magnetic field a region where a magnetic force can be detected (p. 680)

mass density the concentration of matter of an object, measured as the mass per unit volume of a substance (p. 275)

mechanical energy the sum of kinetic energy and all forms of potential energy (p. 174)

mechanical wave a wave that requires a medium through which to travel (p. 382)

medium a physical environment through which a disturbance can travel (p. 382)

model a pattern, plan, representation, or description designed to show the structure or workings of an object, system, or concept (p. 6)

moment of inertia the tendency of a body that is rotating about a fixed axis to resist a change in this rotating motion (p. 905)

momentum a quantity defined as the product of the mass and velocity of an object (p. 198)

mutual inductance the ability of one circuit to induce an emf in a nearby circuit in the presence of a changing current (p. 721)

N

net force a single force whose external effects on a rigid body are the same as the effects of several actual forces acting on the body (p. 126)

node a point in a standing wave that maintains zero displacement (p. 393)

normal force a force that acts on a surface in a direction perpendicular to the surface (p. 135)

O

order number the number assigned to interference fringes relative to the central bright fringe (p. 529)

P

parallel describes two or more components of a circuit that provide separate conducting paths for current because the components are connected across common points or junctions (p. 651)

path difference the difference in the distance traveled by two beams when they are scattered in the same direction from different points (p. 529)

perfectly inelastic collision a collision in which two objects stick together after colliding (p. 212)

period the time that it takes a complete cycle or wave oscillation to occur (p. 376)

phase change the physical change of a substance from one state (solid, liquid, or gas) to another at constant temperature and pressure (p. 318)

photoelectric effect the emission of electrons from a material when light of certain frequencies shines on the surface of the material (p. 756)

photon a unit or quantum of light; a particle of electromagnetic radiation that has zero mass and carries a quantum of energy (pp. 734, 757)

pitch a measure of how high or low a sound is perceived to be, depending on the frequency of the sound wave (p. 409)

potential difference the work that must be performed against electric forces to move a charge between the two points in question divided by the charge (p. 596)

potential energy the energy associated with an object because of the position, shape, or condition of the object (p. 169)

power a quantity that measures the rate at which work is done or energy is transformed (p. 179)

precision the degree of exactness of a measurement (p. 16)

pressure the magnitude of the force on a surface per unit area (p. 280)

projectile motion the curved path that an object follows when thrown, launched, or otherwise projected near the surface of Earth (p. 96)

R

radian an angle whose arc length is equal to the radius of the circle, which is approximately equal to 57.3° (p. 898)

rarefaction the region of a longitudinal wave in which the density and pressure are at a minimum (p. 408)

real image an image that is formed by the intersection of light rays; a real image can be projected on a screen (p. 456)

reflection the turning back of an electromagnetic wave at a surface (p. 451)

refraction the bending of a wavefront as the wavefront passes between two substances in which the speed of the wave differs (p. 488)

resistance the opposition presented to electric current by a material or device (p. 612)

resolving power the ability of an optical instrument to form separate images of two objects that are close together (p. 539)