Middle School
Plants-Workhorses of the Wetland Program
TEKS Overview
3 – 3 ½ Hours in Length
Inside/Outside

During this field investigation, students will learn the role of plants in a wetland. Students will use an interactive dichotomous key to identify plants, collect samples, and identify plant structures and functions that help them live and survive. Relationships among the plants and their dependence on biotic and abiotic factors will be investigated, including soil quality testing. The plant processes of phytoremediation and nutrient removal and their importance to the water system will also be discussed. Plant collection and the use of plant presses are part of this class.

6th Grade TEKS

- The student for at least 40% of instructional time, conducts laboratory and field investigations following safety procedures and environmentally appropriate and ethical practices. (1)
- Collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers. (2C)
- The student knows how to use a variety of tools and safety equipment to conduct scientific inquiry (taxonomic key, hand lenses, white boards, etc.). (4A)
- Organisms within taxonomic groups share similar characteristics which allow them to interact with the living and nonliving parts of their ecosystem. (12)
- Identify the basic characteristics of organisms, including prokaryotic or eukaryotic, unicellular or multicellular, autotrophic or heterotrophic, and mode of reproduction, that further classify them in the currently recognized Kingdoms. (12D)
- Describe biotic and abiotic parts of an ecosystem in which organisms interact. (12E)

7th Grade TEKS

- The student for at least 40% of the instructional time, conducts laboratory and field investigations following safety procedures and environmentally appropriate and ethical practices. (1)
- Demonstrate safe practices during laboratory and field investigations as outlined in the Texas Safety Standards. (1A)
- Collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers. (2C)
- The student knows how to use a variety of tools and safety equipment to conduct science inquiry (taxonomic key, hand lenses, white boards, etc.) (4A)
- Recognize that radiant energy from the sun is transformed into chemical energy through the process of photosynthesis. (5A)
- Demonstrate and explain the cycling of matter within living systems such as in the decay of biomass. (5B)

- Illustrate the transformation of energy within an organism. (7B)
- Observe and describe how different environments, including microhabitats, support different varieties of organisms. (10A)
- Describe how biodiversity contributes to the sustainability of an ecosystem. (10B)
- Examine organisms or their structures and use dichotomous keys for identification. (11A)
- Explain variation within a populations or species by comparing external features, behaviors, or physiology of organisms that enhance their survival. (11B)
- Investigate and explain how internal structures of organisms have adaptations that allow specific functions. (12A)
- Define heredity as the passage of genetic instructions from one generation to the next generation. (14A)
- Compare the results of uniform or diverse offspring from sexual reproduction or asexual reproduction. (14B)

8th Grade TEKS

- The student for at least 40% of the instructional time, conducts laboratory and field investigations following safety procedures and environmentally appropriate and ethical practices. (1)
- Collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers. (2C)
- The student knows how to use a variety of tools and safety equipment to conduct science inquiry (taxonomic key, hand lenses, white boards, etc.) (4A)
- The student knows that interdependence occurs among living systems and the environment and that human activities can affect these systems. (11)
- Describe producer/consumer, predator/prey, and parasite/host relationships as they occur in food webs within freshwater ecosystems. (11A)
- Investigate how organisms and populations in an ecosystem depend on and may compete for biotic and abiotic factors. (11B)

JOHN BUNKER SANDS
WETLAND CENTER