

## Waders in the Wetlands

What is a wetland? Why are wetlands important? These are just some of the questions that we explore in our Waders class. In our Texas Parks and Wildlife Aquatic Science Certified Field Site, students learn about wetland ecology, aquatic macro invertebrates, and biological pollution indicators.

After a brief discussion and explanation students enter the lake using waders or rubber boots. Using nets and their hands, students find and collect as many wetland specimens as they can! After they get out, we have them identify all the macroinvertebrates that they found and discuss their findings. What do these indicators tell us about the pollution levels in Lake Texoma?

**SCIENCE:5.4 A:** Collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, prisms, mirrors, pan balances, triple beam balances, spring scales, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observations of habitats or organisms such as terrariums and aquariums.

**5.9 A:** Observe the way organisms live and survive in their ecosystem by interacting with the living and non-living elements.

**5.10 A:** Compare the structures and functions of varied species that help them live and survive such as hooves on prairie animals or webbed feet in aquatic animals.

**5.10 C:** Describe the differences between complete and incomplete metamorphosis of insects.

**Concepts:** Water Quality, Adaptation and Diversity of Flora and Fauna, and Interconnectedness of the Wetlands/Red River System.

**Goals:** At the end of Macroinvertebrate class, students should be able:

- To know the sources of freshwater and wetlands.
- To identify some common species found in freshwater wetlands.
- To recognize the diversity of life in the wetlands and get a better understanding of adaptations.

- To gain appreciation for natural resources and their management.
- To understand the interaction between the lake and wetland areas.
- To understand that wetlands are the nursery of many animal species.
- Differentiate between complete and incomplete metamorphosis.

**Objectives:**

- Discuss local freshwater wetlands, the Red River, and the part it plays in maintaining biodiversity.
- Use dip nets and seine nets to explore the diversity of freshwater wetlands.
- Use microscopes and/or magnifying glasses to take a closer look at findings.
- Use macro invertebrates to analyze the health of the wetland ecosystem.