GLOSSARY

Abrasion
The act of rock particles scraping or wearing away against other rock.

Absolute Dating
Using radioactive decay to determine the exact age of a rock, fossil, or event.

Agents of Erosion
Forces that are set in motion by gravity that causes sediments to move.

Air Currents
The rising or sinking movement of air perpendicular to the ground.

Air Mass
Characteristics of the air identified by temperature and moisture.

Air Pressure
The force exerted on a unit of area by the air that is exerted equally in every direction.

Altitude
The angular distance measured above the horizon in degrees.

Anemometer
An instrument used to measure the speed of the wind.

Asthenosphere
A partially melted layer that allows for parts of the lithosphere to move.

Asteroid Belt
A region between Mars and Jupiter where most of the asteroids are found orbiting the Sun.

Astronomy
The study of Earth's motions and celestial objects in outer space.

Atmosphere
Layer of gases that surround Earth or any other planet.

Azimuth
Angular distance along the horizon measured from due north.

Banding
Type of foliation where pressure separates minerals into alternating light and dark layers.

Barometer
An instrument used to measure atmospheric pressure.

Big Bang
Leading theory of the origin of the Universe as observed from the expanding Universe.

Bioclastic
Sedimentary rock type that forms from the remains of plants and animals.

Celestial Object
Natural objects that can be seen in the sky that is above Earth's atmosphere.

Cementation
The act or process of holding sediment or pieces of rock together.

Chemical Weathering
The breakdown of rock through a change in mineral or chemical composition.

Circle
A perfect geometric figure with one center point.

Clastic
Sedimentary rock type that forms from the fragments or pieces of other rocks.

Cleavage
The tendency of a mineral to break along zones of weakness and form flat or parallel surfaces.

Climate
Overall view of a regions weather conditions over a long time span.

Climatology
The study of Earth's weather variables and patterns over long periods of time.

Clinometer
An instrument that is used to measure an incline.

Cold Front
A boundary where more dense cold air advances under less dense warm air pushing it up.

Colloid
A small particle that remains suspended indefinitely.

Compaction
The consolidation of sediments resulting from the weight of overlying deposits.

Condensation
The process which atmospheric water vapor turns into precipitation [gas to a liquid].

Contact Metamorphism
Localized metamorphism resulting from the heat of an igneous intrusion.

Continental Drift
The theory that Earth's continents are moving.

Continental Glacier
Huge sheets of ice that cover entire land masses.

Contour Index
Lines that are bolder and have an elevation labeled.

Contour Interval
The difference in elevation between two side by side contour lines.

Contour Line
Lines drawn on a map that connect equal points of elevation.

Convection
Driving force of plate movement.

Convergent Boundary
Boundary where two lithospheric plates are coming together.

Coordinate System
A system which uses one or more numbers to locate a position.

Coriolis Effect
The tendency of particles to be deflected from a straight line.

Correlation
The process of showing that rocks or geologic events from different places are similar in age.

Crescent Moon
Figure of the moon resembling a segment of a ring tapering to points at the ends.

Crystalline
A naturally occurring solid that is formed as and composed of crystals.

Cyclic Change
A repeating pattern that occurs over and over again.

Density
The degree of compactness of a substance which is the ratio of mass to its volume.

Dependent Variable
The variable that is measured and affected in an experiment.

Deposition
The process by which sediments are released from erosion.

Depression Contours
Contour lines marked with hachured lines that signify a depression.

Dewpoint
The temperature at which air must be cooled for water vapor to condense.

Direct Relationship
When the x-axis and y-axis increase.

Divergent Boundary
Boundary where two lithospheric plates are moving apart.

Drumlin
A low oval mound consisting of glacial till.

Earthquake
A natural shaking of the lithosphere caused by a release of energy stored in rocks.

Eccentricity
The degree of flatness or "ovalness" of an ellipse.

Ecology
The study of how living things interact with their environments.

Electromagnetic Energy
Energy that is radiated through space in the forms of transverse waves.

Element
A substances that cannot be separated into simpler substances by chemical means.

Elevation
The vertical distance or height above or below sea level.

Ellipse
Special geometric shape with two center points and is the oval shape of a planet's orbits.

Eon
A longest division of geologic time that is further subdivided.

Epicenter
Location on the surface directly above the focus.

Epoch
A division of time that is a subdivision of a period that is based on fossil records.

Equator
The horizontal main reference line of latitude [0°].

Era
A major division of time that is a subdivision of an eon and is based on fossil records.

Erosion
Process where rock fragments are transported.

Erratics
Transported rock fragments that are carried on top or within a from glacier and deposited.

Esker
A long winding ridge of gravel and sediment deposited by meltwater from a retreating glacier.

Evolution
The gradual development from a simple to a more complex form.

Extinction
The state or process of a species no longer existing.

Extrapolate
To infer or estimate by projecting known information.

Extrusive
A type of igneous rock that forms on the outside of Earth's surface.

Fault
A break in rock layers that is marked by the relative displacement on either side.

Felsic
Light colored rocks that have a high aluminum [Al] content.

Field
A region with a measurable quantity at all locations.

Focal Depth
The depth at which an earthquake originates.

Foci
The two fixed center points of an ellipse.

Focus
The point inside the Earth where the earthquake originates.

Foliation
Type of texture when minerals rearrange in flat layers due to pressure.

Fossil
A remnant or trace of an organism of a past geologic age.

Fracture
A texture that causes minerals to break irregularly or unevenly.

Frost Action
Weathering process caused by cycles of freezing and thawing of water in rock openings.

Full Moon
The phase of the moon in which its whole disk is illuminated.

Galaxy
A collection of billions of stars and various amounts of gas held together by gravity.

Geocentric Universe
The idea that Earth was at the center of the solar system.

Geology
The study of the rocky portion of Earth.

Geographic Poles
Two points on the surface of a rotating planet where the axis of rotation meets the surface.

Glacial Grooves
Parallel scratches from sediment embedded under glaciers.

Glacier
A naturally formed mass of ice and snow that moves downhill under the force of gravity.

Gibbous Moon
Any moon that appears more than half lighted but less than full.

Glossopteris
A tree fossil that is found in South American and Africa, India and Antarctica.

Gradient
A slope that is calculated by dividing the change in field value divided by the distance.

Greenhouse Effect
The trapping of the sun's heat energy in a planet's lower atmosphere.

Half-life
The time required for half of a radioactive product to decay to a stable product.

Hardness
The resistance to a mineral being scratched to other minerals or object.

Heliocentric Model
A model of the solar system where the Sun is at the center.

High Pressure
Fair weather with wind patterns that are outward and clockwise.

Horizon
The edge of the visible portion of the celestial sphere.

Horizontal Sorting
Sorting from a decrease in stream velocity where particles are deposited from largest to smallest.

H-R Diagram
A chart used to classify stars according to their luminosity, mass, color and temperature.

Hurricane
A low pressure tropical storm that reaches winds above 74 mph.

Hydrology
The study of Earth's fresh water system in relation to land.

Hydrosphere
A layer of Earth above the lithosphere that is in the liquid phase.

Igneous Rock
Rock type that forms when molten material solidifies.

Independent Variable
The variable that stands alone and isn't changed by other factors.

Index Fossil
Fossil used to define and identify geologic periods.

Infiltration
The process which water penetrates into soil or rock.

Inner Core
The solid inner most zone of Earth's core composed of iron [Fe] and nickel [Ni].

Insolation
Term to describe incoming solar radiation from the Sun [sunlight].

Intrusion
Magma cools and solidifies before it reaches Earth's surface.

Intrusive
Igneous rock that forms deep inside of Earth.

Inverse Relationship
When the x-axis increases and y-axis decreases

Island Arc
A curved belt of volcanic islands lying above a subduction zone.

Isobar
Lines that are drawn on a map that connect all equal points of air pressure.

Isoline
Lines that are drawn on a map that connect all equal points of data.

Isotherm
Lines that are drawn on a map that connect all equal points of temperature.

Isotope
Variations of an element that have the same atomic number but differing atomic masses.

Isohyet
Lines that are drawn on a map that connect all equal points of rainfall amounts.

Jovian Planet
The outer gaseous planet with larger diameters and lower densities.

Kettle Lake
Depression left in the ground that is filled with glacial melt water.

Landscape
A collection of landforms, such as mountains, hills, plains, and plateaus

Latitude
Measuring lines, north or south, from the equator.

Lava
Molten rock that is outside the Earth.

Leeward
On or toward the side sheltered from the wind or toward which the wind is blowing.

Lightyear
A unit of astronomical distance equivalent to the distance that light travels in one year.

Lithification
The processes and methods in which sedimentary rocks form.

Lithosphere
Layer of Earth that is the rigid outer part of the earth, consisting of the crust and upper mantle.

Long Shore Current
Ocean current that flows parallel and close to the shore.

Longitude
Measuring lines, east or west from the prime meridian.

Lowlands
Landscape that is of lower elevation.

Low Pressure
Stormy weather with wind patterns that are inward and counterclockwise.

Luminosity
A measure on how bright a star is compared to our Sun.

Luster
The shine of an unweathered mineral or the way it looks in reflected light.

Mafic
Dark colored rocks that have a high iron [Fe] or magnesium (Mg) content.

Magma
Molten rock inside the Earth.

Main Sequence
Star classification not the H-R Diagram where most stars spend their stellar lives.

Major Axis
The longest straight lined distance across an ellipse.

Mantle
The thickest layer of Earth that makes up approximately 80% of Earth's volume.

Map
A representation of an area of land or sea showing physical features.

Mass
The amount of matter in an object.

Mass Movement
The pulling of rock and sediment downhill by the force of gravity.

Meander
As a stream gets older it begins the shift its course in a series of bends.

Mesosaurus
A dinosaur fossil found in South American and South Africa.

Mercalli Scale
The effect of an earthquake on the Earth's surface based on observations.

Metamorphic Rocks
Rocks that have been altered by an increases in temperature and pressure.

Meteorology
The study of weather and the atmosphere.

Mid-Ocean Ridge
Underwater mountain range created from a divergent plate boundary.

Mineral
Naturally occurring, inorganic solid with a definite structure where atoms are in a repeating pattern.

MOHO
A thin interface between the lithosphere from the asthenosphere.

Moon
A body that orbits a planet or asteroid as they orbit the Sun.

Mountain
A large natural elevation of the earth's surface.

New Moon
The phase of the moon when it is in conjunction with the sun and invisible from earth.

Nonfoliated
Type of metamorphic rock texture where there is no mineral alignment.

Nuclear Fusion
A reaction in which two atomic nuclei combine to form one atomic nuclei while releasing energy.

Oceanography
The branch of science that deals with the physical and biological properties of the ocean.

Original Horizontality
The idea that rocks are deposited in parallel layers to Earth's surface.

Orographic Effect
The effect of rising air causing it to expand, cool and condense resulting in precipitation.

Outer Core
Liquid layer of Earth's interior.

Outgassing
The outpouring of gases from the earth's interior that collected in the atmosphere.

Outwash Plain
Glacial feature of smaller sediment carried from the melting water of a retreating glacier.

Oxidation
When iron combines with oxygen to create rust.

P-wave
The fastest earthquake wave that travels through the earth [compressional].

Pangaea
Name given to the super continent that existed 200 million years ago meaning "all Earth".

Parent Rock
Preexisting rock from which rocks are formed.

Physical Weathering
The breakdown of rock into smaller pieces without chemical change.

Planet
A celestial body moving in an elliptical orbit around a star.

Plains
Landscape that is of lower elevation.

Plate
Section of the lithosphere that move due to convection currents.

Plate Tectonics
Study of the formation and movements of plates.

Plateau
Landscape that is of medium elevation and have a flat top.

Plutonic Rock
Igneous rocks that solidify slowly below the surface of Earth.

Polar Star
Star directly above the North or South Pole.

Prevailing Winds
Wind from the direction that is predominant at a particular place or season.

Prime Meridian
The main reference line of longitude [0°] that runs through Greenwich, England.

Prong
Landscape that is of lower elevation.

Radiative Balance
Balancing out of incoming and outgoing radiation.

Radioactive Decay
The disintegration of an isotope over time that enables dating.

Rainshadow Effect
Typically the leeward side of a mountain that experience minimal to no rainfall.

Rate of Change
The speed at which a variable changes over a specific period of time.

Recrystallization
The act of a rock crystallizing again.

Regional Metamorphism
Large scale metamorphism resulting from the heat and pressure below Earth's surface..

Relative Dating
The sequencing of rocks or events in relation to the ages of other rocks or events.

Relative Humidity
The amount of water vapor in the air at any given time.

Revolution
The motion of one body around another in an orbit.

Ring of Fire
Isolated belt around the Pacific Ocean where 90% of the world's volcanoes exist.

Rock
A naturally formed solid that is part of Earth or any other celestial object.

Rotation
The movement of an object around a line of axis.

S-wave
The slower earthquake wave that travels through the earth (shear).

Saffir-Simpson Scale
A system for classifying hurricanes based on wind speed.

Sea-floor Spreading
The process where ocean floor is extended when two plates move apart.

Sedimentary Rock
Rock type from an accumulation of sediment from preexisting rocks and/or organic material.

Sediments
Smaller pieces of rock that have undergone weathering.

Seismogram
A record of the seismometer.

Seismograph
An instrument used to measure and record movements in the ground.

Sling Psychrometer
An instrument used to measure dew point and relative humidity.

Solar System
All the objects that orbit the Sun under its gravitational influence.

Soluble
The ability for a substance to be dissolved, especially in water.

Source Region
A location over which an air mass gets its characteristics.

Southwesterly Winds
Prevailing winds between 30° N and 60° N.

Stable Product
A nonradioactive element after decay.

Star
Large ball of gas held together by gravity that produces energy and shines.

Station Model
A symbol on a weather map that illustrates all the weather conditions at that location.

Storm Surge
A dome of water that moves onto shore near the landfall point of the hurricane.

Storm Track
The path that a hurricane takes.

Streak
The color of finely crushed powder when a mineral is dragged across a porcelain plate.

Stream
Running water that is confined to a channel.

Subduction
The process where one plate is pushed below another and consumed in the mantle.

Sunspot
A spot appearing on the Sun's surface, usually darker by contrast than its surroundings.

Superposition
The idea that the bottom layer is the oldest and each overlying layer gets progressively younger.

Suspension
When a particle remains floating.

Temperature
The heat energy present in the atmosphere.

Terminal Moraine
A mound of till deposited along the leading edge of a glacier

Terrestrial Planet
Solid surfaced planet with smaller diameters and higher densities.

Thermometer
An instrument used to measure temperature at a specific location.

Topographic Map
A model of an elevation field of Earth's surface.

Topographic Profile
A side view of a geologic feature.

Tornado
A rotating column of whirling air with destructively high winds.

Trade Winds
Prevailing winds between 30° N and 0°.

Transform Boundary
Boundary where two lithospheric plates are sliding past one another.

Tributary
A smaller stream that feeds a larger stream or lake.

Tropical Depression
Low pressure that produces sustained circular winds below 39 mph.

Tropical Storm
Low pressure that produces sustained circular winds above 39 mph, but less than hurricane.

U-Shaped Valley
The result of glacial erosion on the sides of valley walls.

Unconformity
A break in the rock record or sequence that usually occurs from erosion.

Uniformitarianism
Idea that forces working on our planet today worked on our planet in the past in the same way.

Universe
All the space, matter, and energy in existence.

Unstable Product
A radioactive element.

V-Shaped Valley
Shape of valley walls from stream erosion.

Valley Glacier
Glaciers that form in high elevations in mountain valleys.

Vesicular
Texture that consists of gas pockets that give the appearance of having holes.

Volcanic Rock
Rock that formed on Earth's surface.

Volcano
A vent in the crust of the earth from which molten material and steam is ejected from

Volume
The amount of space that an object occupies.

Waning Moon
When the moon decreases in size and becomes less brilliant.

Warm Front
A boundary where less dense warm air advances over top of more dense cold air.

Waxing Moon
When the moon increases in size and becomes more brilliant.

Weather
The present condition of the atmosphere with respect to changing weather variables.

Weather Vane
An instrument used to measure wind direction.

Weathering
The breakdown of rock at or near Earth's surface.

Weight
The effect of gravity on weight.

Wind
The horizontal movement of air parallel to the surface.

Windward
The side or direction from which the wind is blowing

Zenith
The highest point on the celestial sphere.