

## O

**organ** group of tissues in an organism that performs a specific task (62)

**organ system** group of two or more different organs that work together to perform one or more specific functions in the body (68)

**organelle** small structure (part) inside a cell that performs a specific function to meet the cell's basic needs to survive and reproduce (18)

**osmosis** special kind of diffusion in which a fluid (usually water) moves through a selectively permeable membrane from an area of higher concentration to an area of lower concentration (27)

**output force** force that a machine applies to an object; symbolized by  $F_{out}$  (115)

## P

**paralysis** inability to move muscles (73)

**particle theory of matter** theory that states that all matter is made up of particles; that all particles of one substance are identical; that particles of matter are in constant motion; that temperature affects the speed at which particles move; that particles have forces of attraction between them; and that there are spaces between particles (198)

**Pascal's law** law that states that when force is applied to an enclosed fluid, the increase in pressure is transmitted equally to all parts of the fluid (241)

**permeable** that can be easily permeated or penetrated (by air or water, for example) (24)

**photosynthesis** process by which the chlorophyll in chloroplasts uses the Sun's energy to convert carbon dioxide and water into sugar and oxygen (51)

**photosynthetic tissue** tissue that transforms the Sun's energy into sugar (64)

**piston** disk that moves inside a cylinder (242)

**Plimsoll line** line painted on the hull of all cargo ships to show how heavily the ship can be safely loaded in different water conditions (221)

**pneumatic system** system that uses a gas, usually air, under pressure to transmit a force (244)

**polar icecap** sometimes used to refer to the big ice masses at the poles (284)

**potential energy** energy that is stored (108)

**pressure** amount of force applied to a given area (227)

**productivity** amount of output that is produced per unit of time (165)

**protective tissue** tissue that forms a covering on most plants to help prevent water loss and to protect the plant (64)

**pulley** simple machine consisting of a grooved wheel with a rope or cable looped around it; can change the direction of the force or increase the output force, depending on whether it is fixed or movable (136)

**pump** device that moves a fluid through or into something (245)

## Q

**qualitative assessment** analysis made by observation (169)

**quantitative assessment** analysis of numerical data (169)

## R

**recharge** refill (310)

**reproductive system** system made up of organs for producing offspring (69)

**respiration** process that involves the intake of oxygen and the discharge of carbon dioxide (68)

**respiratory system** system made up of the nose, trachea, and lungs, as well as the throat, larynx, and bronchi allows oxygen from the air to enter the body and waste carbon dioxide to exit the body (68)

**ribosome** tiny organelle in the cell's cytoplasm that helps make proteins (18)

## S

**salinity** amount of dissolved salts in water (280)

**salt water** type of water with a concentration of dissolved salts averaging 3.5% (280)