SCIENCE

A WORLD IN YOUR BACKYARD

Wetland Adventure

Subject Area: Science
Grade: 5

GENERAL LEARNER OUTCOMES

Topic E: Wetland Ecosystems

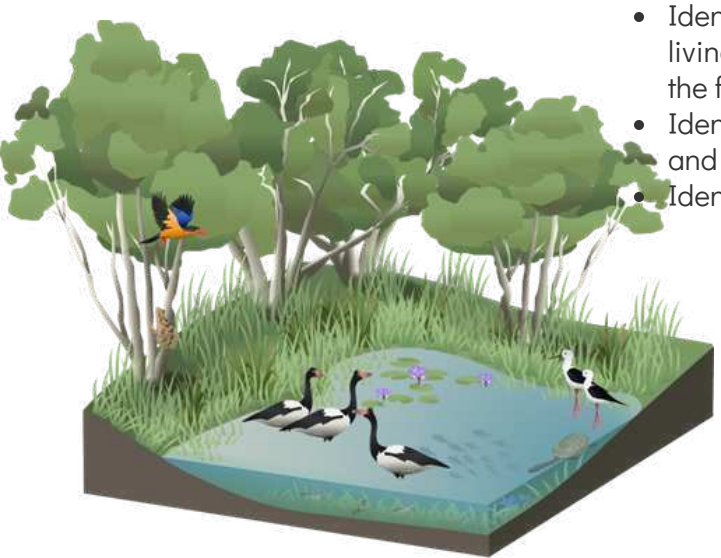
Students will:

- Describe the living and nonliving components of a wetland ecosystem and the interactions within and among them.

SPECIFIC LEARNER OUTCOMES

Students will:

- Recognize and describe one or more examples of wetland ecosystems found in the local area; e.g pond, slough, marsh, bog, fen.
- Understand that a wetland ecosystem involves interactions between living and nonliving things, both in and around the water.
- Identify some plants and animals found at a wetland site, both in and around the water; and describe the life cycles of these plants and animals.
- Identify and describe adaptations that make certain plants and animals suited for life in a wetland.
- Understand and appreciate that all animals and plants, not just the large ones, have an important role in a wetland community.
- Draw diagrams of food chains and food webs, and interpret such diagrams.
- Recognize that some aquatic animals use oxygen from air and others from water, and identify examples and adaptations of each.
- Identify human actions that can threaten the abundance or survival of living things in wetland ecosystems; e.g., adding pollutants, changing the flow of water, trapping or hunting pond wildlife.
- Identify individual and group actions that can be taken to preserve and enhance wetland habitats.
- Identify the roles of different organisms in the food web of a pond:
  - producers-green plants that make their own food, using sunlight
  - consumers-animals that eat living plants and/or animals
  - decomposers-organisms, such as molds, fungi, insects and worms, that reuse and recycle materials that were formerly living.



STUDENT LEARNING OBJECTIVES

Students will:

- Recognize and describe one or more examples of wetland ecosystems found in the local area.
- Understand that a wetland ecosystem involves interactions between living and nonliving things, both in and around the water.
- Identify some plants and animals found at a wetland site, both in and around the water; and describe the life cycles of these plants and animals.
- Identify and describe adaptations that make certain plants and animals suited for life in a wetland.
- Understand and appreciate that all animals and plants, not just the large ones, have an important role in a wetland community.
- Identify the roles of different organisms (producers, consumers and decomposers) in the food web of a pond.
- Draw diagrams of food chains and food webs, and interpret such diagrams.
- Identify human actions that can threaten the abundance or survival of living things in wetland ecosystems; e.g., adding pollutants, changing the flow of water, trapping or hunting pond wildlife.
- Identify individual and group actions that can be taken to preserve and enhance wetland habitats.

ASSESSMENT

Students will provide evidence of learning by:

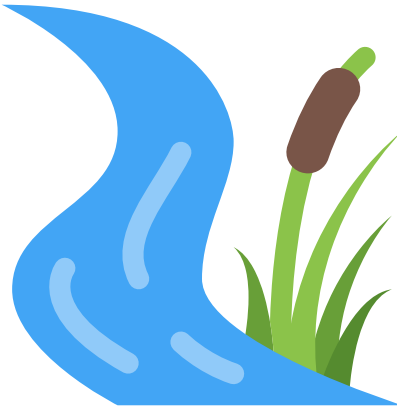
- Creating a Google Slide presentation with a partner, reflecting on their wetland field trip experience and research completed

MATERIALS

- Bill Nye the Science Guy S03E17 - Wetland Ecosystems (27:53 minutes)

LEARNING RESOURCES

Alberta Education Program of Studies



TEACHER INSTRUCTIONS:

Prior to going on the wetland field trip host a discussion on wetlands.

What prior knowledge do the students have?

View:

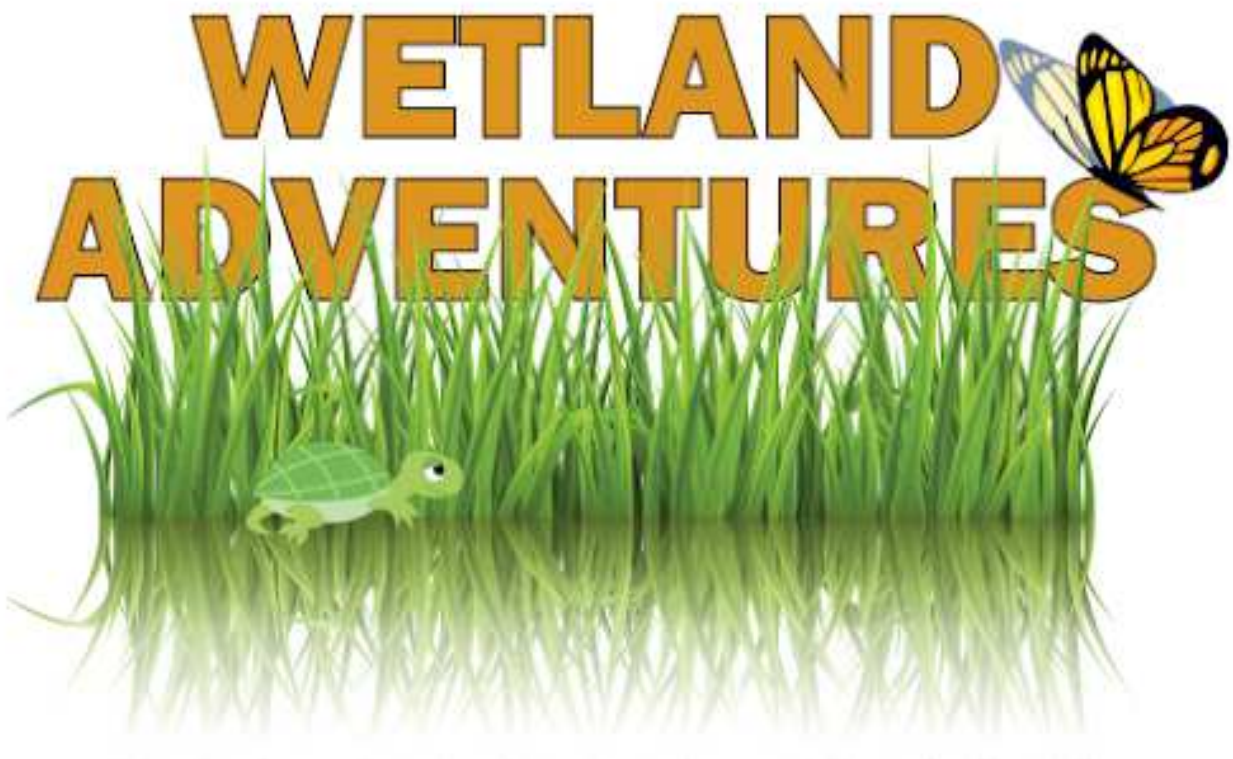
Bill Nye the Science Guy S03E17 - Wetland Ecosystems (27:53 minutes)

Attend Field Trip:

Field Trip planning instructions provided by Ducks Unlimited are very extensive and include all the planning steps teachers need to take. The link to their wetland field trip guide is attached here:

"How to Deliver a Wetland Field Trip"- Ducks Unlimited Canada

Upon completion of your wetland field trip, the assignment suggested will reinforce student learning.



A WORLD IN YOUR BACKYARD

Wetland Adventure

STUDENT ASSIGNMENT:

A fun experience is going on a wetland field trip and learning about wetland ecosystems by studying life in a local pond, slough, marsh, fen or bog. These areas are often found on a local farm, and farmers must avoid these areas for protection of the wetland, and also because it is too difficult to use them for agricultural purposes.

Through your classroom studies, and studies in the field, you will learn about organisms that live in, on and around wetlands and about adaptations that suit pond organisms to their environment. Through observation and research, you will also learn about the interactions among wetland organisms and about the role of each organism as part of a food web. The role of human action in affecting wetland habitats and populations is also something you will study.

With a partner you will take on the role of one of the organisms (producer, consumer, or decomposer) you saw in the wetland.

You and your partner will create a Google Slide presentation where you will:

- Describe the wetland where you live (pond, slough, marsh) and each character will describe their life cycle.
- Discuss your interaction with each other as well as other living and nonliving things in and around the water.
- What is your role in the wetland community. Are you a producer, consumer, or decomposer?
- Where do you and your partner fit on a food chain? Describe and illustrate with a diagram.
- Identify and describe adaptations that make you suited for life in a wetland.
- Identify some other plants and animals found at the wetland site, both in and around the water.
- Are there any human actions that can threaten the abundance or survival of living things in your wetland? Has human action already done some damage in your wetland?
- Are there any individual and group actions that can be taken to preserve and enhance your wetland habitat?
- You need to include a title slide as well as a bibliography slide that documents all of your research sources including website URLS.

MARKING RUBRIC:

Criteria	Excellent	Proficient	Satisfactory	Limited
Introduction Slide Slide includes your group names and a catchy image.	Fully captures the attention of the audience. Topic has a clear focus.	Captures the attention of the audience. Topic is focused.	Few audience members seem interested. Topic focus is vague.	Audience is not captured. No topic focus.
Organization Introduction (title slide), body content and bibliography.	Present findings in an organized manner, and interesting sequences that are easy to follow.	Presents findings with some degree of organization and logical sequence that the audience can follow.	Information and graphics are placed haphazardly and students jump around content.	Audience cannot understand the presentation because there is no sequence and information is disorganized.
Content Accuracy	Covers topic completely and in depth. All content throughout the presentation is accurate. There are no factual errors. Students demonstrate full knowledge (more than required) with detailed explanations.	Includes essential information. Most of the content is accurate but there is one piece of information that might be inaccurate. Students demonstrate knowledge with content, but fail to fully explain.	Includes some essential information. The content is generally accurate but one piece of information is clearly flawed or inaccurate.	Includes little essential information. Content is typically confusing or contains more than one factual error.
Presentation	Includes 9–10 slides. Information on slides is kept short and clear.	Includes 7–8 slides. Information on slides contains some sentences and has some difficulty explaining ideas clearly	Includes 6 slides. Information on slides contains many sentences and has much difficulty explaining ideas clearly	Includes less than 6 slides. Information on slides contains many sentences and does not explain ideas