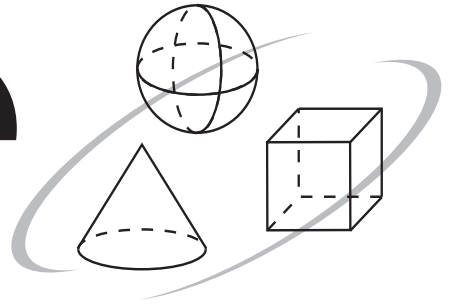


# Simple Solutions.



Minutes a Day—Mastery for a Lifetime!

NextGen  
Science 5

Glossary

# Glossary

Vowel Pronunciations				
a	e	i	o	u
at	end	it	hot	up
āpe	mē	īce	ōld	ūse
wigwām			sōng	rūle
âir			fōrk	pūll
			ōil	tūrn, sūre
			out	
ə = unstressed sound, as in lava, given, pencil, wagon, virus, and idea				

## **adapt (v) L #12**

change in a way that makes an organism better suited to survive in its environment; a species adapts over time

## **adaptation (n) L #12**

long-lasting change in a species that helps its members be better suited to survive in their environment; adaptations happen over a long period of time and are passed from parent to offspring

## **air (n)**

a mixture of nitrogen, oxygen, carbon dioxide, and other gases

## **air pressure (n) L #64**

the weight of the atmosphere pressing down on Earth

## **algae (n) L #48**

aquatic organisms that carry out photosynthesis

## **apparent brightness (n) L #91**

how bright a star appears from Earth

## **atmosphere (n) L #56**

the layers of air that surround Earth; includes weather and climate

## **attract (v)**

pull toward

## **axis (n) L #92**

imaginary line that runs through the center of Earth from the North Pole to the South Pole; Earth rotates on its axis

## **bacterium (n) plural: bacteria**

microscopic single-celled organisms that are found in all natural environments

## **behavior (n)**

the way an organism acts to meet a need or respond to signals from its environment

## **biodiversity (n) L #76**

variety of life; refers to the different species that interact in an ecosystem

# Glossary

**biological weathering (n) L #14**

weathering that occurs when the roots of trees and other plants grow into the cracks and holes in rock, causing rocks to crack and break apart

**biome (n) L #67**

large region of Earth that shares climate, types of vegetation and animals; the six major biomes are tundra, forest, ocean, freshwater, grassland, and desert

**biosphere (n) L #56**

all living things on Earth

**boiling (n) L #27**

a type of vaporization; occurs when energy is added and a substance changes from liquid to gas

**boiling point (n) L #27**

the temperature at which a heated liquid becomes a gas

**cache (cash)(v) L #79**

collect and store more than is needed; for example, animals cache seeds to use during winter

**canyon (n)**

deep valley with steep sides

**carcass (n)**

dead body of an animal

**carnivore (n) L #47**

animal that eats other animals

**cause (n) L #7**

event that brings about an effect

**cell (n) L #11**

the basic unit of life; what all living things are made of

**chemical change (n) L #36**

change that results in a substance with physical and chemical properties that are different from the original substance

**chemical property (n) L #31**

feature that describes an object's ability to change (e.g., flammability, toxicity, reactivity)

**chemical reaction (n) L #38**

chemical change; occurs when substances combine and the particles rearrange to form a different substance

**chemical weathering (n) L #14**

the breaking down of rock into smaller pieces; weathering that is caused by chemical reactions

**circumpolar (adj) L #93**

describes anything that circles the North Pole or the South Pole

**climate (n)**

the average weather in a place over many years

# Glossary

**collision (n)**

an encounter between particles; happens when particles touch or bump into each other, and energy is transferred between them

**community (n)**

all the populations that live in an ecosystem at one time

**conclusion (n) L #1**

a summary of data collected during an experiment; an explanation of the results of an experiment

**condensation (n) L #28**

process by which a gas changes to a liquid

**condensation point (n) L #28**

the temperature at which a substance changes from a gas to a liquid

**conductivity (n)**

a physical property of matter; the ability to allow heat or electricity to pass through

**conductor (n)**

material that allows heat or electricity to flow through it

**constant (n) L #2**

a condition that must remain the same for both the experimental group and the control group in an experiment

**constellation (n) L #92**

a group of stars that forms a recognizable shape

**constraint (n) L #17**

a factor or condition that limits what engineers can do while they are designing solutions

**consumer (n) L #48**

organisms that take in the energy and matter they need by eating other organisms

**contact force (n)**

force that works when objects touch (push, pull, friction)

**contract (kän trakt) (v)**

make smaller or become smaller

**control (n) L #2**

the group that does not receive the experimental treatment in an experiment; the control group helps the scientist know that the outcome is a result of the treatment

**core (n) L #62**

deepest layer of Earth, which is made of very hot metal; includes an inner core and outer core

**crescent (adj) L #98**

moon phase in which less than one-half of the illuminated face of the moon can be seen

**criterion (n) L #17 plural: criteria**

a requirement needed to make an engineer's design successful

# Glossary

**crust (n) L #62**

Earth's thin outer layer made of sections called plates; includes the continents and land under the oceans

**decomposer (n) L #51**

an organism that breaks down dead matter and returns nutrients to the environment

**deforestation (n) L #86**

removal of all the trees in a wide area to make the land usable for other purposes, such as agriculture

**dependent variable (n) L #2**

the outcome, or what happens as a result of changing the independent variable in an experiment

**digest (v)**

convert food into a simple form that the body can use

**digestion (n)**

chemical process of breaking down food

**drought (n) L #72**

extended period of little or no rain

**earthquake (n)**

the shaking of Earth's surface, often caused by tectonic plates colliding or sliding past each other

**ecosystem (n) L #11**

a community of living things that interact with each other and their environment

**effect (n) L #7**

an event or condition that happens as a result of a cause

**energy (n) L #8**

the ability to cause change

**energy pyramid (n) L #49**

model that shows the flow of energy from one feeding level to the next in an ecosystem

**engineering (n) L #16**

the use of science and technology to solve problems and to meet people's wants and needs

**engineering design process (EDP) (n) L #16**

a set of steps engineers use to create the best solution to an observed problem

**erosion (n) L #14**

process by which small bits of broken down rock (sediment) are moved from one place to another

**evaluate (v) L #18**

find the value in something by looking at its strengths and weaknesses

**evaporation (n) L #27**

a type of vaporization; process by which a liquid changes to a gas

**evidence (n)**

an outward sign; proof

**exosphere (n) L #64**

outermost layer of Earth's atmosphere

# Glossary

**expand (v)**

get bigger; increase in size, number, or amount

**experiment (n) L #1**

series of steps that are carried out under controlled conditions to test a hypothesis

**experimental group (n) L #2**

the group that receives the experimental treatment in an experiment

**external structure (n) L #12**

a body part on the outside of an organism

**extinct (n)**

a species that has died out; a species with no more living members

**extinction (n)**

the act or process of a species dying out

**feces (n)**

solid waste of animals

**food chain (n) L #48**

model that shows the transfer of matter and energy from a producer to a series of consumers

**food web (n) L #53**

model that shows interconnected food chains in an ecosystem

**force (n) L #9**

a push or a pull

**fossil (n) L #13**

evidence of an organism that lived thousands or even millions of years ago

**freezing (n)**

process by which a substance changes from a liquid to a solid

**freezing point (n) L #28**

the temperature at which a substance changes from a liquid to a solid

**fresh water (n)**

water that does not contain noticeable amounts of salt; fresh water includes glaciers and ice caps, groundwater, lakes, rivers, and streams; fresh water is necessary for survival of most land and freshwater organisms

**friction (n) L #9**

a force created by objects rubbing against each other; a force that slows or stops moving objects

**full moon (n) L #98**

moon phase in which the fully lighted circular face of the moon is visible from Earth

**galaxy (n) L #13**

vast collection of dust, gas, and stars; includes hundreds of billions of stars and many solar systems

**gas (n)**

one of the states of matter; it does not have a definite shape and does not have a definite volume

# Glossary

**geosphere (n) L #56**

all land and rock on Earth; includes crust, mantle, and core

**gibbous (adj) L #98**

moon phase in which more than one-half of the illuminated face of the moon can be seen

**glacier (n)**

a large mass of moving ice

**glucose (n) L #46**

sugar produced by plants through photosynthesis

**gravity (n) L #9**

force that attracts; it pulls from the center of an object toward the center of another object

**greenhouse effect (n) L #71**

process by which gases in the atmosphere trap reflected energy from the sun and keep Earth warm

**greenhouse gas (n)**

gas that keeps Earth's temperature from being too hot or too cold; examples are methane and carbon dioxide; an excess of greenhouse gases will make Earth too warm

**groundwater (n) L #57**

water stored underground

**habitat (n)**

the place or environment where a plant or animal lives

**hardness (n) L #32**

a physical property of matter; ability of a substance to scratch another surface

**herbivore (n) L #47**

animal that eats plants

**horizon (n) L #41**

where land or a body of water appears to meet the sky

**hydrosphere (n) L #56**

all water on Earth and in the atmosphere

**hypothesis (n) L #1**

an explanation that is based on observations and can be tested and measured through experimentation

**igneous (adj) L #63**

rock formed from cooled magma; means "from fire"

**illuminated (adj)**

lit; brightened with light

**independent variable (n) L #2**

the condition a scientist changes to see what effect that change has on the dependent variable

**inquiry (n) L #1**

a process of asking questions and seeking information

# Glossary

**insulator (n) L #33**

a material that does not allow heat or electricity to flow through it; a nonconductor

**interdependent (adj)**

dependent on or relying on one another

**internal structure (n) L #12**

a body part on the inside of an organism

**invasive species (n) L #82**

a plant or animal that is introduced into an ecosystem where it causes harm

**iron (n)**

metal found in Earth's core

**irrigate (v)**

bring water to land by artificial means to grow crops

**kinetic energy (n) L #8**

energy of motion

**landfill (n)**

area set aside for the collection of waste and garbage; goes by many other names, including trash heap and garbage dump

**landslide (n)**

sudden downhill movement of a large amount of rock and soil

**Law of Conservation of Matter (n) L #39**

principle that states the following: Matter is neither created nor destroyed.

**liquid (n)**

one of the states of matter; it has a definite volume and does not have a definite shape

**luster (n) L #32**

a physical property of matter that describes the way light reflects off the surface of an object

**magma (n)**

molten rock inside Earth that becomes lava as it flows out of a volcano

**magnetism (n) L #9**

a force that attracts or repels; the force exerted by a magnet

**malleability (ma lē ə bi lə tē) (n) L #33**

a physical property of matter that describes the ability to bend or be shaped without shattering

**mantle (n) L #62**

layer of very hot rock below Earth's crust; tectonic plates float on the mantle

**mass (n) L #21**

the amount of matter in an object or substance

**matter (n) L #21**

anything that has mass and volume

**melting (n) L #27**

process by which a solid changes to a liquid



# Glossary

**melting point (n) L #27**

the temperature at which a substance changes from a solid to a liquid

**mesosphere (n) L #64**

coldest layer of the atmosphere; most meteors burn up in this layer

**metalloid (n) L #33**

a material that has some of the properties of metals and some of the properties of nonmetals

**metamorphic (adj) L #63**

describes rock formed over time by heat and pressure applied to sedimentary and igneous rock; means “changed form”

**methane (n) L #88**

naturally occurring greenhouse gas

**microplastics (n) L #83**

small bits of plastic created from the breakdown of larger pieces

**mineral (n) L #32**

naturally occurring solid found in rocks, sands, and soils, as well as deep beneath Earth’s surface; has a crystal structure and does not come from any living thing; examples include halite, diamonds, gold, silver, copper, talc, and quartz

**model (n) L #4**

an object, drawing, simulation, or mathematical equation that represents something real; can represent something that is very difficult or impossible to observe

**molten (adj)**

describes a substance that has been turned to liquid by extreme heat

**moon (n)**

natural satellite of Earth; shines by reflected light; orbits Earth every 29 ½ days

**moon phase (n) L #98**

view of the moon that varies throughout the month; caused by the angle at which the moon is seen from Earth

**multicellular (adj) L #11**

describes an organism that is made up of more than one cell

**native species (n) L #82**

a plant or animal that occurs naturally in an ecosystem (without assistance) and is well suited to its habitat

**new moon (n) L #98**

the illuminated face of the moon cannot be seen during this phase; the moon appears dark during this phase

**nitrogen (n)**

a gas that makes up 78 percent of Earth’s atmosphere; a nutrient needed by all living things

**nonconductor (n)**

see insulator

# Glossary

**nutrient (n)**

substance an organism needs to survive and grow

**observation (n) L #1**

paying attention to details; examining through use of the five senses

**ocean trench (n)**

long, deep, narrow valley in the ocean floor

**omnivore (n) L #47**

animal that eats plants and other animals

**opaque (ō pāk) (adj)**

describes a material that allows no light waves to pass through

**orbit (n) L #91**

path that a body in space follows around another body in space

**organism (n)**

living thing (plant, animal, bacteria, etc.)

**ozone (n) L #64**

layer of gas that absorbs the harmful rays of the sun

**particle (n)**

a very small bit of matter; a piece of matter too small to be seen with the human eye

**pathogen (n) L #7**

a disease-causing agent, such as a virus or bacteria

**pattern (n) L #6**

a regular and predictable series of repeating events

**phase (n)**

see moon phase

**phase (of matter) (n)**

states of matter: solid, liquid, gas

**phase change (n) L #27**

the change from one state of matter to another, for example from solid to liquid; occurs when energy is added or removed

**phenomenon (fi nă mə nə) (n) L #1 plural: phenomena**

fact or event that is observable

**photosynthesis (n) L #46**

chemical reaction plants use to make their own food

**physical change (n) L #36**

a change in which the appearance of an object or substance is altered, but its identity (makeup) does not change

**physical property (n) L #29**

a property that can be observed or measured without changing the identity (makeup) of the object or substance

# Glossary

**physical weathering (n) L #14**

The breaking down of rock into smaller pieces by water, ice, wind, or temperature change

**plateau (n)**

area of high, flat ground

**polar ice cap (n) L #57**

dome-shaped sheet of ice; ice caps are located at the North Pole and South Pole and are made from layers of ice and snow built over millions of years

**pollen (n)**

fine yellow dust produced in the male parts of the flower

**pollinate (v)**

transfer pollen from the male parts of a flower to the female parts of the flower; this process produces seeds

**pollination (n) L #78**

process by which pollen is transferred from the anther (male structure) to the stigma (female structure) to produce a seed

**pollinator (n) L #78**

animal, such as a bird, bat, or bee, that carries pollen from one plant to another

**pollutant (n)**

a thing or substance that makes air, water, or land impure or unsafe

**pollute (v)**

contaminate or make dirty with harmful things or substances

**pollution (n)**

waste that ends up in water, air, or land; contaminates the environment in a way that makes it unsafe or unlivable

**population (n) L #48**

all the organisms of the same species in an ecosystem

**potential energy (n) L #8**

stored energy

**precipitate (pri si pə tət) (n) L #37**

a solid that forms when two clear liquids are mixed

**precipitation (n)**

rain, snow, sleet, hail

**predator (n)**

an animal that hunts and eats other animals for food

**prey (n)**

an animal that is hunted by other animals; an animal that is eaten by other animals

**primary consumer (n) L #48**

an animal that gets its energy by eating producers; the first consumer in a food chain

**producer (n) L #48**

organism that makes its own food; plants and algae

# Glossary

**product (n) L #38**

a substance that is formed as a result of a chemical reaction (chemical change); its properties differ from the properties of the substances present before the reaction

**property (n) L #8**

a feature that describes an object or substance

**prototype (n) L #18**

a device, process, or system that shows the idea engineers have for a solution

**quarter moon (n) L #98**

moon phase in which one half of the moon's illuminated face can be seen

**rainforest (n)**

woodland area characterized by tall broad-leaved evergreen trees, high annual rainfall and humidity, and high levels of biodiversity

**reactant (n) L #38**

one of the substances present at the beginning of a chemical reaction; during a reaction, the particles of each reactant break apart and come together in new arrangements

**repel (v)**

push away

**reproduce (v)**

make more of one's own kind; create offspring

**reproduction (n)**

the process by which an organism makes more of its own kind

**reservoir (n)**

place where water builds up and is stored

**revolution (n) L #97**

one complete orbit of an object around another

**revolve (v)**

move in a curved path around an object; orbit

**rock cycle (n) L #63**

process by which rocks constantly change from one form to another

**rotate (v) L #92**

spin or turn; Earth rotates on its axis

**runoff (n) L #61**

water that is not absorbed into the ground and flows into rivers, streams, and other bodies of water

**salt water (n)**

water that contains large amounts of salt; ocean water

**saturate (v)**

fill to a point where no more can be absorbed

**scavenger (n) L #52**

consumer that eats dead and decaying animal matter

# Glossary

**scratch test (n) L #32**

a test used to determine a mineral's hardness by dragging the mineral against another object to see if it leaves a permanent mark

**secondary consumer (n) L #48**

an animal that eats a primary consumer

**sediment (n) L #14**

small bits of broken-down rock

**sedimentary (adj) L #63**

rock formed over thousands of years from sediment deposited in layers

**seismic wave (n) L #13**

energy that travels through Earth, often caused by the movement of tectonic plates

**semiconductor (n) L #33**

material that allows electricity to pass through but not as well as a metal does

**shadow (n)**

dark shape cast when light is blocked by an object

**shelter (n)**

covering or structure that protects an organism

**soil (n)**

mixture of broken-down rock, air, water, and decayed plants and animals

**solar system (n)**

planetary system including our sun and all the planets, moons, asteroids, comets, and other objects that orbit it

**solid (n)**

one of the states of matter; it has a definite shape and a definite volume

**solubility (n)**

physical property of matter that describes the ability of a substance to dissolve in another substance

**species (n)**

the whole group of the same kind of organism

**sphere (n) L #56**

an area where certain objects and events occur

**spring (n) L #59**

an opening in the earth near the surface where groundwater overflows onto land

**star (n) L #91**

giant ball of hot gas that gives off heat and light

**stomata (n) L #46**

tiny openings on plant leaves that allow gases to enter and exit plants

**stratosphere (n) L #64**

layer of the atmosphere where air is dry, and clouds are uncommon; layer that contains the ozone

# Glossary

**streak (n) L #32**

a mineral property; the mark left by a mineral when it is scraped across a streak plate; the color of the mark may or may not match the color of the mineral

**sun (n) L #91**

the center of our solar system and the closest star to Earth; 93 million miles away; its light takes eight minutes to reach Earth

**surface water (n) L #59**

water above ground on Earth's surface; fresh surface water includes rivers, lakes, ponds, wetlands, and other easily-accessible water

**technology (n) L #16**

the use of knowledge to make life easier or better; systems, processes, and devices that humans create

**tectonic plate (n) L #13**

section of Earth's crust that floats on the molten upper mantle; plates hold all the continents and the land under the oceans

**tertiary (tər shē er ē) consumer (n) L #48**

an animal that eats a secondary consumer

**theory (n) L #6**

an explanation that has been well tested and is widely accepted by the scientific community

**thermosphere (n) L #64**

one of the upper layers of the atmosphere; the northern lights occur here

**trait (n)**

a quality that describes a living thing; a characteristic that is passed from parent to offspring

**translucent (adj)**

describes a material that allows some light waves to pass through

**transparent (adj)**

describes a material that allows most light waves to pass through

**transparency (n) L #32**

the physical property of matter that describes how much light an object or substance allows to pass through

**troposphere (n) L #64**

layer of atmosphere closest to Earth's surface; where most weather happens and all life exists

**unicellular (adj) L #11**

describes an organism that is made up of only one cell

**universe (n)**

the entirety of everything that exists; includes everything on Earth, in our solar system, and in all the galaxies

**vaporization (n) L #27**

process by which a liquid changes to a gas

**variable (n) L #2**

a condition that can be changed in an experiment

# Glossary

**volume (n) L #21**

the amount of space matter takes up

**waning (wā ning) (adj) L #98**

getting smaller; describes the moon as it appears to shrink during the period from the full moon to the new moon

**waste (n)**

an unwanted by-product

**water cycle (n) L #61**

movement of water through the hydrosphere; includes evaporation, condensation, precipitation, and runoff

**water vapor (n)**

water in a gaseous form

**waxing (adj) L #98**

growing; describes the moon as it appears to grow during the period from the new moon to the full moon

**weather (n)**

short-term condition of the atmosphere; described by temperature, air pressure, wind, sunshine, humidity, and precipitation

**weathering (n) L #14**

continuous process that breaks down rock over time

**well (n) L #59**

a hole drilled into the earth to reach groundwater; the water is brought up using a pump