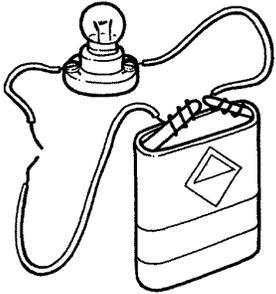




interaction

the effect that objects, organisms, or substances have when they connect with each other



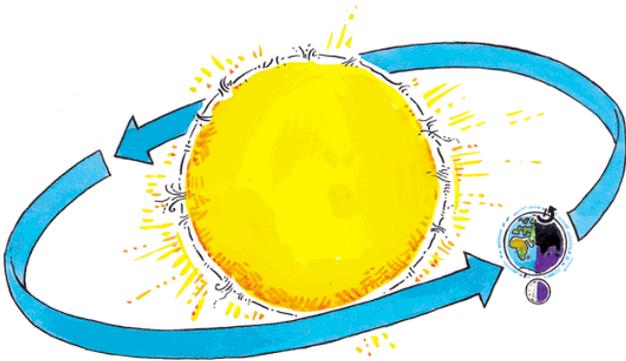
diagram

a plan, sketch, drawing, or outline made to show how something works or to show the way parts are put together



force

a push or a pull that causes an object to move, stop, or change direction



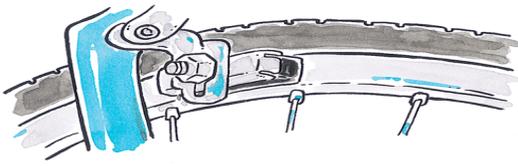
gravity

the force that pulls all things in the universe toward each other; the force that pulls things down on Earth

magnetism



a force that pulls iron or steel across a distance; a force that attracts or repels magnetic material



friction

a force that resists motion when objects rub against each other

motion



a change in the position of an object

simple machine



a device with few or no moving parts that changes the size or direction of a force



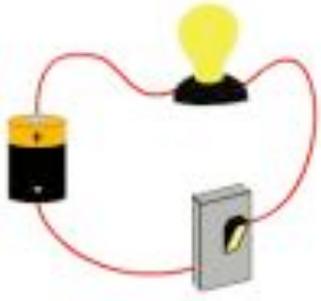
energy

the ability to make a change in matter



electricity

energy that flows through a circuit and can create light, heat, magnetism, sound, or other effects



electric circuit

a closed path where electricity can flow



electromagnet

a temporary magnet created when electricity passes through wire wrapped around an iron bar

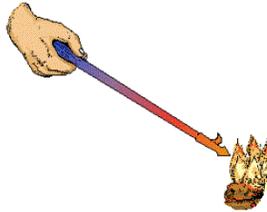


Photo Credit:
National Park Service

thermal energy

heat energy caused by the movement of molecules in an object

conduction

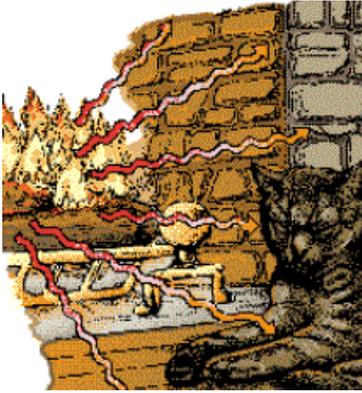


the direct transfer of heat between objects that touch

convection



heat moving from one object to another caused by mixing a liquid or a gas



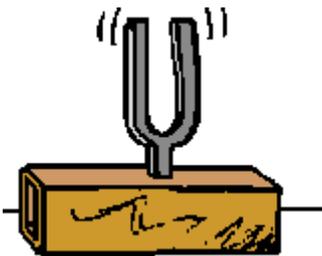
radiation

the movement of thermal (heat) energy by electromagnetic waves, such as light waves from the sun



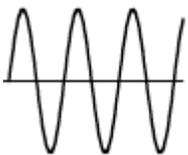
sound energy

a change in matter made by vibrating objects

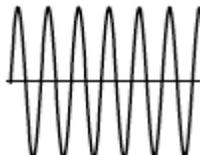


vibrate

to move back and forth



Lower Pitch



Higher Pitch

pitch

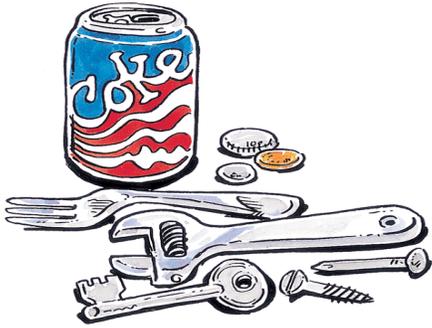
how high or low a sound is

volume



(sound energy)

the loudness or amount of a sound



conductor

a material that allows energy to flow through it easily

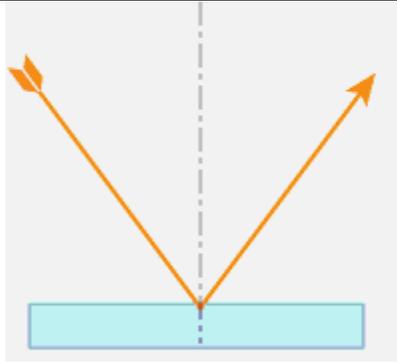
insulator



a material that **does not allow** energy to flow through it easily

light energy

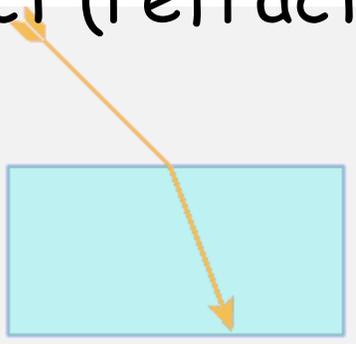
a form of energy that travels in waves and can be seen with our eyes



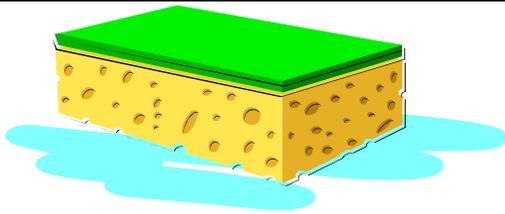
reflect (reflection)

when light rays bounce
off an object

refract (refraction)



when light rays bend



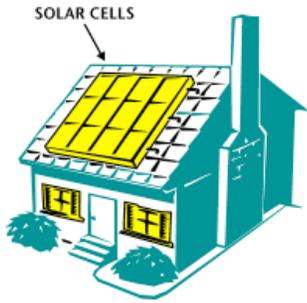
absorb (absorption)

to take in and hold
inside



fossil fuels

materials formed from
decayed remains of
ancient plants and
animals that are burned
to produce heat; coal,
oil, and natural gas



solar

energy

energy from sunlight

mechanical
energy



energy of motion



potential
energy

energy that is stored in
a material because of
its position or condition

kinetic
energy



energy of a material in
motion