

Note: The number in parentheses at the end of each definition indicates the page number in this book where the term is defined.

A

action-at-a-distance force force that can push or pull an object without touching it; also called a non-contact force (99)

aquifer underground freshwater reservoir (282)

automated system replacement of human workers with machines that are controlled by a computer (167)

B

bias obvious opinion about an issue (347)

bioremediation technique of using living organisms to clean up contamination in land and water (353)

buoyancy tendency of an object in a fluid to rise or sink due to density differences with its surroundings (219)

buoyant force upward force exerted by a fluid (219)

C

cancer disease related to the uncontrolled and rapid reproduction of cells through cell division (73)

cell basic structural unit of an organism and the building block of life; all living things are made of cells (11)

cell division process by which a cell divides into two new cells (13)

cell membrane thin covering that holds the cytoplasm and organelles inside a cell and controls the passage of materials in or out of the cell (18)

cell theory (1) the cell is the basic unit of life; (2) all organisms are made up of one or more cells; (3) all cells come from existing cells (13)

cell wall rigid structure that surrounds the cell membrane of plant cells; provides strength and support for a plant cell (18)

cellular respiration process by which mitochondria provide energy for plant and animal cells by transforming oxygen and sugar (food) into carbon dioxide and water (51)

cellular transport movement of substances into and out of a cell; involves several different processes, such as diffusion and osmosis (25)

chlorine chemical used to disinfect water (i.e., kill organisms) (308)

chloroplast membrane-bound organelle of a plant cell that contains a green substance (pigment) called chlorophyll; chlorophyll uses the Sun's energy to convert carbon dioxide and water into sugar and oxygen in a process called photosynthesis (18)

circulatory system system made up of the heart, blood vessels, and blood; main purpose is to move nutrients, gases, and wastes throughout the body (68)

component part of a system (158)

compound light microscope microscope that uses light focussed through several different lenses, which make up the eyepiece and the objective lenses, to form a magnified image of a specimen (14)

compressibility property of being able to be compressed or made more compact (229)

compression decrease in volume caused by a force (229)

connective tissue tissue that supports and connects different parts of the body (e.g., blood, fat, cartilage, tendons, bone) (63)

consumer individual who uses the goods or services provided by a system (160)

contact force force that acts between objects that are touching (99)

contaminant content that is harmful to humans, other animals, and the environment (318)

criterion (pl. criteria) standard rule or test on which a decision or judgement can be based (169)

cytoplasm jelly-like material that fills the cell and surrounds the organelles; contains nutrients the cell needs to survive (18)