**Photosynthesis Vocabulary**

**sunlight**- The source of all energy on Earth. The visible light spectrum is Red, Orange, Yellow, Green, Blue, Indigo, Violet (ROYGBIV). Powers photosynthesis.

**energy**- the ability to do work

**chloroplast**- A small organelle in the plant cell that contains the pigment chlorophyll and carries out photosynthesis

**Carbon dioxide**- a colorless, odorless, common gas that is formed during respiration

**Carbon**- one of the most abundant elements on Earth and is a basic building block of life.

**Nitrogen**- The most abundant gas in our atmosphere and is found in proteins.

**Oxygen**- A colorless, odorless, combustible gas that makes up 21% of our atmosphere. It is produced during photosynthesis and is necessary for respiration.

**solar radiation**

**reflection**- to bend something (such as light) back from a surface

**absorption**- To soak up

**nitrogen cycle**- A continuous cycle in which atmospheric nitrogen is absorbed into the soil through processes with bacteria or through lightening, used by living things in the food chain, then released back into the atmosphere through excretion of animal wastes or decomposition.

**plant cell**- A cell surrounded by a cellulose wall and is capable of photosynthesis.

**animal cell**- The other type of cell that lacks a cell all and is instead surrounded by a flexible cell membrane.

**tissue**- A collection of cells that have a similar function (blood or connective tissue)

**organ**- a part of an organism composed of cells and tissues designed to carry out a specific function (such as the heart for pumping blood or the liver for producing bile)

**roots**- A usually underground portion of a plant that serves as support and for drawing up water and nutrients from the surrounding soil, and stores nutrients.

**stem**- The main stalk or trunk of a plant, or a slender stalk connecting another plant part such as a leaf or flower.

**leaf**- a usually green flattened structure on the plant that serves as the site of photosynthesis and respiration.

**xylem** – the supporting and water transporting tubes in plants

**phloem** – the food-transporting tubes of plants

**epidermis** – the outermost layer of cells or protective covering of a plant or plant part.

**cortex** - The layer of tissue in roots and stems that lies between the epidermis and the xylem and phloem.

**water** – Composed of Hydrogen and Oxygen and is essential for most plant and animal life.

**glucose** – a simple sugar molecule composed of Carbon, Hydrogen and Oxygen. One of the products of photosynthesis, and is burned with Oxygen during respiration to release energy.

**cell respiration**- The process of burning glucose with Oxygen to release energy for the cell. Results in the production of Carbon dioxide and Water.

**stomata** – plural of “stoma”. The minute pores in the epidermis of a leaf that allow gasses and water vapor to pass through.

**photosynthesis**- The process which occurs only in green plants in which sun energy is used to convert Carbon dioxide and water into Oxygen and glucose.

**transpiration** –the process by which plants release water vapor and oxygen out through the stomata of the leaf.