

constituents from inorganic substances. The best examples are green photosynthetic plants.

Basalt A fine-grained, dark, heavy, igneous rock composed primarily of dense iron and magnesium compounds. Basalts occur principally in lava flows and constitute over 90% of volcanic rocks.

BIF (banded iron formations) Cherts with alternating iron-rich and iron-poor laminae, each layer commonly a centimeter or less in thickness, that constitute the bulk of the world's iron ore reserves. They are all of Precambrian age, the majority around 2 billion years old.

Big Bang theory The theory that the presently expanding Universe (including not only all energy and matter, but also space and time) was created at a finite instant in the past in a cataclysmic explosion which flooded the Universe with radiant energy (light).

Big Bloom The appearance, rapid spread, and diversification of angiosperms (flowering plants) that took place about 130 million years ago.

Big Crunch A theory suggesting the end to the present Universe will occur as all matter is pulled back together by gravitational attraction and compressed into a universal sea of fiery hot elementary particles.

Binary fission A form of asexual reproduction in which one cell divides into two essentially equal parts.

Biologic processes Processes involving living as opposed to non-living matter (including reproduction, photosynthesis, growth, development, etc.)

Bipedal Walking on two legs as the normal means of locomotion.

Black hole An object in space with a gravitational field so strong that no light can escape.

Brachiopods One of a phylum or class (Brachiopoda) of nearly extinct molluscid marine animals having a bivalve shell and a pair of brachial appendages at the sides of the mouth.

Cambrian The first period of the Paleozoic.

Cambrian explosion The relatively sudden appearance of widely varied marine animal forms during the Cambrian period that began 570 million years ago.

Carbonaceous Containing carbon. In geology, this term is used primarily to describe a sedimentary rock containing significant organic material.

Carnivorous Flesh-eating. Used to describe an animal or organism that kills and feeds on other animals.

Cataclysmic explosion A sudden and violent disturbance of the Earth's surface.

Catalysis Acceleration of a chemical reaction by the addition of a substance that is not itself permanently changed by the reaction.

Cenozoic era The latest era of geologic time which includes the tertiary and quaternary periods and is characterized by mammals.

Ceratopsians A horned group of dinosaurs which appeared late in the age of dinosaurs.

Chemical reaction Chemical change in which the atoms or molecules of substances rearranged.

Chert (silicon dioxide) A sedimentary form of extremely fine-grained or amorphous silica found in beds and concretions; commonly a chemical sediment.

Closed system A philosophic view of the Universe that presupposes reality is limited solely to what can be scientifically observed, quantified, and reduced to mathematical formulas. (See open system.)

Coacervate A cluster of macro-molecules surrounded by a shell of liquid in which the individual molecules are rigidly oriented relative to the colloidal particles.

Coelacanth A large-bodied, hollow-spined fish of the crossopterygian group.