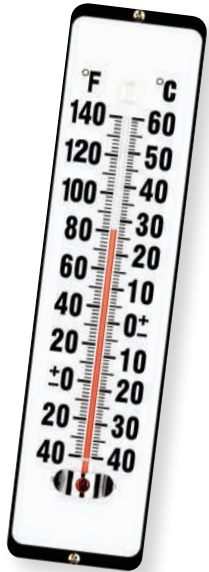


Heat and Light Energy



Contents

<i>Preview the Book</i>	2
What Is Heat?	3
Thermal Energy	4
How Thermal Energy Moves	7
<i>Cause and Effect</i>	10
What Is Light?	11
Light Energy	12
Light and Objects	14
<i>Sequence</i>	16
How Do We See Light?	17
How the Eye Works	18
<i>How to Read Diagrams</i>	20
What Kinds of Technology Use Light?	21
Lenses, Lasers, and Fiber Optics	22
Glossary	24



Glossary

absorption (uhb-SORP-shuhn) the taking in of energy by an object **(14)**

concave lens (kon-KAYV LENZ) a lens that is thicker at the edges and thinner in the middle; makes light waves spread apart **(22)**

conduction (kuhn-DUHK-shuhn) the transfer of thermal energy between two objects or materials that are touching **(7)**

conductor (kuhn-DUHK-tur) a material through which thermal energy moves easily **(7)**

convection (kuhn-VEK-shuhn) the transfer of thermal energy by the movement of a liquid or a gas **(8)**

convex lens (kon-VEKS LENZ) a lens that is thicker in the middle and thinner at the edges; makes light waves come together **(22)**

electromagnetic spectrum (i-lek-troh-mag-NET-ik SPEK-truhm) the range of all electromagnetic waves, including those that can and cannot be seen with the human eye, listed in order of wavelength **(13)**

frequency (FREE-kwuhn-see) the number of wavelengths that pass through a given point each second **(13)**

heat (HEET) the movement of thermal energy from matter that is warmer to matter that is cooler **(6)**

insulator (IN-suh-lay-tur) a material through which thermal energy does not move easily **(7)**

lens (LENZ) a curved piece of clear material that refracts light, such as in the human eye, eyeglasses, and telescopes **(18)**

light energy (LITE EN-ur-jee) a form of energy that moves in electromagnetic waves, some of which can be seen with the human eye **(12)**

opaque (oh-PAYK) not letting any light pass through **(14)**

radiation (ray-dee-AY-shuhn) the transfer of energy by electromagnetic waves, which can move through both matter and space **(9)**

reflection (ri-FLEK-shuhn) the bouncing of light, heat, or sound off an object **(15)**

refraction (ri-FRAK-shuhn) the bending of light as it moves from one material to another **(15)**

temperature (TEM-pur-uh-chur) how hot or cold something is; the average kinetic energy of the particles in an object **(5)**

thermal energy (THER-muhl EN-ur-jee) the sum of the kinetic energy of all the moving particles within an object **(4)**

translucent (tranz-LOO-suhnt) letting some light pass through, but preventing objects from being seen clearly through it **(14)**

transparent (tranz-PAIR-uhnt) letting nearly all light pass through **(14)**

wavelength (WAYV-length) the distance from a point on one wave to the same point on the next wave **(13)**