Glossary of Terms

Abyssal plain	relating to ocean depths from 2000 to 5000 meters
Acceleration	to speed up
Accelerometer	an instrument for measuring the acceleration of aircraft or rockets
Acrostic poem	a poem or series of lines in which certain letters, usually the first in each line, form a name, motor or message when read in sequence
Adjective	words that describe or modify a noun
Air	a colorless, odorless, tasteless, gaseous mixture, mainly nitrogen (approximately 78 percent) and oxygen (approximately 21 percent with lesser amounts of argon, carbon dioxide, hydrogen, neon, helium, and other gases that envelopes the earth or atmosphere with varying amounts of moisture and particulate matter
Air resistance	the frictional force from the air that resists the forward motion of the object; drag
Apogee	the point in an orbit that is most distant from the body being orbited
Aquifer	an underground bed of layer of earth, gravel, or porous stone that yields water
Aquitard	a leaky confining bed that transmits water at a very slow rate to or from an adjacent aquifer
Artificial satellite	a man-made object that orbits around the earth
ASCII	American Standard Code for Information Interchange; a code for information exchange between computers; a string of 7 binary digits represents each character used in most microcomputers
Atmosphere	the body of gases surrounding or comprising any planet or other celestial body, held there by gravity
Attraction	the electric or magnetic force exerted by oppositely charged particles, tending to draw or hold the particles together; the gravitational force exerted by one body on another

Balance	a state of equilibrium; a weighing device, especially one consisting of a rigid beam horizontally suspended by a low-friction support at its center, with identical weighing pans hung at either end, one of which holds an unknown weight while the effective weight in the other is increased by known amounts until the beam is level and motionless
Bernoulli's Principle	is the explanation for flight and has to do with the shape of an airplane's wing; the bottom is flat, while the top is curved; air travels across the top and bottom in the same time, so air travels slower on the bottom creating more pressure and faster on top creating less pressure, causing the plane to stay in the air
Binary	a system of numeration having 2 at its base
Blueprint	a contact print of a drawing or other image rendered as white lines on a blue background, especially such as a print of an architectural plan or technical drawing
Booster	the primary stage of a multistage rocket that provides the main thrust for launch, liftoff, and initial flight
Cargo	goods carried by a large vehicle
Celsius	a temperature scale that assigns the value 0°C to the boiling point of water at standard pressure
Center of mass	the point in an object about which the object's mass is centered
Centimeter	a metric unit of length equal to one hundredth of a meter
Character	a person portrayed in an artistic piece, such as a drama or novel
Circle	a geometric shape, where all points are the same distance from the center
Circular orbit	is a special case of an ellipse where the speed of a satellite does not depend on its mass but does depend on the mass of the parent body
Circumference	the line that goes around or encompasses a circular figure
Climate	the meteorological conditions, including temperature, precipitation, and wind that characteristically prevail in a particular region

Clue	something that serves to guide or direct in the solution of a problem or mystery
Coastline	the shape, outline, or boundary of a coast
Column	a perpendicular set of lines, not extending across the page, and separated from other matter by a rule or blank space; such as a column in a newspaper
Communication satellite	an artificial satellite used to aid telecommunications, as by reflecting or relaying a radio signal
Composite number	an integer exactly divisible by at least one positive integer other than itself or 1; example: 6 by 2 or 3
Condensation	to form a liquid or solid from the gaseous state
Conics	the branch of geometry that relates to the cone and the curves which arise from its sections
Continental rise	the smooth, gently sloping section of the continental margin lying between the continental slope and the abyssal plain
Continental shelf	a submerged border of a continent that slopes gradually and extends to a point of steeper descent to the ocean bottom
Continental slope	the descent from the continental shelf to the ocean bottom
Contour map	a map showing elevations and surface configuration by means of contour lines
Coordinates	any of a set of two or more numbers used to determine the position of a point, line, curve, or plane in a space of a given dimension with respect to a system of lines or other fixed references
Coral	a rocklike deposit consisting of the calcareous skeletons by various anthozoans; coral deposits often accumulate to form reefs or islands in warm seas
Cove	a small sheltered bay in the shoreline of a sea, river, or lake
Cryosphere	the region of the earth's surface that is frozen throughout the year
Current	a flowing or passing onward motion; a body of fluid moving continuously in a certain direction, such as a current or water or air

Cycle	an interval of time during which a characteristic, often regularly repeated event or sequence of events occurs
Decrease	to grow or cause to grow gradually less or smaller, as in number, amount or intensity
Degrees	a unit of a temperature scale; a planar unit of angular measure equal in magnitude of 1/360 of a complete revolution
Density	mass of the concentration of matter in a substance; mass per unit volume
Desert	a barren or desolate area characterized by dry, often sandy region of little rainfall, extreme temperatures, and sparse vegetation
Displacement gravity	the amount of gravity that is moved away from the original position
Distance	the extent of space between two objects or places; the length or numerical value of a straight line or curve
Drag	friction forces in the atmosphere that "drag" on a rocket to slow its flight
Echo sounding	determining the location of something by measuring the time it takes for an echo to return from it
Ellipse	an oval, where all the points on the curve form the sum of the distances from two fixed or focal points
Elliptical orbit	when a satellite forms an ellipse (not circular) or travels far from earth at one end and very close to earth at the other
Erosion	process whereby materials are loosened, dissolved, or worn away, and moved from one place to another by natural agents, includes weathering, solution, corrosion, and transportation.
Escape velocity	the velocity an object must reach to escape the pull of Earth's gravity
Evaporation	the process by which any substance if converted from a liquid state into, and carried off in, vapor
Exosphere	the outermost layer of the earth's atmosphere, lying above the thermosphere and extending thousands of kilometers into space, from which molecules having sufficient velocity can escape the earth's gravitation

Extricate	to release from an entanglement or difficulty; to cause to be emitted or evolved
Fahrenheit 212°F	a temperature scale with the freezing point of water assigned the value of 32°F and the boiling point of water
Fluids	a continuous, amorphous substance whose molecules move freely past one another and that has the tendency to assume the shape of its container, a liquid or gas
Fog	condensed water vapor in cloudlike masses lying close to the ground and limiting visibility
Force	that which tends to put a stationary body in motion or to change the direction or speed of a moving body
Forecast	to estimate or calculate in advance, especially to predict weather conditions by analysis of meteorological data
Frame of reference	a system that uses coordinates to establish position; a system of assumptions and standards that sanction behavior and give it meaning
Free fall	the ideal falling motion of a body that is subject only to the earth's gravitational field
Geodesy	the branch of science dealing with obtaining precise measurements of the Earth, mapping points on the surface, and studying its gravitational field
Geophysics	extensive experimental and modeling studies of the Earth and other planetary bodies with respect to their structure and development
Geosynchronous orbit	when a satellite moves at the same speed as Earth is moving, always staying in the same spot because it is moving with Earth
Glacier	a huge mass of ice slowly flowing over a land mass, formed from compacted snow in an area where snow accumulation exceeds melting and sublimation
Global warming	an increase in the average temperature of the earth's atmosphere, especially a sustained increase sufficient to cause climatic change
GRACE	Gravity Recovery and Climate Experiment
Graph	a diagram that exhibits a relationship, often functional, between two sets of numbers as a set of points having coordinates determined by the relationship; a pictorial device used to illustrate quantitative relationships

Gravitational pull	the pull of an object under the influence of gravity
Gravity	force of attraction between matter, proportional to its mass. Gravity holds us on Earth and keeps the planets orbiting around the Sun. Just as Earth pulls on you, you pull on Earth; however, the effect of your pull on Earth is negligible since Earth's mass is so much bigger.
Gravity field	model of the Earth's gravitational potential
Gulf Stream	a warm ocean current of the northern Atlantic Ocean off eastern North America which originates in the Gulf of Mexico and, as the Florida Current, passes through the Straits of Florida and then flows northward along the southeast coast of the United States; north of Cape Hatteras the Gulf Stream veers northeastward into the Atlantic Ocean where it splits to form the North Atlantic Drift and the Canary Current.
Harbor	a sheltered part of a body of water deep enough to provide anchorage for ships; a place of shelter, a refuge
Hexagon	a polygon having six sides
Homogeneous	composed of one type of material
Horizontal	at right angles to a vertical line; parallel to or in the plane of the horizon
Human-made satellite	an object that orbits or travels around a planet that is made by humans
Hydrology	the scientific study of the properties, distribution, and effects of water on the earth's surface, in the soil and underlying rocks, and in the atmosphere
Hydrosphere	the waters of the earth's surface as distinguished from those of the lithosphere and the atmosphere
Hyperbola	a plane curve having two branches, formed by the intersection of a plane with both halves of a right circular cone at an angle parallel to the axis of the cone; it is the locus of points for which the difference of the distances from two given points is a constant
Hypothesis	an idea or group of ideas that attempt to explain an observed or predicted event or occurrence
Iceberg	a massive floating body of ice broken away from a glacier with only about 10 percent of its mass above the surface of the water

Impermeable	not permitting passage, such as preventing a fluid such as liquids to pass or diffuse through a substance
Increase	to become greater or larger
ISS	International Space Station
Inundate	to overflow, deluge, flood
Invisible	impossible to see, not visible
K-band	the key science instrument on the GRACE satellite
Kilometer	a metric unit of length equal to 1,000 meters (0.62 mile)
Landmass	a large unbroken area of land
Landsat	a resource satellite that photographs land areas to study landforms, oceans, pollutions, and natural disasters such as fires.
Latitude	the angular distance North or South from the Earth's equator measured in degrees on the meridian of a point; Equator being 0° and the poles 90°N and 90°S
Launch	to set or thrust in motion; to throw or propel with force
Lines of regression	retrograde motion of a celestial body; a relative fall in sea level resulting in deposition of terrestrial strata over marine strata
Lithosphere	the stiff upper layer of a planetary body, the solid outer part of a planet; on Earth, it includes the crust and the upper part of the mantle and is about 100 km thick
Magnet	an object that is surrounded by a magnetic field and that has the property, either natural or induced, of attracting iron or steel
Magnetic field	the region of "altered space" that will interact with the magnetic properties of a magnet. It is located mainly between the opposite poles of a magnet or in the energetic space about an electric charge in motion.
Magnetism	the property, quality, or state of being magnetic; the manifestation of the force in nature which is seen in a magnet
Mammoth	something of great size
Manipulate	to move, arrange, operate, or control by the hands or by mechanical means, especially in a skillful manner

Mass	the measure of an object's inertia, i.e., how heavy it is. Mass is not the same as weight, which measures the gravitational force on an object.
Meandering	to follow a winding and turning course; to move aimlessly and idly without fixed direction
Measurement	the act of measuring or the process of being measured
Mesopause	an atmospheric area about 80 kilometers (50 miles) above the earth's surface, forming the upper boundary of the mesosphere
Mesosphere	the portion of the atmosphere from about 30 to 80 kilometers (20 to 50 miles) above the earth's surface characterized by temperatures that decrease from 10°C to -90°C (50°F to -130°F) with increasing altitude.
Meteorologist	one who studies meteorology; one who reports and forecasts weather conditions
Meter	the international standard unit of length, approximately equivalent to 39.37 inches
Microgravity	an environment that imparts to an object a net acceleration that is small compared with that produced by Earth at its surface
Mid-ocean ridge	a series of mountain ranges on the ocean floor, more than 84,000 kilometers (52,000 miles) in length, extending through the North and South Atlantic, the Indian Ocean, and the South Pacific; according to the plate tectonics theory, volcanic rock is added to the sea floor as the mid-ocean ridge spreads apart.
Military satellite	satellites used by the military for navigation, communication, and reconnaissance which is used to gather information on other governments
Molecules	the smallest particle of a substance that retains the chemical and physical properties of the substance and is composed of two or more atoms
Mouth of stream	the point where a stream issues into a larger body of water
Mnemonic	relating to, assisting, or intended to assist with memory
Natural satellite	an object that orbits or travels around a planet that is natural, not artificial

Nautical mile	a unit of length used in sea and air navigation, based on the length of one minute of arc of a great circle, especially an international and U.S. unit equal to 1,852 meters (about 6,076 feet)
Navigation	the science or art of conducting ships or vessels from one place to another, including more especially, the method of determining a ship's position, course, distance passed over, etc., on the surface of the globe by principles of geometry and astronomy
Newton	in the meter-kilogram-second system, the unit of force required to accelerate a mass of one kilogram one meter per second, equal to 100,000 dynes
Non-porous	not porous, especially not having vessels that appear as pores
Noun	the part of speech that is used to name a person, place, thing, quality, or action and can function as the subject or object of a verb, the object of a preposition, or an appositive
Number puzzle	puzzle made of numbers
Oblateness	having the shape of a spheroid generated by rotating an ellipse about its shorter axis; having an equatorial diameter greater than the distance between the poles; compressed or flattened at the poles
Ocean	the entire body of salt water that covers more than 70 percent of the earth's surface
Ocean current	a movement of ocean water that follows a more or less definite pattern, usually moving in a continuous flow but sometimes undergoing marked cyclical changes
Ocean depth	the average depth of the ocean floor is nearly 4 km and the maximum depth is a little over 11 km along the Mariana trench
Ocean heat transport	transporting heat through the oceans through circulations and currents
Ocean explorers	one who explores the oceans
Ocean surface currents	a movement of ocean water at the surface that follows a more or less definite pattern, usually moving in a continuous flow but sometimes undergoing marked cyclical changes

Oceanography	the exploration and scientific study of the ocean and its phenomena
Orbit	the path a planetary body makes as it revolves around the Sun. The orbit of a comet tends to be far more elliptical than planets.
Orbital path	the path an object takes when in orbit
Orbiter	something that orbits, especially a spacecraft that orbits a planet or moon without landing on it
Oval	resembling an ellipse, or egg, in shape; elliptical
Pacific Ocean	the largest of the world's oceans, divided into the North Pacific Ocean and the South Pacific Ocean; extending from the western Americas to eastern Asia and Australia
Parabola	a plane curve formed by the intersection of a right circular cone and a plane parallel to an element of the cone or by the locus of points equidistant from a fixed line and a fixed point not on the line
Payload	the cargo (scientific instruments, satellites, spacecraft, etc.) carried by a rocket
Perigee	the point in any orbit nearest to the body being orbited
Permeable	capable of being permeated or being passed through, used especially with substances which allow the passage of fluids
Planetary motion	movement of the planets and their satellites
Polar ice caps	a perennial dome-shaped or plate-like mantle of ice and snow, having an area of less than 50,000 square kilometers, that covers the summit of a mountain or a flat landmass and spreads out radially under its own weight at the poles
Polar orbit	when a satellite travels from pole to pole (north to south) in a 24 hour period
Porous	admitting the passage of gas or liquid throughout pores of interstices
Precipitation	any form of water, such as rain, snow, sleet, or hail that falls to the earth's surface; the quantity of such water falling in a specific area within a specific period
Prime number	a positive integer not divisible without a remainder by any positive integer other than itself and one

Puzzle	something, such as a game, toy, or problem; that requires ingenuity and often persistence in solving or assembling
Radius	a line drawn or extending from the center of a circle to the periphery; a line segment that joins the center of a circle with any point on its circumference
Relative surface	have pertinence or relevance to the exterior part of anything that has length and breadth, one of the limits that bound a solid, especially the upper face, especially the outside
Rhombus	an equilateral parallelogram
Rocket	a vehicle or device propelled by one or more rocket engines, especially such a vehicle designed to travel through space
Row	a series of objects placed next to each other, usually in a straight line
Satellite	an attendant body that revolves about another primary body
Satellite components	the parts of a satellite which form and function as a whole
Scale	the relationship of a distance on a map or model to the true distance in space; written as a ratio, such as 1:24,000
Science satellite	satellites used by scientists to see images more clearly and to learn more about conditions in space; study the conditions of space near Earth, relationship between the Sun, Earth, and the rest of space, and deep space.
Scientist	a person having expert knowledge of one or more sciences, especially a natural or physical science
Scientific discovery	that which is discovered, found out for the first time, ascertained, or recognized about a science topic
Scuba	a portable apparatus containing compressed air and used for breathing under water
Sea	one of the larger bodies of salt water, less than an ocean, found on the earth's surface; a relatively large body of salt water completely or partially enclosed by land
Sea-floor	the bottom of a sea or ocean

Sea level	the level of the ocean's surface, especially the level halfway between mean high and low tide, used as a standard in reckoning land elevation or sea depths
Sea surface	the outer or topmost boundary of the sea
Seashore	land by the sea; the coast of the sea; the land that lies adjacent to the sea or ocean
Seasons	one of the four natural divisions of the year: spring, summer, fall and winter, in the North and South temperate zones; each season, beginning astronomically at an equinox or solstice, is characterized by specific meteorological or climatic conditions
Sediment	solid rock or mineral fragments transported and deposited by wind, water, gravity, or ice; precipitated by chemical reactions; or secreted by organisms; accumulated as layers in loose, unconsolidated form
Semi-major axis	one-half the major axis of an ellipse; the distance from the center of an ellipse to one end
Semi-minor axis	one-half the minor axis of an ellipse
Setting	the specific position, place, and description of a story
Sidescan sonar	engineered sonar designed to look sideways and at a downward angle from both sides of the unit; an image is produced from the bottom and any objects in the water above the bottom as they reflect sound waves back to the unit
Solar maximum	the period of activity the sun goes through every 11 years filled with sunspots, solar flares, and coronal mass ejections
Source of stream	the point of origin of a stream
South China Sea	an arm of the western Pacific Ocean bounded by southeast China, Taiwan, the Philippines, Borneo, and Vietnam; a tropical arm of the Pacific Ocean near southeastern Asia subject to frequent typhoons
Space debris	scattered remains of something broken, destroyed, or lost in space
Space medicine	the medical science that is concerned with the biological, physiological, and psychological effects of space flight on humans

Space probe	a spacecraft carrying instruments intended for use in exploration of the physical properties of outer space or celestial bodies other than Earth
Sphere	an object that is round or almost round in all dimensions like a ball
Square	a plane figure having four equal sides
Square number	the product obtained when a number of quantity is multiplied by itself
Story line	the plot of a story of dramatic work
Stratopause	the boundary between the stratosphere and the mesosphere located at an altitude of about 55 kilometers (35 miles) above the earth's surface
Stratosphere	the region of the atmosphere above the troposphere and below the mesosphere
Submarine	a vessel that is capable of operating submerged
Tangram	a Chinese puzzle consisting of a square cut into five triangles, a square, and a rhomboid, to be reassembled into different figures
Temperature	the degree of hotness or coldness of a body or environment
Thermal expansion	expansion due to heat
Thermometer	an instrument for measuring temperature, especially one having a graduated glass tube with a bulb containing a liquid, typically mercury or colored alcohol, that expands and rises in the tube as the temperature increases
Thermosphere	The outermost shell of the atmosphere, between the mesosphere and outer space, where temperatures increase steadily with altitude.
Tidal wave	The swell or crest of surface ocean water created by the tides. An unusual, often destructive, rise of water along the seashore, as from a storm or a combination of wind and high tide.
Tides	The periodic variation in the surface level of the oceans and of the bays, gulfs, inlets, and estuaries, caused by gravitational attraction of the moon and sun.
Trapezoid	A quadrilateral having two parallel sides.

Triangle	The plane figure formed by connecting three points not in a straight line by straight line segments, a three-sided polygon.
Tributaries	A stream that flows into a larger stream or other body of water.
Topographic	Graphic representation of the surface features of a place or region on a map, indicating their relative positions and elevations.
Tropopause	The boundary between the troposphere and the stratosphere varying in altitude from approximately 8 kilometers (5 miles) at the poles to approximately 18 kilometers (11 miles) at the equator.
Troposphere	The lowest region of the atmosphere between the earth's surface and the tropopause, characterized by decreasing temperature with increasing altitude.
Vertical	Being or situated at right angles to the horizon; upright.
Water cycle	The cycle of evaporation and condensation that controls the distribution of the earth's water as it evaporates from bodies of water, condenses, precipitates, and returns to those bodies of water. Also called hydrologic cycle.
Water currents	the part of a body of liquid that has a continuous onward movement
Water density	the quantity of water per unit measure, especially per unit length, area, or volume; the mass of water under specified conditions of pressure and temperature
Water vapor	Water in a gaseous state, especially when diffused as a vapor in the atmosphere and at a temperature below boiling point.
Watershed	The region draining into a river, river system, or other body of water.
Waves	A ridge or swell moving through or along the surface of a large body of water.
Weather	The state of the atmosphere at a given time and place, with respect to variables such as temperature, moisture, wind velocity, and barometric pressure.

Weather satellite	also called meteorological satellites carry cameras that photograph the Earth’s atmosphere and clouds. Scientists study these pictures to predict the weather.
Weight	A measure of the heaviness of an object. The force with which a body is attracted to Earth or another celestial body, equal to the product of the object's mass and the acceleration of gravity.
Westerlies	A storm or wind coming from the west.
Wind	Moving air, especially a natural and perceptible movement of air parallel to or along the ground.