

Discovering Wetlands in the Classroom

Syllabus



Presented by: The Swamp School, Raleigh, NC

Instructor: Marc Seelinger, PWS

Format: Online - Moodle

This new online continuing education class is designed for middle and high school teachers. This class is aligned to meet the new subject matter continuing education requirements for science teachers. This class includes 1.0 CEUs (10 hours of online instruction and activities).

Course Outline

1. What is a wetland?

In this section we will cover what a wetland is and where they can be found. Wetlands are areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods of time during the year, including during the growing season. Wetlands may support both aquatic and terrestrial species. The prolonged presence of water creates conditions that favor the growth of specially adapted plants (hydrophytes) and promote the development of characteristic wetland (hydric) soils.



Wetlands vary widely because of regional and local differences in soils, topography, climate, hydrology, water chemistry, vegetation, and other factors, including human disturbance. Indeed, wetlands are found from the tundra to the tropics and on every continent except Antarctica. Two general categories of wetlands are recognized: coastal or tidal wetlands and inland or non-tidal wetlands.

2. Why are wetlands important?

Wetlands prevent flooding by holding water much like a sponge. By doing so, wetlands help keep river levels normal and filter and purify the surface water. Wetlands accept water during storms and whenever water levels are high. When water levels are low, wetlands slowly release water.

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Topics discussed in this section include specific roles wetlands play in the ecosystem.

a. Wetland Functions

In this section we will expand on the importance of wetlands and we will identify specific functions of wetlands .

b. Wetland Loss

This section we will present the history of wetland impacts in the US and the significance of wetland loss. Examples include Hurricane Katrina and the Gulf Oil Spill.

3. How do you identify a wetland?

This section will present the scientific standards and lab activities required to identify a wetland.

a. Wetland Plants

There are plants that are unique to wetlands. This section will present the specific ways to identify and calculate wetland plant communities. This includes several dominance calculations that can be done in the field or classroom.

b. Wetland Soils

Wetland soils are also known as hydric soils. This section will present the current standard for identifying hydric soils. Workshop activities that students can engage in include soil classification profile studies, hydric soil indicator studies and soil map studies.

c. Wetland Hydrology

At the core of all wetland studies is the presence of water in the ecosystem. This section will present ways to identify how much water is required for a wetland to exist as well as way to identify if wetland hydrology is present. We will also provide you with an classroom workshop that demonstrates how a wetland functions.

4. How do we protect wetlands?

Wetlands are protected by both state and federal laws. This section will discuss the history of wetland regulation in the US. This section will also include student research activities.

Discovering Wetlands in the Classroom Syllabus



a. Wetland Laws

In this section we will review some of the history of wetland regulation in the US.

b. Wetland Mitigation

What happens when a wetland is lost? This section will discuss ways that wetlands are replaced when development necessitates the filling of wetlands.

5. Vocabulary

Key wetland terms and definitions

6. Study guide and resources

7. Review and Test Preparation

8. Standardized Test

Enrollment Information

Tuition: \$80

CEU's: 1.0



The Swamp School
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877-479-2673
SwampSchool.org

Course Website: SwampTraining.com