**AHSGE Biology Objectives**

***1: Select appropriate laboratory to conduct an experiment***  (Sections 1, 2, 3)

***2: Describe cell processes necessary for achieving homeostasis***  (Sections 4, 6, 7)

***3: Identify reactants, products and purposes of photosynthesis and cellular respiration***

(Sections 4, 8)

***4/9: Describe cell organelles. Differentiate between five- and six-kingdom classification***

***systems*** (5.1-5.5, Sections 13, 14)

***5: Identify levels of organization in the biosphere*** (5.6, 22.1)

***6: Describe the roles of mitotic and meiotic divisions during reproduction, growth,***

***and repair of cells*** (Section 9)

***7: Apply Mendel’s laws to determine phenotypic and genotypic probabilities of offspring***

(10.1, 10.2, 12.4, Section 11)

***8: Identify the structure and function of DNA, RNA and protein***(9.2, 10.3, 11.2, 11.3, 20.2,

Section 12)

***10: Distinguish between monocots and dicots, angiosperms and gymnosperms, and***

***vascular and non-vascular plants*** (Sections 15 and 16)

***11: Animal Classification – skeletal structure, reproduction, body symmetry,***

***coverings and locomotion*** (Sections 17 and 19, 18.1-18.3)

***12: Describe protective adaptations of animals*** (18.4, Section 20)

***13: Trace the flow of energy as it decreases through the trophic levels from***

***producers to the quaternary level***  (22.1-22.5)

***14: Trace biogeochemical cycles through the environment***  (Section 21, 22.5, 23.3, 23.4)

***15: Identify biomes based on environmental factors and native organisms***  (23.1, 23.2)

***16: Identify density-dependent and density-independent limiting factors affecting***

***populations in an ecosystem***  (Section 6)