Discover!
Science

5

INSTRUCTOR GUIDE

Lesson Objectives

By the end of this lesson, your student will be able to:

- identify the different types of wetlands
- recall the effects humans can have on a wetland biome
- recognize how wetlands help the area around them

Supporting Your Student

Read *(Wetlands)*
The differences between a wetland biome and other aquatic biomes are subtle. The main point of emphasis with your student is that wetlands are found within terrestrial biomes and have constantly changing water levels dependent on rainfall in the area. However, there is always water present in order for plants to be submerged or emerged in the water. One way to reinforce this concept is to use a map combined with an internet search and locate the different wetland biomes around the world. Show your student that these biomes are found within terrestrial biomes such as forests.

Read *(Bogs, Marshes, and Swamps)*
Bogs are a natural progression in the life of a lake and are often found at the end of the lake life cycle. This is due to the constant dumping of sediment in the lake after flowing in from a river or stream. Over thousands of years, the sediment builds up, decreasing the water depth and allowing other plant species to grow. Marshes and swamps are very similar in location and nutrient level. The defining characteristic for each is the type of plant life present. Marshes have soft, tall grasses, whereas swamps have woody plants and trees. To support your student in categorizing the types of wetland biomes, have them create a three-column T-chart labeled "Bog, Marsh, Swamp." For each wetland habitat, brainstorm different organisms and locations unique to each habitat.

Take a Closer Look *(Wetlands as Nature's Water Filter)*
Similar variations of this lab can be performed with other materials. Specifically, if large plastic bottles cannot be found, 20-ounce water bottles will work just as well. Jar "D" is the wetland simulation. The water will drain the slowest through jar "D" and should be the clearest of the group, thus demonstrating how wetland biomes filter the particles out of runoff.

Learning Styles

Auditory learners may enjoy listening to the sounds of native birds found in wetland environments and identifying their unique characteristics.

Visual learners may enjoy creating posters or visuals for each of the wetland habitats.

Kinesthetic learners may enjoy taking a nature trip to a local wetland habitat and recording the unique plants and animals they see.

Extension Activities

Create a Wetland Travel Brochure
Choose a specific wetland habitat from around the world, such as a mangrove swamp in Costa Rica or the cypress swamps of eastern Texas. Have your student create a travel brochure encouraging people to visit these unique habitats. The brochure should include pictures and descriptions of the plant and animal species that their traveler will find on their wetland vacation.

Wetland Advocacy
Have your student research different nonprofit organizations involved in the preservation of wetland habitats. After researching, create a letter or poster that can raise awareness to the importance of wetland biomes and why they should be preserved and protected.

Answer Key

Practice

The correct answer is C.

Take a Closer Look *(Wetlands as Nature's Water Filter)*

Answers will vary. Possible answer: Jar "D" represents the wetland biome. The plants found in this biome filter the dirty particles from the water, which is why the water in jar "D" was the clearest. Because there are plants to filter the water, it takes longer for the water to move through, which is what occurred in jar "D."

Show What You Know

1. Bogs

2. Swamps

3. Marshes

4. D

5. A

6. Answers will vary. Possible answers: your current practice of using too much pesticide is hurting the natural areas around you, our local marsh is very important to the health of our local ecosystem as it filters the rain runoff in order to keep clean water flowing back into all of our plants