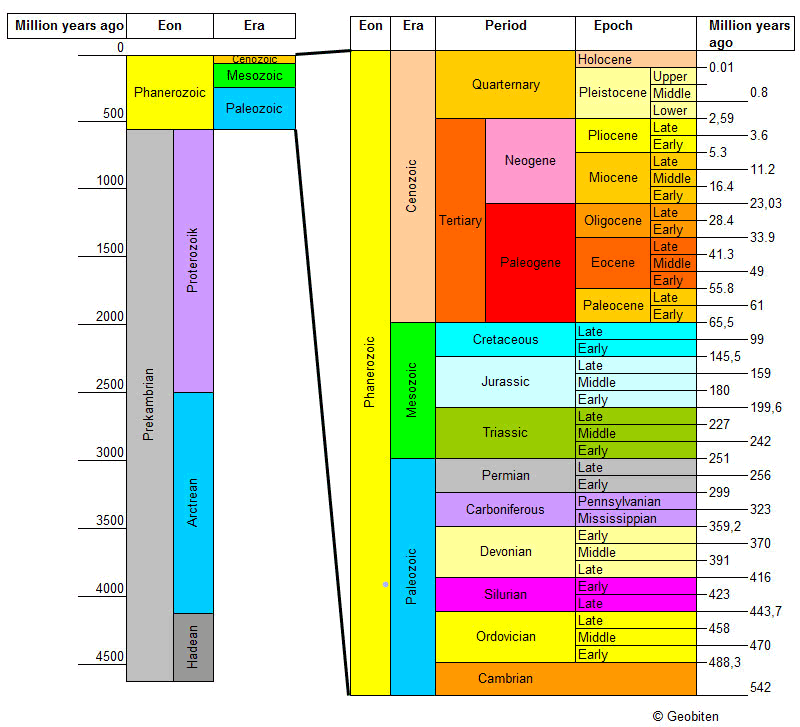
Time units on the scale are based on\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Example:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, a type of index fossils that live during specific periods of time.



When did they appear?



When did they go extinct?

Geologic time is divided into \_\_\_\_\_major subdivisions:

**Eons** - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Eras** - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Periods** - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Epochs** - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The fossil record indicates that species have \_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_ over time.

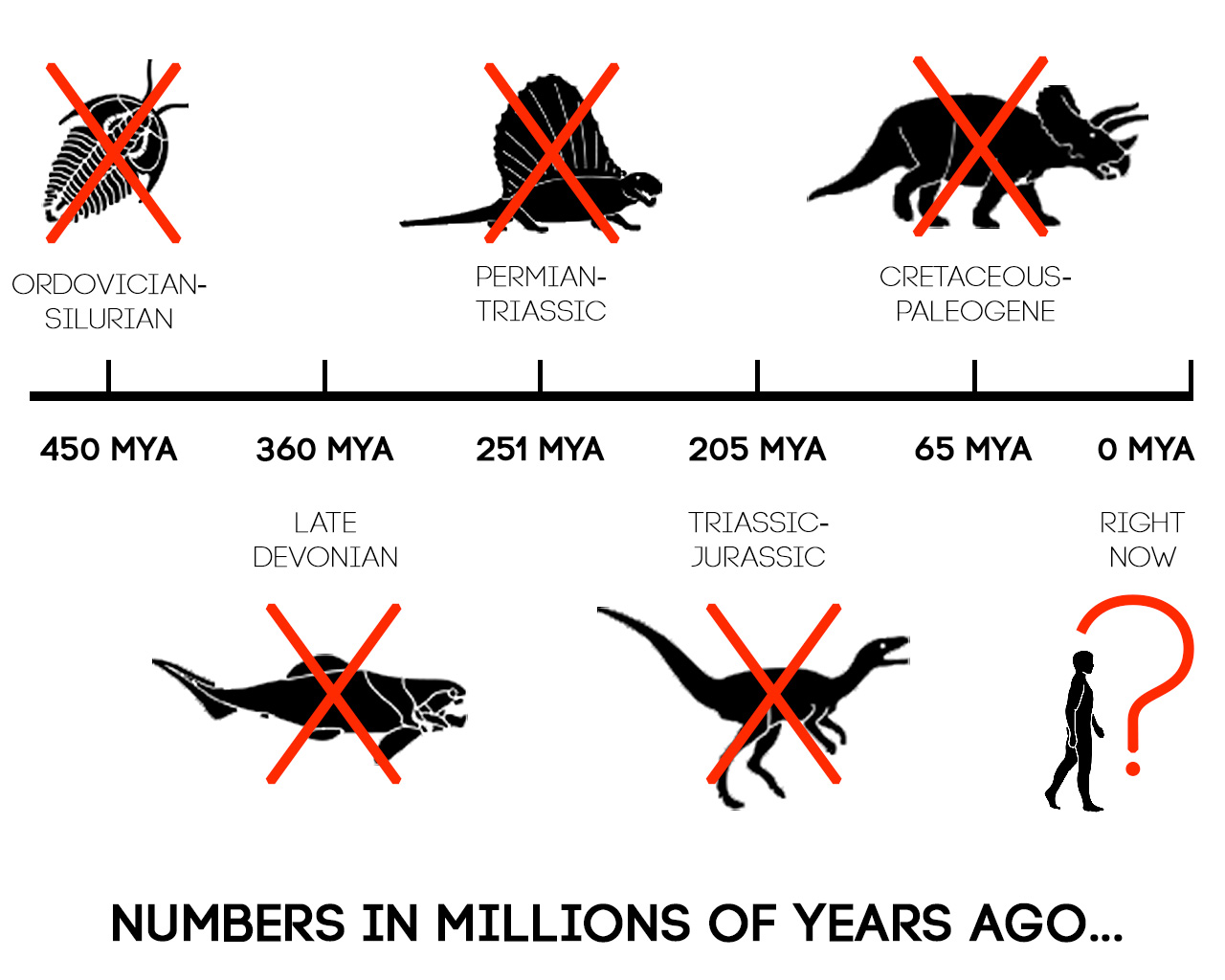
Charles Darwin is responsible for proposing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ explains how continents moving throughout time have influenced the environments of past organisms.

**Mass Extinction** - periods in Earth's history when abnormally \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ simultaneously or within a limited time frame.

* + The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is marked by a Mass Extinction.
  + The most severe occurred at the end of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Era when 96% of all species perished.



**Major Events of the Geologic Time Scale**

|  |
| --- |
| **Precambrian Time**  **4 billion - 540 million years ago**   * Very \_\_\_\_\_\_ fossils remain from this time.   + Many Precambrian rocks were deeply buried, causing the fossils in them to be changed by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. * Most Precambrian organisms lacked \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.   + Cyanobacteria are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, one of the earliest life forms to appear. |
| **Paleozoic Era**  **540 - 245 million years ago**   * + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with shells evolved in the warm, shallow seas.   + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ evolved to survive in water and on land.   + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ evolved from amphibians to survive farther from water.   + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ caused mountains to form as \_\_\_\_\_\_\_\_\_\_\_\_ comes together.   + Most marine species became extinct at the end of the Paleozoic Era.   + **Mass Extinction = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| **Mesozoic Era**  **245 - 65 million years ago**   * + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ separated into continents and the climate became \_\_\_\_\_\_\_\_.   + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dominate.   + \_\_\_\_\_\_\_\_\_\_\_ appear during the Jurassic Period.   + Small, mouse-like \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_appear in the Triassic Period.   + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ appeared during the Cretaceous period.   + Due to extreme climate change from volcanic activity and meteors, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_die off.   + **Mass Extinction = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| **The Cenozoic Era**  **65 million years ago - present day**   * + Many \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ranges formed.   + Colder climates; 3 Major \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ occur during this Era.   + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ continued to evolve.   + Many species became \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as the continents continued to separate.   + Fossils of *homo sapiens* (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) show their appearance about 400,000 years ago. |