

Word	Definition
Aquifer	A permeable region of rock or soil through which water can move.
Archaea	A phylogenetic domain of prokaryotes consisting of those that can produce methane, organisms that require salt and those who live in extreme conditions such as temperatures above 80° C or higher.
Autotrophs	Organisms capable of making their own food from inorganic materials
Bacteria	All prokaryotes that are not members of the domain Archaea
Basement Rock	The rock layers that lie underneath layers of sediments
Biogeography	The study of the distribution of species (biology) spatially (geography) and temporally (history).
Biosphere	The biological component of earth systems, including all living organisms on earth together with the dead organic matter produced by them. From an ecological point of view, the biosphere is the "global ecosystem", comprising the totality of biodiversity on earth and performing all manner of biological functions, including photosynthesis, respiration, decomposition, nitrogen fixation and denitrification. <a href="http://www.eoearth.org/article/Biosphere?topic=58074">http://www.eoearth.org/article/Biosphere?topic=58074</a>
Chemosynthetic bacteria	Bacteria that are able to use chemical energy to produce organic compounds or food.
Chemosynthesis	A process by which inorganic materials are converted to food or organic material using chemical energy
CORK	Stands for Circulation Obviation Retrofit Kit. A CORK is a set of scientific instruments designed to monitor conditions beneath the ocean floor.
Crust	The outermost layer of rock that covers the earth's surface; consists of continental and ocean crust
Drill String	On the JOIDES Resolution this means a column, or string, of pipes that transmits drilling fluids (via the mud pumps) and rotational power to the drill bit at the bottom.
Ecosystem	A group of organisms and their habitat or environment
Eukaryote	A cell or organism having a unit membrane-enclosed (true) nucleus and usually other organelles.
FISH	Fluorescent in-situ hybridization; a process in which a cell is made fluorescent by labeling it with a specific nucleic acid probe that contains an attached fluorescent dye
FLOCS	Stands for Flow-through osmotic colonization system it is the in-situ device
In-situ	To study "in-situ" means to study in the environment or on site, in our case, the bore hole in the ocean floor

IODP	Integrated Ocean Drilling Program is an international marine research program that explores Earth's history and structure recorded in seafloor sediments and rocks and monitors subseafloor environments. <a href="http://www.oceanleadership.org/programs-and-partnerships/scientific-ocean-drilling/integrated-ocean-drilling-program/">http://www.oceanleadership.org/programs-and-partnerships/scientific-ocean-drilling/integrated-ocean-drilling-program/</a>
JOIDES Resolution	The research vessel used for scientific drilling
Lithosphere	The rigid outer shell of the earth
Mantle	Thick layer of rock between the earth's crust and core
Metabolism	All biochemical reactions in a cell, both anabolic (processes involved in the synthesis of cell constituents from simpler molecules, usually requiring energy) and catabolic (processes involved in the breakdown of organic or inorganic compounds, usually leading to energy production)
Microorganism	A microscopic organism consisting of a single cell or cell cluster
Oxidation-reduction (redox) reaction	A pair of reactions in which one compound becomes oxidized (loses electrons; gains positive charge) while another becomes reduced (gains electrons; gains negative charge)
Phototroph	An organism that obtains energy from light
Phylogenetic tree	Branching diagram or tree showing the inferred evolutionary relationships among various biological species based upon differences and similarities in physical and/or genetic characteristics
Plate tectonic	A theory that the earth's surface is broken up into a few large, thick plates that are slowly moving and changing size.
Prokaryote	A cell or organism lacking a nucleus and other membrane-enclosed organelles, unusually having its DNA in a single circular molecule
Subsurface biosphere	The biosphere below the sea floor