

Wetland Bamboozle

GRADE LEVEL: upper elementary, middle school

DURATION: one 30-40 minute class period

OBJECTIVES

After this activity, students will be able to:

- List and define several wetlands habitats
- Explain several of the physical features that distinguish wetland types from one another

MATERIALS

- Large chalkboard or whiteboard with the appropriate writing utensils
- OR props that represent wetland features (see Procedure Step 5)
- A set of cards, each with a different definition of a wetland type (see definitions in Procedure Step 2)

PROCEDURE

1. Begin by reviewing the definition of a wetland (presented in Unit 1 Lesson 1). Explain that wetlands share those common qualities, but that there are many variations of wetlands. Provide a few examples of wetland types (see Procedure Step 2).
2. Provide students with a list of definitions for the many types of wetlands and ask them to review it briefly. Suggested definitions for wetland types are as follows:
 - **Marsh:** freshwater, shallow and have emergent plants – or plants that rise above the water – like cattails and rushes; water flows through the marsh, unlike some other types of wetlands
 - **Swamp:** freshwater and found within a forest; trees grow in the nutrient-rich soils and it may have standing water for part of the year
 - **Tidal Marsh:** salt water in a shallow area found at the place where the ocean meets land; salt water floods the marsh when the tide comes in and drains when the tide goes out
 - **Bog:** freshwater, though it is acidic as not much water flows in or out, low in

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Wetlands have been defined differently by scientists, conservationists, developers, government, and countries. However, most definitions generally agree that wetlands share traits from all three of these categories:

- The wetland is saturated with water either permanently or intermittently.
- The wetland has 'hydric soils' – soils hold water for all or part of the year, which creates an anaerobic (low oxygen) state.
- Water-tolerant plants are found in the wetlands. These plants are able to grow in the low oxygen conditions formed by the hydric soils.

However, within this definition, there are many variations to the features of a wetland. Wetlands can be further categorized by characteristics such as what types of plants grow in and around them, how water flows in and out of the wetland, whether it is fresh or salt water.

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- nutrients, plants and animals that live here are adapted to this
- **Vernal Pools:** freshwater, shallow wetland that usually fills with water during the spring and dries up later in the year, plants and animals that live here are adapted to this
 - **Mangrove Swamp:** salt water, found along the coast of tropical and subtropical regions (like the Gulf of Mexico), trees that grow here can live in salt water and can help stop erosion
 - **River:** freshwater, carries water downstream to other bodies of water, its shoreline winds through many habitats as it moves downstream
 - **Ocean:** saltwater, largest body of water, most of the water on earth can be found in oceans
3. Divide the students into two or three teams and explain that they will be playing a game with definitions. One student from each team will come forward to be the first player. The instructor will give each player a definition to read through (the same definition for each player). The student will then draw an image that represents the wetland type, in order for the remaining team members to make a guess as to what wetland type it is. Encourage students to use their drawings to focus on features such as:
 - Freshwater vs. saltwater
 - The types of plants in and around the wetland
 - Whether water flows in/out of the wetland
 4. The instructor can award points to the teams in one of two ways. The teams can call out their answers during play and the first team that is correct earns a point. Alternatively, each round of play can be limited to a time period (1-2 minutes) and then give the teams time to consult with one another to come to a consensus.
 5. Alternatively, students may use a set of props to demonstrate and/or act out the type of wetland they are defining (i.e. salt shaker for saltwater, vinegar for acidic water, a variety of plants to represent trees, emergent and submerged plants, etc.).
 6. As the lesson concludes, review the types of wetland habitats with the students and emphasize that they are similar yet different in their physical features.
- EXTENSION**
1. Ask students to research a wetland type that is not found in their area, using the library, internet or other resources. Students can use available software to create a diagram of the wetland type, identifying unique physical characteristics.
 2. Have students document observations from this lesson and share with another classroom via social media.
 3. Students could teach a younger grade what they have learned and do the charade activity for them.
 4. Videotape a wetland near your school and create a movie.