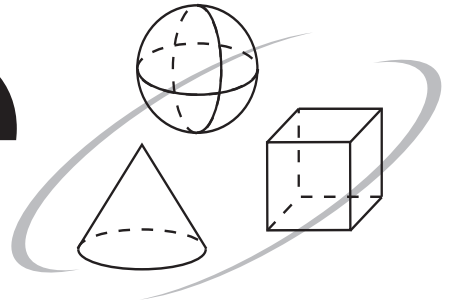


Simple Solutions.



Minutes a Day—Mastery for a Lifetime!

NextGen Science 6

Glossary

Glossary

Vowel Pronunciations				
a	e	i	o	u
at	end	it	hot	up
āpe	mē	īce	ōld	ūse
wigwām			sòng	rūle
âir			fôrk	pŭll
			òil	tŭrn, sùre
			out	
ə = unstressed sound, as in lava, given, pencil, wagon, virus, and idea				

acceleration (n)

the rate of change in velocity; the rate of change in an object's speed and/or direction

action-reaction pair (n)

a pair of forces that are equal in strength and opposite in direction; neither part of the pair exists without the other

absolute dating (n)

a method for determining the actual age of an object from its physical properties

air resistance (n)

a type of friction that is at work when air particles collide with the surface of a moving object

alloy (n)

a solution made from two or more metals; an alloy is stronger or better in some way compared with the materials from which it was formed

annular eclipse (n)

a solar eclipse that happens when the moon is farthest from Earth and during which a ring of sunlight appears around the moon

apparent size (n)

a phenomenon in which the size of an object appears to change with distance (i.e., an object that is far away appears smaller than it really is)

asteroid (n)

a small rocky object that orbits the sun and is believed to be the remains of planetesimals

asteroid belt (n)

a region between Mars and Jupiter where asteroids orbit; it is about 150 million kilometers wide

astronomical unit (AU) (n)

the unit used to describe distances between space objects within our solar system; one AU is the distance between Earth and the sun, about 150 million km

atmosphere (n)

the layers of gas surrounding an object (such as a planet) and held in place by gravity

atom (n)

the smallest building block of all matter; the smallest particle that has all the properties of a substance

balanced forces (n)

a pair of forces that are equal in size, opposite in direction, and acting on the same object

Big Bang theory (n)

the model of the origin of the universe that states that the universe began as a single point, an extremely dense object that exploded about 14 billion years ago. The universe is continuing to expand today.

boiling (n)

a form of vaporization that occurs within a liquid; usually energy must be added for boiling to occur

boiling point (n)

the temperature at which a substance boils (changes from liquid to gas)

carrying capacity (n)

the number of organisms of a particular species that can be supported by an ecosystem

Ceres (sir ēz) (n)

the largest object and only known dwarf planet in the asteroid belt

change in state

a change from one physical state to another (i.e., from liquid to solid)

chemical bond (n)

the strong electromagnetic attraction (force) that holds atoms together

chemical change (n)

a change in which a substance is altered chemically and becomes different substances with chemical and physical properties of their own; a chemical reaction

chemical formula (n)

the chemical symbols and numbers that represent the elements and number of atoms in a given type of molecule

chemical reaction (n)

a change in which a substance is altered chemically and becomes different substances with chemical and physical properties of their own; a chemical change

coefficient (n)

the number in front of a variable in an equation

coma (kō mā) (n)

the head of a comet consisting of a cloud of gas and dust

comet (n)

a small space object that orbits the sun and is made of rock, dust, and ice

commensalism (n)

a symbiotic relationship in which one species benefits while the other species is neither helped nor harmed

community (n)

all the populations that interact in a shared habitat or living area

competition (n)

a demand by two or more organisms for the same resource

compound (n)

one or more types of atoms bonded together; each has its own specific properties

condensation (n)

the process by which a gas changes to a liquid

condensation point (n)

the temperature at which a substance condenses (changes from gas to liquid)

conduction (n)

the transfer of thermal energy through collisions between particles

consensus (n)

the goal of peer review; an agreement with a finding or idea, based on evidence, that most scientists accept

constraint (n)

a limitation

consumer (n)

an organism that cannot make its own food

contact force (n)

a push or a pull that acts between two objects that touch each other; a force that involves physical contact

convection (n)

the transfer of thermal energy through the movement of particles from one part of a substance to another

crater (n)

a depression formed by an impact

crescent moon (n)

a phase of the moon in which only a sliver of the moon is visible

criteria (n)

a requirement [criteria, plural]

crystal (n)

an arrangement of atoms built with a repeating structure

day (n)

the time it takes for Earth to complete one rotation on its axis; an Earth day is 24 hours

decomposer (n)

organisms that break down dead organisms and waste

density (n)

the measure of how tightly (or loosely) packed the particles in a substance are

dependent variable (n)

the factor that may change as a result of something manipulated in an experiment

dwarf planet (n)

an outer space object that orbits the sun, is spherical or nearly spherical in shape, and shares its orbital path with other large objects (does not clear the neighborhood around its orbit)

Earth (n)

the third planet from the sun

eclipse (n)

an event during which one object blocks the light of another object

ecliptic (n)

the plane of Earth's orbit around the sun; the sun's apparent path during the year as seen from Earth

ecology (n)

the branch of biology that deals with relationships among living things and with their environment

ecosystem (n)

all living and nonliving elements interacting in an area

elastic force (n)

a force an object exerts to resist a change in its shape when the object is stretched or compressed

electric current (n)

the flow of negatively-charged particles

electric field (n)

an area where energy is stored; its strength is related to distance and magnitude

electromagnetic forces (n)

a noncontact force between charged particles

element (n)

a substance made of a single type of atom

energy (n)

the ability to cause change

engineering design process (n)

a series of steps engineers follow to find the best design solution

Eris (er is) (n)

the largest of three known dwarf planets in the Kuiper Belt; its discovery in 2005 led to the dwarf planet classification

erosion (n)

the removal of soil and rock from its source

erratic (n)

a rock or boulder found in areas where there is no other rock like it

evaporation (n)

a form of vaporization that occurs only at the surface of a liquid

extensive property (n)

a physical property of matter that depends on the sample being described; includes volume, mass, length, size, and weight

extinct (adj)

describes a species that has died out and has no more living members on Earth

fault (n)

a break in rock layers caused by Earth's internal forces

field (n)

an invisible area where energy is stored

flood basalt (n)

a large, flat, area of land or ocean floor covered with basalt, an igneous rock; formed from cooled lava flowing from the earth

fold (n)

a bend or buckle in rock layers caused by Earth's internal forces

food chain (n)

a model that illustrates energy flow in an ecosystem

food web (n)

an interconnected food pathway that shows the transfer of energy and matter in a food chain

force (n)

a push or pull that causes an object to accelerate; measured in newtons

fossil (n)

the remains or traces of ancient organisms that have been preserved by geologic processes

fossil record (n)

the history of life on Earth as documented by fossils; fossils are mapped in layers and arranged from oldest to youngest

frame of reference (n)

the viewpoint from which motion is observed or measured

freezing (n)

the process by which a liquid changes to a solid

freezing point (n)

the temperature at which a substance freezes (changes from a liquid to a solid)

friction (n)

the force exerted by a surface as an object moves across it; friction always works in the opposite direction of the force being applied

frost line (n)

the imaginary boundary between Mars and Jupiter, beyond which substances such as ammonia, methane, and water are cold enough to condense or freeze

full moon (n)

the complete illumination of the moon; the fully lighted circular face of the moon; occurs when the moon is positioned on the opposite side of Earth

galaxy (n)

a vast system of gases, dust, and billions of stars in their star systems

gas (n)

the state of matter that has no definite volume and no definite shape

gas giants (n)

the large outer planets composed primarily of hydrogen; Jupiter and Saturn

geologic column (n)

a sequence of rock strata that contains all the known fossils and rock formations from oldest (bottom) to youngest (top)

geologic time scale (n)

a timetable that describes the order and duration of major events during Earth's history, when living things first came into existence, when they went extinct

gibbous moon (n)

a phase of the moon's cycle after the full moon; a sliver of darkness is visible on the moon

glacier (n)

a large frozen body; an accumulation of snow, ice, rock, and sediment that slowly moves or spreads out over land

gravity (n)

a force of attraction between objects

greenhouse effect (n)

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

habitat (n)

the natural location and environment where an organism or population lives

Haumea (how mā ə) (n)

an egg-shaped rapidly spinning dwarf planet in the Kuiper Belt; discovered in 2005

heat (n)

the transfer of thermal energy from a region of higher temperature to a region of lower temperature

heat capacity (n)

the amount of thermal energy a substance can hold without changing its temperature

host (n)

the species harmed in a parasitic relationship

hypothesis (n)

a possible explanation for something a scientist has observed; it is based on existing knowledge

ice age (n)

a period of time when when large ice sheets cover vast areas of the planet

ice giant (n)

the large outer planets composed of icy material found in the early solar system; Uranus and Neptune

impact crater (n)

a depression formed on the surface of a planet as a result of a large object striking it

independent variable (n)

the factor that a scientist will manipulate in an experiment

index fossil (n)

a special class of fossils used to identify geologic periods

inertia (n)

an object's resistance to a change in motion; the more mass an object has, the more inertia it possesses

inorganic (adj)

the compounds that make up nonliving matter

insoluble (adj)

describes a substance that will not dissolve in a particular solvent

intensive property (n)

a characteristic that does not depend on the size of a substance; includes density, color, hardness, odor, etc.; can be used to identify a pure substance

intrusion (n)

a type of rock disturbance in which magma forces itself through cracks in rocks

iridium (n)

an element common in meteorites and asteroids but is rare on Earth

Jupiter (n)

a gas giant that is the largest planet in our solar system; made mostly of hydrogen and helium, it has more mass than all the other planets combined; its distance from the sun is 5 AU

kinetic energy (n)

the energy of motion

K-Pg boundary (n)

the layer of rock that marks the time when dinosaurs went extinct

Kuiper Belt (kī pār belt) (n)

a large region of objects 30–50 AU from the sun, containing remnants from the formation of the solar system; home to the short-period comets

law of conservation of energy (n)

the theory that states energy cannot be created or destroyed

law of conservation of mass (n)

the theory that states matter is neither created nor destroyed; also known as the law of conservation of matter

light-year (ly) (n)

the unit used to describe distances between Earth and space objects outside of our solar system; one light-year is the distance light can travel in one year

liquid (n)

the state of matter that has an indefinite shape and a definite volume

long-period comet (n)

a comet that can take from 200 years to millions of years to orbit the sun; believed to originate in the Oort Cloud

lunar cycle (n)

the moon's repeated orbit around Earth; takes approximately 29.5 days

lunar node (n)

a point at which the moon's orbital plane intersects Earth's orbital plane; there are two lunar nodes

magnetic field (n)

an area in which magnetic forces can act; this area fills the space around a magnet or wire that is carrying electric current

magnetism (n)

a phenomenon related to interactions between charged particles; a force that attracts or repels

magnitude (n)

the size or amount of something

Makemake (mä kā-mä kā) (n)

a dwarf planet; the second brightest object in the Kuiper Belt; discovered in 2005

Mars (n)

a terrestrial planet half the size of Earth and with a thin atmosphere and evidence of water; its distance from the sun is 1.5 AU

mass extinction (n)

the extinction of a large number of species within a relatively short period of geological time

melting (n)

the process by which a solid changes to a liquid

melting point (n)

the temperature at which a substance melts (changes from solid to liquid)

Mercury (n)

the terrestrial planet that is the smallest and closest to the sun; about one-third the diameter of Earth, it has a very slow rotation, no atmosphere, and extremes in temperature

Milky Way (n)

one of billions of galaxies in the universe; contains over 100 billion stars, including the sun and solar system

mixture (n)

two or more pure substances that are not chemically bonded, they can be separated

molecule (n)

two or more atoms held together by a chemical bond and acting as a single unit

moon (n)

the natural satellite that orbits Earth; reflects the light of the sun and makes a complete revolution every 29.5 days

moraine (n)

a large pile of till left behind by a glacier and that forms along the edges of a glacier

motion (n)

a change in an object's position

mutualism (n)

a symbiotic relationship in which both species benefit

Neptune (n)

an ice giant that is the outermost planet in the solar system; its distance from the sun is 30 AU

net force (n)

the sum of all the forces acting on an object

new moon (n)

a phase of the lunar cycle in which the moon cannot be seen because the illuminated part is facing away from Earth; occurs when the moon is positioned between Earth and the sun

noncontact force (n)

a push or a pull that acts between two objects that do not touch; a force that acts across a distance

Oort cloud (n)

a theoretical sphere of icy objects that surrounds our solar system at a distance of 2,000 AU from the sun; it has never been seen or photographed

orbit (n)

the path of an object as it moves around another object

orbit (v)

to revolve around something

organic (adj)

describes carbon-based molecules made of or derived from living organisms

parasite (n)

a species in a symbiotic relationship that harms another species

parasitism (n)

a symbiotic relationship in which one species benefits while the other species is harmed

partial lunar eclipse (n)

an event during which Earth partially blocks the sun's light, and part of the moon is in darkness (in Earth's shadow)

partial solar eclipse (n)

an event during which the moon covers part of the sun's light, and the sun looks like it is partially covered by the moon

path of totality (n)

the path of the moon's shadow as it travels across Earth's surface during a solar eclipse

peer review (n)

a process where a proposal is reviewed by experts in the field

penumbra (n)

the part of the shadow along the edges of the umbra where only some of the light source is blocked; part shadow and part light

period (n)

the completion of a cycle; in astronomy, the time it takes an object to complete an orbit

phase (of the moon) (n)

any of the shapes of the visible part of the moon as it moves through the lunar cycle

physical change (n)

a change that alters the physical properties of a substance without changing the identity of that substance

planet (n)

an object that orbits the sun, has formed into a sphere, and has a clear orbital path

planetesimal (n)

a small celestial body that never developed into a planet

Pluto (n)

a dwarf planet that was once considered the outermost planet in the solar system; discovered in 1930

population (n)

a single species of organisms that interact and influence each other in an area

potential energy (n)

the energy stored in fields

predator (n)

an animal that hunts, kills, and feeds on other animals

pressure (n)

a force exerted over a specific area

producer (n)

an organism that absorbs energy from the sun to make its own food

product (n)

the atoms or molecules present at the end of a chemical reaction; the substance produced by a chemical reaction

protoplanet (n)

an early planet formed when planetesimals merged

pure substance (n)

a substance that has a definite and unchanging composition; a substance composed of a single type of atom or a single type of molecule

qualitative data (n)

any data that describes qualities or characteristics like color, texture, shape or sound

quantitative data (n)

any data that describes an amount; it is numerical like height, weight, or length

quarter moon (n)

a phase of the lunar cycle when the moon is one-quarter of the way through its orbit; appears as if one-half of the moon's face is lighted

radiation (n)

the transfer of thermal energy through waves

reactant (n)

the atoms or molecules present at the beginning of a chemical reaction; the starting substance in a chemical reaction

relative dating (n)

the science of identifying the basic order of geological events and the rocks they leave behind; it is a comparison, it does not determine an exact age

relative motion (n)

a description of how an object moves in comparison to a chosen object or position (frame of reference)

satellite (n)

a body such as a moon that orbits a larger body

Saturn (n)

a gas giant that is the second largest planet; known for its seven distinctive rings and very low density; its distance from the sun is 9.5 AU

scientific inquiry (n)

a process that follows the scientific method leading to an investigation to answer a scientist's question

season (n)

a period of the year (spring, summer, fall, winter) determined by the tilt of Earth and its position in its orbit around the sun

shadow (n)

a dark shape created when an object blocks light from a source like a lamp, flashlight, or the sun

short-period comet (n)

a small space object made of rock, dust, and ice that takes less than 200 years to orbit the sun; Halley's comet is a well-known short-period comet

solar energy (n)

the heat and light energy that comes from the sun

solar wind (n)

the charged particles of the corona that escape gravity and flow out of the sun in all directions at great speed

solid (n)

the state of matter that has a definite shape and a definite volume

solubility (n)

the ability of matter to dissolve in a substance; an intensive property of matter

solute (n)

a part of a solution that dissolves in the solvent

solution (n)

a type of mixture in which the components are uniformly distributed

solvent (n)

the part of the solution into which another component of the solution dissolves

speed (n)

the measure of how far an object moves during a certain amount of time; calculated by dividing a unit of distance by a unit of time

star (n)

an enormous glowing ball of hot gases held together by the pull of gravity

static electricity (n)

a buildup of negatively charged particles

stratigraphy (n)

the study of rock layers

striation (n)

a scratch or groove carved into the land by a flowing glacier

subscript (n)

the number, in a chemical formula, that represents the number of atoms in the element immediately before it; written below and to the right

symbiosis (n)

a close, long-term relationship between two different species in which one or both of the species benefits

system (n)

two or more objects that work together; the part of the universe the observer chooses to study

tectonics (n)

the processes that change a planet's surface

temperature (n)

a measure of the average speed (average kinetic energy) of the particles in an object or substance

terrestrial planet (n)

the four inner planets; called terrestrial because, like Earth, they are rocky and have a core and outer crust

theory (n)

a principal or set of ideas that explains something; based on a large body of evidence, it may be adjusted or refined when new information is discovered

thermal conductivity (n)

a measure of the ability to transfer heat

thermal conductor (n)

a substance that transfers thermal energy quickly

thermal energy (n)

the sum of the energy in the particles of a substance; related to temperature, mass, and state of matter

thermal insulator (n)

a material that slows the transfer of thermal energy

till (n)

a jumble of rock in all shapes and sizes left behind by a retreating glacier

totality (n)

the time during a solar eclipse when the moon completely covers the sun and blocks its light from reaching Earth

total lunar eclipse (n)

an event during which Earth completely blocks the sun's light, and the entire moon is in darkness (in Earth's shadow)

total solar eclipse (n)

an event during which the moon completely blocks the sun's light, and the sun looks like it is covered by the moon

trophic level (n)

a step in a food chain; at each trophic level, energy and matter pass from one organism to another

umbra (n)

the part of a shadow in complete darkness

unbalanced forces (n)

a pair of forces acting on an object when the sum of the forces is not zero; unbalanced forces cause the motion of the object to change

unconformity (n)

a surface that represents a missing part of the geologic column

uniformitarianism (n)

the theory that states that processes that change Earth happen in the same way and at the same rate for all of Earth's time

universe (n)

the entirety of everything that exists and that scientists agree formed 13–14 billion years ago; includes everything on Earth, in our solar system, and in all the galaxies

Uranus (n)

an ice giant in the outermost region of the solar system; the first planet discovered using a telescope; its distance from the sun is nearly 20 AU

vaporization (n)

the process by which liquid changes to gas

velocity (n)

speed in a particular direction

Venus (n)

a terrestrial planet that has roughly the same size and makeup as Earth; at one time may have been able to support life but is now surrounded by a harsh toxic atmosphere

year (n)

the time it takes for Earth to complete one revolution around the sun; an Earth year is 365.25 days

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