

Appendix 1: Implementing Common Core and Essential Standards

Overall Standard 6.L.: *Understand the structures, processes, and behaviors of plants that enable them to survive and reproduce.*

Substandard 6.L.1.2: *Explain the significance of the processes of photosynthesis, respiration, and transpiration to the survival of green plants and other organisms.*

Students will research and explain the processes of photosynthesis, cellular respiration, and transpiration.

Overall Standard 6.L.2: *Students will understand the flow of energy through ecosystem and the responses of populations to the biotic and abiotic factors in their environment.*

Substandard 6.L.2.1: *Students will summarize how energy derived from the sun is used by plants to produce sugars (photosynthesis) and is transferred within a food chain for food web (terrestrial and aquatic) from producers to consumers to decomposers.*

Students will identify how decomposers affect the nitrogen cycle and how abiotic factors can influence the success of the cycle.

Substandard 6.L.2.2: *Explain how plants respond to external stimuli (including dormancy and forms of tropism) to enhance survival in an environment*

Students will observe and record data based on their study of plants within the classroom.

Substandard 6.L.2.3: *Summarize how the abiotic factors such as temperature, water, sunlight, and soil quality affect the ability of organisms to complete photosynthesis.*

Students will examine how abiotic and biotic factors can become limiting factors.

Overall Technology Standard 6.TT.1: *Students will use technology and other resources for the purpose of accessing, organizing, and sharing information.*

Substandard 6.TT.1.1: *Students will select appropriate technology tools to gather data and information (e.g., Web-based resources, e-books, online communication tools, etc.).*

Substandard 6.TT.1.3: *Students will select appropriate technology tools to present data and information effectively.*

Students will use text and web resources to research bivalves and phytoplankton.

Common Core Standard CCSS.ELA-Literacy.RST.6-8.9: *Compare and contrast the information gained from multiple sources.*

Students will analyze written text and visual models to determine elements of evidence to identify metamorphosis in the bivalve and the insect.