



JBSWC: *Wetland Ecology grades 9-12*

Introduction: Students will spend at least 50% of instruction time immersed in the JBS wetland, with a guided boardwalk tour, learning how to conduct water quality testing, and participating in the much-loved macroinvertebrate investigation activity, learning about this artificial wetland ecosystem.

TEKS	Learning & Skill Objectives
<p>Aquatic Science (adopted 2021)</p> <ul style="list-style-type: none">interdependence and interactions that occur in aquatic environmentsanalyze water quantity and quality in a local watershed or aquifer <p>Biology (adopted 2020)</p> <ul style="list-style-type: none">predict effects of chemical, organic, and physical and thermal changes due to humans on the living and nonliving components of an aquatic system	<p>Learning</p> <ul style="list-style-type: none">remediation of nutrient overabundance and mitigation by plantsaquatic systems and their components <p>Skills</p> <ul style="list-style-type: none">identification and delineation of wetlandswater quality testingcharting and delineation of water quality data

Summary:

- Wetland Delineation** - Students will learn how specialized wetland plants, saturated soils, and water flow create components of a wetland, and develop skills in identification of parts of a wetland
- Phytoremediation** - Students learn how nutrients can be considered pollutants, and how plants clean the water by removing these pollutants from the water that we use in our homes
- Water Quality** - Students will develop field test skills investigating water quality at the deep water channel evaluating dissolved oxygen, nitrates, phosphates, turbidity, and temperature
- Macroinvertebrates** - Students will use field equipment to collect macroinvertebrates from our artificial wetland ecosystem and evaluate species sensitivity to water pollutants.

