

Mrs. Whittaker's Advanced Earth Science
Unit 12: Earth's History & Geologic Time

<p style="text-align: center;">Precambrian</p> <ul style="list-style-type: none"> • Beginning of Earth – est. at 4.6 billion years old. • Use of radioactive dating (Moon, meteorites, etc...) – solar system evolved at the same time • Earth - hot, unstable, & forbidding • Crust cooled from granitic magma and formed plates & continents – formed first supercontinent Rodinia • Oxygen - created by photosynthesizing cyanobacteria – used fossil evidence & iron oxidation • Oceans - outgassing volcanoes & vents and from meteorites & comets. • Amino acids & proteins, ingredients for life were present. Evidence shows single cell organisms 	<p style="text-align: center;">Paleozoic</p> <ul style="list-style-type: none"> • Rock records indicate a rise in sea level (continents still joined, but with higher seas) • Cambrian Explosion – massive amount of new species of animals and plants (trilobites, brachiopods) • More shallow seas, reefs, lagoons (salt & gypsum deposits in the Great Lakes) • More plate tectonics, mountain building time periods • Late Paleozoic – Pangaea forms, still many warm, swampy areas in the US (formed oil and coal deposits) • Cycles of changing sea levels • Emergences of seeds & eggs – species in ocean & on land • BUT – Mass Extinction, wiped out 90% of marine life and 70% of land animals
<p style="text-align: center;">Mesozoic</p> <ul style="list-style-type: none"> • Breakup of Pangaea • Rise of reptiles/Dinosaurs • Change in dinosaurs' posture allowed them to walk upright • Also first birds, mammals, and flowering plants • Meteorite crash caused the mass extinction of the dinosaurs 	<p style="text-align: center;">Cenozoic</p> <ul style="list-style-type: none"> • Current Era • Ice Age up to now • Beginning the age of mammals and rise of humans