Water Trivia!

Image from NatureNorth.com.

Specific Learning Outcomes

8-4-01: Use appropriate vocabulary related to their investigations of water systems.
8-4-06: Describe the components of the global water cycle.
8-4-07: Describe features of the North American drainage systems.
8-4-11: Describe examples of human interventions to prevent riverbank or coastal erosion.
8-4-12: Identify factors that can cause flooding either individually or in combination.
8-4-13: Provide examples of the way in which technology is used to contain or prevent damage due to flooding, and discuss related positive and negative impacts.
8-4-15: Explain how and why water may need to be treated for use by humans.
8-4-17: Identify substances that may pollute water, related environmental and societal impacts of pollution, and ways to reduce or eliminate effects of pollution.

Vocabulary

heat capacity, water cycle, watershed, continental divide, erosion

Summary

Students are introduced to water, the water cycle, watersheds, and wetlands through a trivia game. Through a series of questions, they will become familiar with these concepts.

Materials

- *Projector and computer to present slideshow*
- *Writing utensils*

Procedure

Warm Up

Begin with the provided slideshow presentation, which is a trivia game that discusses the concepts of a watershed, the water cycle and how humans interact with them.

Activity

There are three rounds of trivia (10 questions each). The answers are on a slide at the end of the round. How you play the Trivia came is up to you.

There is supplemental information within the notes of the slideshow that you will help you explore each question (sometimes it is a website link with more information).

Wrap Up

At the end of the three rounds of trivia, students should be familiar with many terms and concepts in the topic areas.

Conclude by explaining that as a class you will be visiting Oak Hammock Marsh Interpretive Centre, which is in a wetland, where you will be learning more about water and watersheds.

A wetland is an area of land that holds shallow water, with a maximum depth of two metres. The water makes the soil very moist, so water-loving plants will grow in and around the wetland; this is why a wetland can not be deeper then two metres, because otherwise these kinds of plants drown and do not receive enough sunlight. The water moves slowly because there are so many plants that slow the flow, absorbing some of the water like a sponge and filtering it as it moves through.

A watershed, also known as a drainage basin, is an area of land where all water drains to a central point like a lake, river, or stream.

Wetland—Bog

Image from Wikipedia.

Key Characteristics of Bogs:

- Peat-covered (peat is a brown, soil-like substance made of decaying *Sphagnum* mosses)
- Isolated from ground water
- Rain-fed
- Low nutrients in the water and acidic
- Dominated by *Sphagnum* mosses with tree, shrub or treeless vegetation cover

Wetland—Fen

Image from Ducks Unlimited Canada.

Key Characteristics of Fens:

- Peat-covered (peat is a brown, soil-like substance made of decaying *Sphagnum* mosses)
- Exposed to ground water; water at surface is moving
- Fed by rain, streams and groundwater
- More nutrients in the water than bogs and is less acidic
- Greater variety of plants than bogs: grass meadows, shrubs, and trees

Wetland—Swamp

Image from Ducks Unlimited Canada.

Key Characteristics of Swamps:

- Non-peat forming wetland
- Has flowing water; flooded for the majority of the growing season
- Waterlogged soil, often standing water
- Vegetation is dense, and can include coniferous or deciduous trees, or tall shrub thickets

Wetland—Freshwater Marsh

Image from Ducks Unlimited Canada.

Key Characteristics of Freshwater Marshes:

- Non-peat forming wetland
- Frequently or continually flooded with shallow, slow moving water
- Waterlogged soil that is oxygenated, which allows for plants to form roots
- Nutrient rich water offers greater plant diversity, such as cattails, reeds, rushes, or sedges
- No trees

Shallow Open Water

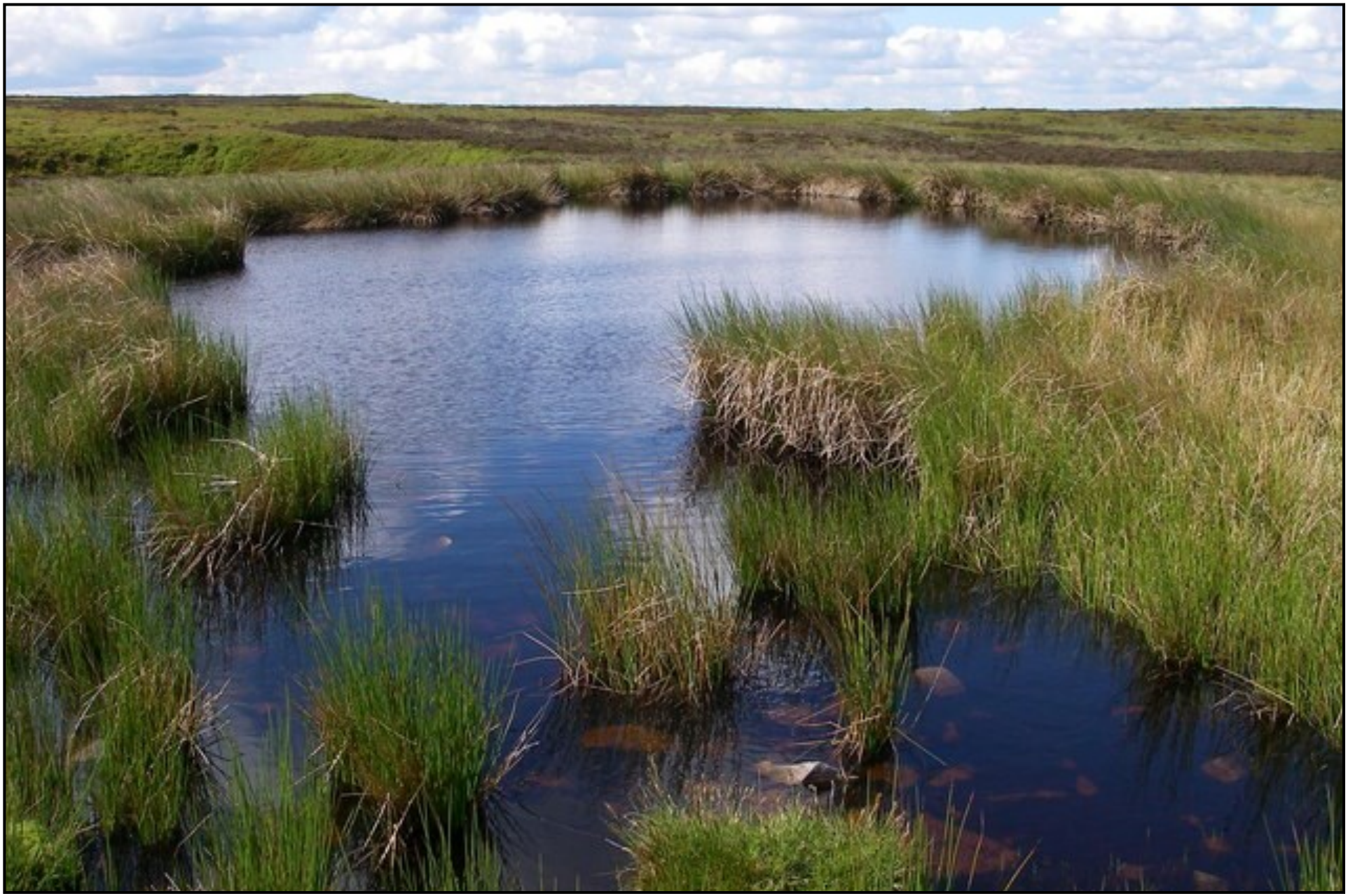

Image from Wikipedia.

Key Characteristics of Shallow Open Water Wetlands:

- Locally known as ponds, sloughs and marshes
- Non-peat forming wetland
- Standing water, often a transition between lake and marsh
- Fewer emergent plants, but submersed plants may be present