angle The space (usually measured in degrees) between two intersecting lines or surfaces at or close to the point where they meet.

atom The basic unit of a chemical element. Atoms are made up of a dense nucleus that contains positively charged protons and uncharged neutrons. The nucleus is orbited by a cloud of negatively charged electrons.

bacteria (singular: bacterium) Single-celled organisms. These dwell nearly everywhere on Earth, from the bottom of the sea to inside other living organisms (such as plants and animals).

biology The study of living things. The scientists who study them are known as biologists.

chemical A substance formed from two or more atoms that unite (bond) in a fixed proportion and structure. For example, water is a chemical made when two hydrogen atoms bond to one oxygen atom. Its chemical formula is H_2O. Chemical also can be an adjective to describe properties of materials that are the result of various reactions between different compounds.

chemical reaction A process that involves the rearrangement of the molecules or structure of a substance, as opposed to a change in physical form (as from a solid to a gas).

chemistry The field of science that deals with the composition, structure and properties of substances and how they interact. Scientists use this knowledge to study unfamiliar substances, to reproduce large quantities of useful substances or to design and create new and useful substances. (about compounds) Chemistry also is used as a term to refer to the recipe of a compound, the way it's produced or some of its properties. People who work in this field are known as chemists.

compound (often used as a synonym for chemical) A compound is a substance formed when two or more chemical elements unite (bond) in fixed proportions. For example, water is a compound made of two hydrogen atoms bonded to one oxygen atom. Its chemical symbol is H_2O.

crystal (adj. crystalline) A solid consisting of a symmetrical, ordered, three-dimensional arrangement of atoms or molecules. It's the organized structure taken by most minerals. Apatite, for example, forms six-sided crystals. The mineral crystals that make up rock are usually too small to be seen with the unaided eye.

crystallography A field of science that studies crystals, especially their structure and composition.

defense (in biology) A natural protective action taken or chemical response that occurs when a species confront predators or agents that might harm it. (adj. defensive)

enzymes Molecules made by living things to speed up chemical reactions.

factor Something that plays a role in a particular condition or event; a contributor.

hypothesis (v. **hypothesize**) A proposed explanation for a phenomenon. In science, a hypothesis is an idea that must be rigorously tested before it is accepted or rejected.

information (as opposed to data) Facts provided or trends learned about something or someone, often as a result of studying data.

insect A type of arthropod that as an adult will have six segmented legs and three body parts: a head, thorax and abdomen. There are hundreds of thousands of insects, which include bees, beetles, flies and moths.

journal (in science) A publication in which scientists share their research findings with experts (and sometimes even the public). Some journals publish papers from all fields of science, technology, engineering and math, while others are specific to a single subject. The best journals are peer-reviewed: They send all submitted

articles to outside experts to be read and critiqued. The goal, here, is to prevent the publication of mistakes, fraud or sloppy work.

liquid A material that flows freely but keeps a constant volume, like water or oil.

model A simulation of a real-world event (usually using a computer) that has been developed to predict one or more likely outcomes.

molecule An electrically neutral group of atoms that represents the smallest possible amount of a chemical compound. Molecules can be made of single types of atoms or of different types. For example, the oxygen in the air is made of two oxygen atoms (O_2), but water is made of two hydrogen atoms and one oxygen atom (H_2O).

nitrogen A colorless, odorless and nonreactive gaseous element that forms about 78 percent of Earth's atmosphere. Its scientific symbol is N. Nitrogen is released in the form of nitrogen oxides as fossil fuels burn.

organism Any living thing, from elephants and plants to bacteria and other types of single-celled life.

predator (adjective: predatory) A creature that preys on other animals for most or all of its food.

sulfur A chemical element with an atomic number of sixteen. Sulfur, one of the most common elements in the universe, is an essential element for life. Because sulfur and its compounds can store a lot of energy, it is present in fertilizers and many industrial chemicals.

sulfuric acid A strong acid having the chemical formula H 2 SO 4 . Used as a drain cleaner and in lead-acid car batteries, the liquid is able to burn tissues and eat through metals and even rock.

tissue Made of cells, any of the distinct types of materials that make up animals, plants or fungi. Cells within a tissue work as a unit to perform a particular function in living organisms. Different organs of the human body, for instance, often are made from many different types of tissues.

vaporize To convert from a liquid to a gas (or vapor) through the application of heat.

volatile Chemical that easily evaporates.

X-ray A type of radiation analogous to gamma rays, but having somewhat lower energy.