Cell Structure Objective Sheet

**Tested Objectives**

Bio.1.1.1Summarize the structure and function of organelles in eukaryotic cells (including the nucleus, plasma membrane, cell wall, mitochondria, vacuoles, chloroplasts, and ribosomes) and ways that these organelles interact with each other to perform the function of the cell.

Bio.1.1.2 Compare prokaryotic and eukaryotic cells in terms of their general structures (plasma membrane and genetic material) and degree of complexity.

Bio.1.1.3 Explain how instructions in DNA lead to cell differentiation and result in cells specialized to perform specific functions in multicellular organisms.

**Essential Vocabulary (ALL must be defined for full credit)**

unicellular, multicellular, prokaryotic, eukaryotic, endosymbiotic theory, chromosome, DNA, plasmid, nucleus, cell/plasma membrane, phospholipid bilayer, selectively permeable, cell wall, cytoplasm, organelle, mitochondria, chloroplast, vacuole, ribosome, stem cell, differentiation, specialization, cell communication, junction, synapse, compound light microscope, ocular lens, objective lens, diaphragm, electron microscope, magnification

**Statements to Master (ALL must be answered for full credit)**

1. Identify organelles found in prokaryotic and eukaryotic (plant and animal) cells.
2. Describe the function of the major cell organelles.
3. Compare functions of the cellular organelles to the STERNGRR life processes.
4. Explain how an organelle’s structure is related to its function.
5. I will use a compound light microscope to observe various types of cells.
6. Compare and contrast prokaryotic and eukaryotic cells.
7. Compare and contrast plant and animal cells.
8. Distinguish between prokaryotic/eukaryotic cells and plant/animal cells when viewed using a microscope.
9. Observe images produced using an electron microscope (google) and describe how they are different from those produced using a compound light microscope.
10. How does the DNA of a multicellular organism compare within each cell?
11. Explain how cells can be differentiated using DNA
12. Observe examples of various types of cells in a multicellular organism and compare form to function
13. Identify and describe methods of short distance (junctions, synapses) and long distance (hormones) cell communication.