

**High School
Plants – Work of the Wetland
Description and 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 structure, adaptations, and functions that help them live and survive. Relationships among the plants and their dependence on biotic and abiotic factors will be investigated. The plant processes of phytoremediation and nutrient uptake and their importance to the water system will also be discussed. Plant collection and the use of plant presses are part of this class.

Aquatic Science TEKS

- The student, for at least 40% of instructional time, conducts laboratory and field investigations using safe, environmentally appropriate, and ethical practices. (1)
- Identify key features and characteristics of atmospheric, geological, hydrological, and biological systems as they relate to aquatic environments. (4A)
- Identify the interdependence of organisms in an aquatic environment. (5D)
- Identify the role of carbon, nitrogen, water, and nutrient cycles in an aquatic environment. (6A)
- Identify biological, chemical, geological, and physical components of an aquatic life zone as they relate to the organisms in it. (9C)
- Classify different aquatic organisms using tools such as dichotomous keys. (10A)
- Compare and describe how adaptations allow an organism to exist within an aquatic environment. (10B)
- Identify how energy flows and matter cycles through freshwater aquatic systems. (11A)
- Predict effects of chemical, organic, physical, and thermal changes from humans on the living and nonliving components of an aquatic ecosystem. (12A)

Environmental Systems TEKS

- The student, for at least 40% of instructional time, conducts hands-on laboratory and field investigations using safe, environmentally appropriate, and ethical practices. (1)
- Demonstrate the use of course apparatuses, equipment, techniques, and procedures (taxonomic key, hand lenses, white board, etc.). (2G)
- Identify native plants using a dichotomous key. (4A)
- Diagram abiotic cycles, including the hydrologic, carbon, and nitrogen cycles. (4C)
- Make observations and compile data about fluctuations in abiotic cycles and evaluate the effects of abiotic factors on a local aquatic ecosystem. (4D)
- Identify source, use, quality, management, and conservation of water. (5B)
- Define and identify the components of the geosphere, hydrosphere, cryosphere, atmosphere, and biosphere and the interactions among them. (6A)
- Investigate and identify energy interactions in an ecosystem. (6E)

