**Plant Cell and Organelles**



**Cell Membrane –** Determines what goes in sand out of the cell. Protects and supports the cell

**Cytoplasm –** supports and protects cell’s organelles. Contains some nutrients for the cell

**Nuclear Membrane-** Decides what goes into and out of the nucleus – DNA is too large but RNA is small enough to leave

**Nucleus –** (Contains Chromatin and nucleolus): Directs cell activities. **Chromatin-** genetic material – DNA (Chromosomes) which contain instructions for traits. **Nucleolus-** makes ribosomes

**Ribosomes-** makes proteins

**Cell Wall-** supports and protects the plant cell

**Chloroplast-** Photosynthesis uses sunlight to make sugar for plant.

**Vacuole-** help maintain shape storage, digestion and waste removal

**Lytic Vacuole-** Functions similarly to a lysosome; digests excess or worn out organelles, food particles, and engulfed viruses or bacteria.

**Smooth Endoplasmic Reticulum-** Transports proteins and breaks down toxins in the cell. DOES NOT contain ribosomes

**Rough Endoplasmic Reticulum-** Transports proteins and breaks down toxins in the cell. Covered in ribosomes which make proteins that are transported.

**Mitochondria –** “Powerhouse” of the cell. Produces energy from sugar through chemical reactions (Cellular respiration)

**Golgi Body/ Apparatus-** Processes and packages proteins and lipids. Moves material within the cell and out of the cell in small sacs called vesicles.