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Geology

* System is a group of things that work and are dependant on each other
* They use the depth and the velocity of seismic waves to determine the model for the earth's structure
* Plate Tectonics: the main system that explains almost everything
  + Tectonics: describes earthquakes, volcanoes, mountains
* Plate boundaries are defined by earthquakes
* Paleoclimate Indicators
  + Paleo: ancient
  + Certain rocks that we find in certain places couldn't form where they do today
  + Shows that the continents have moved over time
* Distribution of Fossils
  + Different types of fossils are found on certain points on each continent that help put together Pangea
* 3 types of rocks
  + Typically made out of silicate minerals
  + Metamorphic
    - Form under deep pressure
    - They dont melt completely
  + Igneous
    - Form from melted rock or magma
    - Very high heat, down inside the earth
  + Sedimentary
    - Form near the earths surface by surface processes
    - Also can form chemically, by way of salt
    - Made from old living materials
      * Limestone forms from materials made by old shells
* **Rocks are made of minerals**
* **Minerals are inorganic sediments made of silicate**
* James Hutton: Father of moden Geology
* Relative dating
  + Not so much about exact dates but rather whats first, second, third, etc..
* Uniformitarianism **(On the test we will have a blank and be asked to define it)**
  + We can use the rock record to interpret by way of current geologic processes
  + Geologic processes seem long in terms of human life, but the big picture will show huge changes
  + Using this we can imply that the earth is Very old