

Sensational Wetlands!

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Students will use their senses to learn what makes a wetland different from other habitats.

Wetlands are an integral part of the local ecosystem, and many migratory species rely upon them. Nevertheless, it can be hard to define exactly how a wetland differs from other habitats.

R.L. Smith (*Ecology and Field Biology, 3rd edition*, Harper and Row, New York, 1980) described wetlands simply as “a half-way world between terrestrial and aquatic ecosystems and exhibit some characteristic of each.”

Wetlands are 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 that 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.

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GRADE LEVEL: upper elementary, middle school

DURATION: one 30-40 minute class period

OBJECTIVES

After this activity, students will be able to:

- Describe how a wetland is different from other habitats
- List some of the plants and animals that may be found in a wetland.

MATERIALS

- Pictures of wetlands
- Items to create a wetland model: such as a large tray, clay, sponge(s), and water in a container (or a spray bottle)
- Blindfold
- Containers of dirt, water, and hydric soil taken from a wetland
- Recordings of sounds found in a wetland
- Food that grows in a wetland (see Procedure Step #7 for ideas)

PROCEDURE

1. Begin with description of what a habitat is and then begin to describe how a wetland is different from other habitats. Use one of the definitions found in this lesson plan, or another suitable definition.
2. Explain to the students that they will be going on a field trip to a wetland with their senses. Be creative about adapting the following activities to meet your space or time requirements.
3. **Sight:** Show students pictures of a few types of wetlands and ask them to describe differences between the wetlands and other habitats they may know (forests, meadows, deserts, etc.). Emphasize the water-tolerant plants that are shown in the pictures.
4. **Touch:** Construct a model of a wetland for the students in a large tray. Begin by using clay to build a slope on one end of the tray, to represent land. Use the clay to create features such as streams and hills. Place a

large sponge(s) in the middle of the tray, to represent the wetland. Leave the remaining end of the tray open to represent a lake or ocean. Raise the 'land' end of the tray up slightly to create a slope. Demonstrate how water might flow through a watershed by using the water to make it 'rain' on the land. Ask the students to observe how the water flows through the model and then give them an opportunity to feel the differences between land, wetland, and a body of water. If your space allows, create a model large enough for the students to walk through barefooted!

5. **Smell:** To reinforce the differences between wetlands and other habitats, ask for a volunteer for a smelling test. Explain that you will give them three containers to smell and their job is to identify which belongs to a wetland. Remind the student that they are looking for hydric soil and reinforce this is different from soil found in other habitats. Either blindfold the student, or use opaque containers with holes in the top. Give them a sample of dirt, water, and hydric soil taken from a wetland.
6. **Sound:** Play a recording or recordings of sounds from local wetlands (bird calls, wind blowing through rushes, beaver sounds in a wetland, etc.) and ask students to identify the sounds.
7. **Taste:** Give or show students samples of some of the foods that are derived from plants grown in wetlands. Commonly found foods are cranberries, blueberries, rice, crab meat, mint tea, and marshmallows (originally derived from the marsh mallow plant).
8. Conclude by revisiting the definition of what a wetland is, and reinforcing it with the examples they just experienced.

EXTENSION

1. If possible, bring the students to a nearby wetland for this lesson and have them explore further with their own senses. Ask the students to document some of their observations in a drawing, journal entry, or photo journal.
2. Ask students to explore which foods are harvested from their local wetlands.
3. Have students document observations from this lesson and share with another classroom via social media.