

Your Path to the Ocean



Learning Objectives

Students will:

- Identify their drainage basin.
- Describe the path water takes from their community to the ocean.
- Identify at least one other human community that shares their watershed/coastline.
- Identify five species of ocean wildlife their watershed affects.



Method

Students use various resources to trace the surface waters that connect their community to the ocean, to other communities along their watershed, and to ocean wildlife.



Materials

- [Canada's Drainage Basins](#)
- Canadian geographic atlases
- Large piece of flip chart paper
- Additional maps (optional)

Background

We and our communities are connected to ocean wildlife—and other human communities—through water. How we treat our water matters.

Not all fresh water will leave our communities and make it to the ocean (some will be diverted for use or evaporate), but most will eventually flow into one of five ocean bodies— depending on the drainage basin we live in: Pacific, Atlantic, and Arctic oceans, Hudson Bay, or the Gulf of Mexico.

A watershed is an area that drains precipitation through a connected system of waterways. It includes wetlands, ponds, lakes, streams, rivers, underground waters, and the lands surrounding them. A watershed has boundaries, like a country, except these are land ridges. And, just as townships are combined to form counties and counties to form provinces, smaller watersheds are parts of progressively larger watersheds, like giant jigsaw puzzles.

All watersheds eventually connect to the ocean.

Creating a geographic map of their watershed gives students an excellent visual image of their connections to the ocean, its wildlife, and other communities. The simplest activities here can be done with just the Canada's Drainage Basins map and a good Canadian geographic atlas.

For additional resources visit:

CanadianWildlifeFederation.ca/Education

In Advance

Identify and gather maps showing surface waterways from your community to their ocean outlet.

- [Atlas of Canada](#) has free downloadable maps that require no special software. You can view and print maps with many different features, locations, and scales. Look for Freshwater maps, Drainage Patterns, Population Densities, Agricultural Maps, Industrial Maps, and Parks.
- Very detailed Canadian maps are also available for free from the [Government of Canada](#).
- You can also purchase highly detailed topographical maps from local suppliers. Costs can add up if you wish to trace a long path to the ocean, so you may want this level of detail for just your immediate area.
- Maps of local sewer systems and outflows are often available through local municipalities.

Activity

1. Introduce the topic.
 - Discuss how water and watersheds connect us to the ocean and other communities.
 - Identify your drainage basin.
2. Divide the class into groups of two to four (they can work individually if you prefer).
3. Give each group a copy of:
 - A "Canada's Drainage Basins" map
 - Other pre-selected maps showing major river systems.
4. Groups should:
 - Locate their primary drainage basin on the map.
 - Trace the route from home to the ocean.
5. Once everyone is ready, have a class discussion to ensure that everyone knows the source and destination of the water in their community.
6. Each group should now sketch a map showing the watershed and their community. Students can choose to create these maps at any level of detail, from rough sketches to scale maps using a grid, from a small page to an entire wall. Each map should include:
 - A title, a scale, a north direction arrow, a legend.
 - Basic features, such as rivers, lakes, the ocean, and major communities.

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7. Have students to include other details on their map, such as:
 - Upstream and downstream communities
 - Local wetlands, streams, rivers, and lakes
 - Areas of agricultural or industrial concentration
 - Natural or protected areas and parks
 - Municipal water intakes and sewage outflows.
8. Groups should now:
 - Draw wildlife in the correct areas along the route.
 - Add direction arrows showing the flow of water from home to the ocean.
 - Illustrate the map with colourful drawings.
9. Discuss the activity, emphasizing that humans and wildlife along the route students drew all share the same water, pollutants and toxins.
 - How would you like others to treat the water you drink?
 - What are some sources of pollution in your watershed?
 - What can you do to ensure water leaving your community is safe?
 - What are some land-based threats to ocean wildlife?
 - Are there any areas of water and wildlife protection?

Extensions

- Create a scale model of your watershed in the schoolyard, using chalk on the pavement, or in the school gym, using newsprint.
- Read the book or watch the film, [Paddle to the Sea](#) (National Film Board).

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