**D. CELLS UNIT: Structure and Function** Ast #D1

**Key Terms and Ideas**

**Chapter 6.3 and 6.4 – Water and the Building Blocks of Life**

**\*SWBAT**

-**Discuss** the special properties of water that contribute to Earth’s suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.

-**Describe** the basic molecular structures and primary functions of the four major categories of biological macromolecules.

**Key Terms:**

-polar molecule

-hydrogen bond

-mixture

-solution

-solvent

-solute

-acid

-base

-pH

-buffer

-macromolecule

-polymer

-carbohydrate

-lipid

-amino acid

-nucleic acid

-nucleotide

**Chapter 7 – Cellular Structure and Function**

**\*SWBAT**

-**Describe** the scientific theory of cells (cell theory) and relate the history of its discovery to the process of science.

-**Compare and contrast** structure and function of various types of microscopes.

-**Explain** why/how a scientific theory is the most powerful explanation scientists have to offer

-**Relate** structure to function for the components of plant and animal cells.

-**Explain** the role of cell membranes as highly selective barriers (passive and active transport)

-**Compare and contrast** the general structures of plant and animal cells.

-**Compare and contrast** the general structures of prokaryotic and eukaryotic cells.

**Key Terms:**

-cell theory

-plasma membrane

-organelle

-eukaryotic cell

-nucleus

-prokaryotic cell

-selective permeability

-phospholipid bilayer

-transport protein

-fluid mosaic model

-all cell organelles/structure

-diffusion

-dynamic equilibrium

-facilitated diffusion

-osmosis

-isotonic solution

-hypotonic solution

-hypertonic solution

-active transport

-endocytosis

-exocytosis