

Origin of Life Event Cards

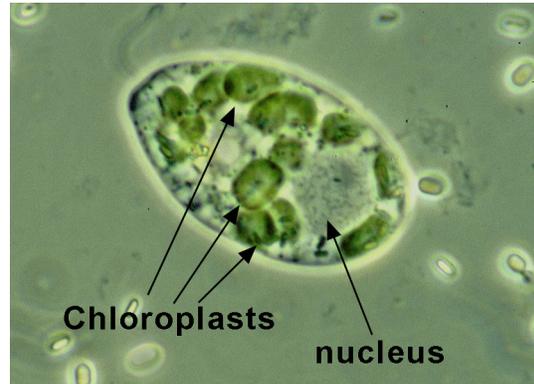
Oxygen-Making Bacteria



Cyanobacteria produce oxygen as a waste product. (Picture of modern cyanobacteria, *Nostoc*.)

Credit: SETI Institute

Eukaryotes



Eukaryotic organisms evolve; they are more complex than prokaryotes. (Picture of modern *Euglena*.)

Credit: SETI Institute

Microscope



The inventors of the microscope placed several lenses in a tube and found it made things appear larger.

Credit: University of California Museum of Paleontology Website

Sexual Reproduction



Sexual reproduction leads to variation within species.

Credit: www.PDIImages.com

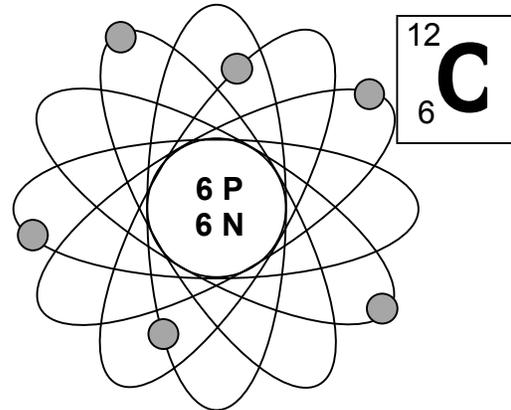
Atmospheric Oxygen

PHOTOSYNTHESIS
carbon dioxide + water + light energy
in the presence of chlorophyll yields:
glucose + oxygen + water

The initial atmospheric oxygen is thought to have been a by-product of photosynthesis by cyanobacteria.

Credit: SETI Institute

Chemical Evidence of Life



Oldest chemical traces of life are carbon isotopes.
(Isua Supracrustals, Greenland.)

Credit: SETI Institute

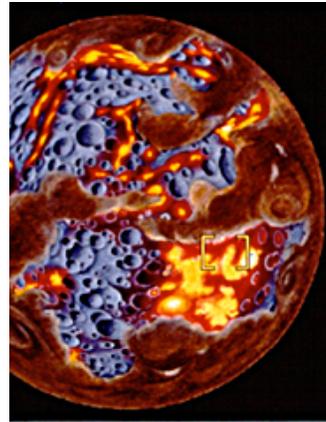
Beginning of Bombardment



Objects crashing into Earth add to its mass.

Credit: SETI Institute, The Evolution of a Planetary System, 1995

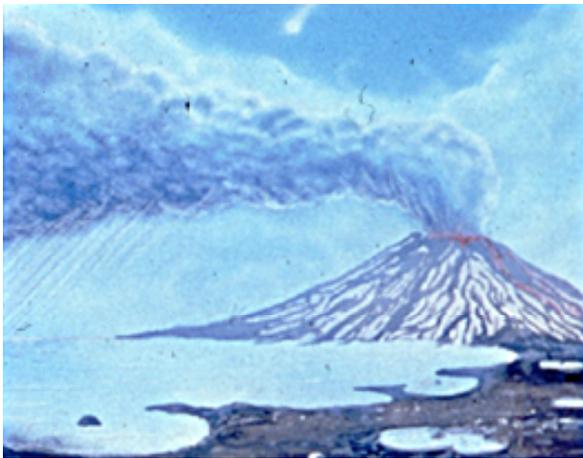
End of Bombardment



Solar system no longer invaded by large objects.

Credit: SETI Institute, The Evolution of a Planetary System, 1995

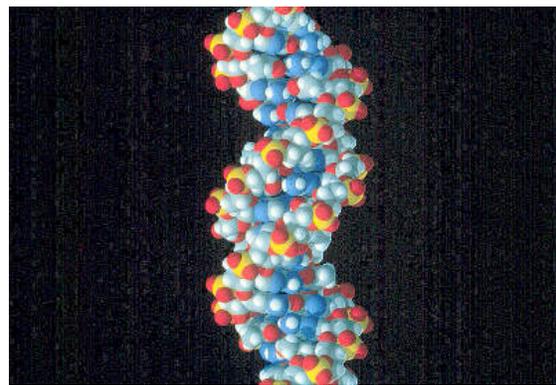
Surface Water



The Earth cools enough for liquid water to remain stable on its surface.

Credit: SETI Institute, The Evolution of a Planetary System, 1995

DNA Discovered



Swiss biologist, Friedrich Miescher, discovers nucleic acid (DNA).

Credit: Credit: www.PDImages.com