

Know your Watersheds!



Image from https://www.youtube.com/watch?v=OL_GmVpa0M.

Specific Learning Outcomes

8-4-01: Use appropriate vocabulary related to their investigations of water systems.

8-4-07: Describe features of the North American drainage systems.

8-4-18: Identify environmental, social, and economic factors that should be considered in the management of water resources.

General Learning Outcomes

8-0-1a: Formulate specific questions that lead to investigations.

8-0-2a: Access information using a variety of sources.

8-0-2b: Develop and use criteria for evaluating information sources.

8-0-2c: Make notes in point form, summarizing major ideas and supporting details and referencing sources.

8-0-4c: Work cooperatively with team members to carry out a plan, and troubleshoot problems as they arise.

8-0-4d: Assume various roles to achieve group goals.

8-0-7g: Communicate methods, results, conclusions, and new knowledge in a variety of ways.

Vocabulary

water cycle, watershed, continental divide, erosion, wetland, drainage system

Summary

Students are introduced to watersheds by exploring the different watersheds we have in Canada. Students will choose a watershed to research and present it to the class.

Materials

- Projector and computer to present slideshow
- Student access to a library and the internet
- You may choose how students present their findings (written report, oral report, video, Power Point, Prezzi, etc.)

Procedure

Warm Up

Begin with the provided slideshow presentation, which discusses the concepts of a watershed and the various watersheds found across Canada.

Activity

The slideshow will introduce students to the activity in which they will be researching and analysing one of Canada's watersheds, then presenting their findings. This activity will likely take several classes to complete or can be a homework assignment, and can either be done as an individual assignment or in groups. Either assign or have students choose a watershed to research, making sure each watershed is represented.

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 than 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.

Once students have chosen their watershed, they will research through various means to answer the following questions:

1. **Where does the water come from? Where does it go?**
Students will need to research the watershed catchment area, including the geography of the area, the types of water sources, etc.
2. **What kinds of animals that might rely on the watershed?**
3. **How do people use the land and the water in the watershed?**
Students will need to research the key uses.
4. **What are some of the threats to the watershed?** Students will need to think about the kinds of threats both natural and human.

Some of the information may not be specific to their chosen watershed, but knowing which areas the watershed covers, students should be able to discover which animals use it, how people use it and what some of the potential threats are. Students will then present their findings to the class, which should clearly communicate the answers to the above questions.

Wrap Up

Conclude by explaining that as a class you will be visiting the Oak Hammock Marsh Interpretive Centre, which is in a wetland in the Hudson Bay watershed where you will be learning more about watersheds and how humans can affect them.

Extension:

- Invite other students to your class's presentations
- Have the students select a town or city in Western Canada. Imagine dumping a bucket of water in that place. Then have them trace where the water would flow. Which ocean would it flow to? How many smaller watersheds would it flow through? Could be traced on a map or described in a report.
- Choose one of Manitoba's smaller watersheds (see slide 6 in the Power Point for the post activity: *Watershed Proposal*) and research it.
- Ducks Unlimited Canada runs two programs that encourages students to engage in wetland conservation: *Wetland Centres of Excellence* and *Wetland Heroes*. Check out their website: <https://www.ducks.ca/initiatives/>