

Vocabulary

Use the vocabulary words and definitions below as a reference for this unit.

Electricity

- atom** the smallest unit of an element that is still that element; the basic building block of matter
- alternating current (AC)** electrical current that flows in one direction, then in the other direction; changes direction many times every second; abbreviated AC
- armature** the coil inside the generator
- battery** a group of two or more electric cells used to create or store electricity
- cell** a device that uses chemical reactions to store and produce electricity
- circuit** the path a current follows through a conductor
- closed circuit** a complete path or circuit which allows electricity to move along it
- conductor** a material that allows electricity to pass through it
- current** the flow of electrons along a path

Vocabulary

direct current (DC) electrical current that flows in only one direction; abbreviated *DC*

electric field the region around a charged object in which other charged objects experience an electric force

electric force the force of attraction or repulsion between objects due to charge

electrical energy the energy of moving electrons; the energy of moving charged particles

electricity a form of energy in which electrons are flowing

electrocute to kill by passing electric current through a body

electromagnetic induction producing a current by moving a coil of wire across a magnetic field

electron the negatively charged particle of an atom; the electron moves around the center of the atom (nucleus)

energy the ability to do work or cause change

force pressure exerted on an object; a push or a pull

generator a machine that changes mechanical energy into electricity

insulator a material that will not allow electricity to pass through it

Vocabulary

matter	anything that has both mass and volume
mechanical energy	the energy of moving things
molecule	two or more atoms that have a bond of shared electrons
negative charge	the charge of an electron
neutral	being neither positively nor negatively charged
neutron	the neutral particle found in the nucleus of an atom; a neutron has no charge
open circuit	an incomplete path or circuit that does not permit the flow of electricity
parallel circuit	a circuit that provides more than one path for electricity to follow
positive charge	the charge of a proton; considered opposite of negative
proton	the positively charged particle in the nucleus of an atom
series circuit	a circuit that has only one path for electricity to follow
static electricity	the form of electricity caused by a charged (+) or (–) particle; it does not move in a path

Vocabulary

- attract** to draw or pull toward itself (e.g., a magnet attracts iron)
- compass** an instrument with a magnetized needle that points to magnetic north; used to determine direction
- electromagnet** a device that creates a magnetic field made by connecting a coil of wire to an electric current
- electromagnetic effect** the tendency of flowing electrons (electricity) to produce magnetic fields and the tendency of moving magnetic fields to cause electrons to flow
- electromagnetic energy** the energy that results from the interaction of the electric and magnetic fields
- electromagnetic force** the forces of attraction and repulsion between charged particles, resulting in electricity and magnetism
- induced** caused, created, or produced
- law of magnetic poles** like magnetic poles repel and unlike magnetic poles attract
- like poles** the same poles; the poles of magnets that repel each other

Vocabulary

lines of force	imaginary lines that show a magnetic field
magnet	a substance that attracts or pulls on other substances, especially those made of or including iron
magnetic	of or relating to a magnet or to magnetism
magnetic field	the space around a magnet where a force is noticeable
magnetic north	the magnetic pole located in the north about 800 miles from the North Pole; also known as the North Magnetic Pole
magnetic south	the magnetic pole located near the South Pole; also called the South Magnetic Pole
magnetic variation	for navigational purposes; the angle between the North Magnetic Pole and the actual geographic North Pole
magnetism	a property of matter that creates forces that attract or repel certain substances
magnetize	to become magnetic; to make into a magnet
nonmagnetic	anything that is not attracted to a magnet