

# Science Language Students Should Know and Use

## Astronomy

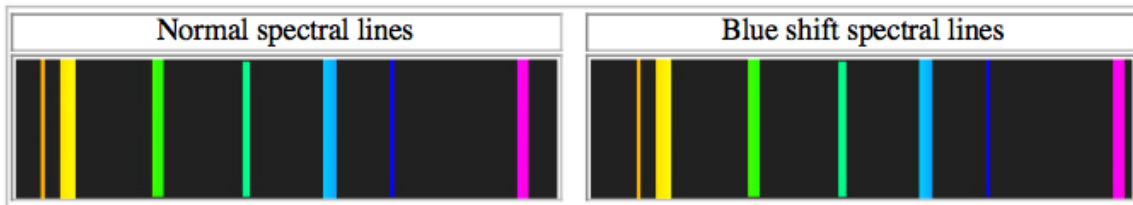
The study of matter found in space. It includes the locations and information about stars, planets, satellites (moons), comets, meteors, and other natural objects.

## Big bang theory

The scientific theory that the universe began from a large explosion of very dense and hot matter over 13 billion years ago.

## Blue shift

A change in the observed spectral lines towards the blue end of the spectrum. Any star showing a blue shift is moving towards Earth.



## Heavy element

During the process of fusion in stars, atoms of hydrogen combine with other hydrogen atoms or different elements to form heavier elements.

## Mass

During the process of fusion in stars, atoms of hydrogen combine with other hydrogen atoms or different elements to form heavier elements.

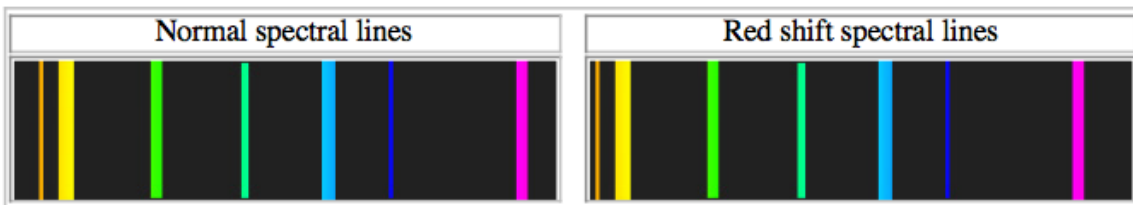
The amount of matter that exists in an object.

## Nuclear fusion

The reaction which occurs in stars. Through the combining of atoms of elements, such as hydrogen, a heavier element is created along with the release of a large amount of energy.

## Red shift

A change in the observed spectral lines towards the red end of the spectrum. Any star showing a red shift is moving away from Earth.



## Theory

The statement that an explanation of events based on a hypothesis is accurate for what occurs in nature.

## Universe

All of the matter and energy that exists in space.

## Abiotic

The non-living parts of the environment.

**Aesthetic**

A personal determination of whether something appears to be pleasing or not.

**Atmosphere**

The layer of gases that surround Earth.

**Biomass**

A reference to the amount of living material in an area.

**Biodiversity**

The number and kinds of different organisms that live in a geographic area.

**Biome**

A major global living community, characterized by the dominant form of plant and the climate. Examples include the desert or a grassland.

**Biotic**

A reference to anything having to do with a living organism.

**Economic**

A reference to the production and development of material wealth of a group or country.

**Ecosystem**

The living parts of a community working together with the non-living parts.

**Ethical**

Making a choice based on personal principles.

**Extinction**

The process of a species being eliminated from Earth.

**Photosynthesis**

The process of plants using carbon dioxide and water, in the presence of light energy, to store energy in the form of carbohydrate and emit oxygen.

**Social**

The act of living together in an organized group or community.

**Species**

A group of similar organisms which are capable of interbreeding and producing offspring which are similar to the parent organisms.

**Stellar**

Referring to the stars of the universe.

**System**

The parts of the environment, including organisms and abiotic factors, which interact together.

**Biomes**

Any of the major global living communities, characterized by the dominant form of plant and the climate. Examples include the desert or a grassland.

**Biosphere**

The part of Earth which is capable of supporting life.

**Climate**

The weather conditions that prevail in a region.

**Convection current**

An area between Earth's core and mantle where material moves in a circular pattern. Two currents either come together and push up at the surface, or they pull down at the surface. Both currents change the structure of Earth's surface.

**Convergent**

The action of plates coming together where convection currents go down from Earth's surface.

**Divergent**

The action of plates moving apart where convection currents rise from beneath Earth's surface.

**Fault**

The location of a variation on Earth's surface due to shifting or dislodging of Earth's crust as the result of earthquake activity.

**Geosphere**

The solid part of Earth.

**Hot spot**

An area of volcanic activity that does not occur at a plate boundary. A hot spot occurs where magma is found near a thin crust area and is able to exit to the surface.

**Hydrosphere**

The water portion of Earth.

**Hypothesis**

A proposed explanation for a science problem that can be tested by investigation.

**Plate**

One of the sections of Earth's lithosphere which moves in relation to other sections.

**Plate tectonics**

The dynamics of the movement of sections of Earth's lithosphere. It is used to explain earthquakes, volcanoes, continental drift, and mountain building.

**Sea-floor spreading**

The process of creating new oceanic crust as magma comes out at mid-ocean ridges. Older crust is moved to the side when the new crust is created.

**Theory**

The statement that an explanation of events based on a hypothesis is accurate for what occurs in nature.

**Transform**

A type of plate boundary where two plates are moving laterally in relation to each other. Also sometimes referred to as a sliding boundary.

**Volcanic eruption**

The sudden occurrence or discharge of magma or steam and exploded volcanic materials.

**Weather**

The current state of the atmosphere in a given location with respect to temperature, moisture, wind speed, and barometric pressure.

**Biological dynamics**

Changes in ecosystems are based on the numbers, characteristics and behaviors of the organisms in that ecosystem.

**Geologic time**

A reference to the time period from the beginning of Earth to the present.

**Glacier**

A large mass of ice slowly flowing over a land mass. It forms in an area where snowfall exceeds melting.

**Groundwater**

Water found under Earth's surface. This water usually is the source for wells and springs.

**Reservoir**

A large area where water is stored. Examples include a lake, glacier, ocean, and in the clouds.

**Salinity**

A reference to the presence of salts in a solution.

**Tide**

A regular change in the surface level of oceans caused by the gravitational force of the sun and moon.

**Carbon cycle**

All of the processes (photosynthesis, decomposition, and respiration) by which the element carbon in its different compounds circulates between living and non-living parts of its environment.

**Climate**

The weather conditions that prevail in a region.

**Decomposer**

An organism such as a bacteria or fungus that breaks down dead plant and animal material, returning the components to the ecosystem.

**Depletion**

The use of a natural resource faster than it can be replenished.

**Fossil fuel**

A product formed from the decay of plant or animal materials from a previous geologic time. Examples include petroleum and coal.

**Lithosphere**

Earth's outer layer, made of the crust and outer layer of the mantle.

**Matter**

Anything that takes up space and has mass.

**Nitrogen cycle**

The series of events where atmospheric nitrogen is converted into compounds used by organisms and released back to the atmosphere by decomposition.

**Ozone layer**

An upper region of the atmosphere which absorbs much of the ultraviolet radiation from the sun.

**Absorbed**

To be taken in, as in Earth's surface absorbed the heat energy from the Sun.

**Coriolis effect**

The observed fact that objects above Earth move to the right in the northern hemisphere and to the left in the southern hemisphere.

**Energy**

The ability to do work.

**Greenhouse gas**

The process whereby energy from the sun is trapped by an atmosphere which increases the temperature.

**Meteorology**

The branch of science that studies the atmosphere and weather.

**Radiation**

The process of energy being transmitted in the form of rays or waves.

**Reflected**

When a wave hits an object, it moves in another direction.

**Topography**

A graphic representation of Earth's surface showing locations and elevations.