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| --- | --- | --- | --- |
|  Event | Why important? How? | How long ago? | Time Period |
| Earth formed | Gravity gathered dust, gas, rock to form planetesimals or asteroids | 4.5-4.6 bya | Precambrian |
| Moon formed | Theia collided with Earth | 4.5 bya | Precambrian |
| Oceans form | Meteors bombarded Earth for 20 my | 3.9 bya | Precambrian |
| Land formed (continents/islands) | Volcanic activity, lava cools | 3.8 bya | Precambrian(Archean Eon) |
| Earliest life – single celled bacteria | Meteors bring minerals, protein material | 3.8 bya | Precambrian(Archean Eon) |
| Photosynthetic bacteria | Stromatolite – releases oxygen | 3.5 bya | Precambrian(Archean Eon) |
| Rodinia formed | Plate tectonics – 1st supercontinent | 1.5 bya | Precambrian(Poterozoic Eon) |
| Rodinia splits, caolcanoes, acid rain, CO2 in rocks and out of atmosphere | Tectonic movement by escaping heat | 750 mya | Precambrian(Proterozoic Eon) |
| Snowball Earth | Longest coldest ice age ever, ended by plate tectonics / volcanic activity | 650 mya | Precambrian(Proterozoic Eon) |
| Cambrian Explosion – complex life emerges | Multi-celled organisms, ocean plants/animals, worms, sponges, trilobites | 540 mya | Paleozoic Era |
| Animals w/spines | Allows complex life to evolve | 540 mya | Paleozoic |
| Gondwana, ozone forms blanket around Earth | Absorbs lethal radiation | 460 mya | Paleozoic |
| 1st land plants | Moss, O2 soars | 450 mya | Paleozoic |
| 1st amphibians | Legs, can live on land | 375 mya | Paleozoic |
| Seed plants | Can survive far from water for months/years | 345 mya | Paleozoic |
| 1st reptile eggs on land | Live solely on land | 325 mya | Paleozoic |
| Pangaea forms | Most recent supercontinent | 270 mya | Paleozoic |
| Permian Extinction | 95% of species gone, greatest mass extinction, volcanism (Siberian Eruption) | 250 mya | Paleozoic |
| Dinosaurs & mammals | Reign on land 165 my | 200 mya | Mesozoic |
| Pangaea breaks up | Last super continent, process continues | 190 mya | Mesozoic |
| Dinosaurs extinct(K-T Extinction) | Asteroid in Gulf of Mexico / Earthquakes, tsunamis, volcanoes | 65 mya | Mesozoic |
| Mammals thrive & evolve | More diverse life | 65mya | Cenozoic |
| World as we know it | Continents and oceans | 20 mya | Cenozoic |