

Watersheds		Grade 8 : Water Systems
Lesson Plan	Safety Notes	Ask an adult for permission to do this experiment. No protective equipment required.
Description		
Understand the geography of a watershed and how the effects humans can have on them.		
Materials		
<p>Here are the materials that you will need:</p> <ul style="list-style-type: none"> ● Tray (such as a baking sheet) ● Piece of white paper ● Water-soluble markers (4 different colours) ● Spray-bottle filled with water. 		
Science Background		
<p>We all live in a watershed. A watershed is an area of land where water will drain into a common body of water like a stream, river, lake or ocean. Watersheds can be large or small. You may live in a smaller watershed where water drains into a river. That watershed may be part of a larger watershed where that river is one of many that drain into a lake. Eventually, most rivers and lakes will drain into a larger body of water like an Ocean.</p> <p>Ontario is made up of two large watersheds: The Hudson Bay Watershed and the Atlantic Ocean Watershed. All water in Ontario eventually drains into one of these main bodies of water.</p>		
Activity Procedure		
<p>We're going to make our own watersheds and will help us to see where water flows across a landscape.</p> <p>Crumple a piece of paper into a loose ball. Partially open the paper, and place it on your tray. The paper should still be crumpled enough to have portions that resemble mountain ridges and valleys. Imagine if you were in an airplane, looking down on your paper, what would you see? Mountains? Hills? Valleys?</p> <p>Using a blue water-based marker, we are going to find and mark where the streams, rivers and lakes</p>		

might be on our paper. Draw lines where you might find a stream or river. Are there any creases going down a mountain or hill? This might be a place a stream might form. Streams might connect to larger rivers. Is there anywhere on your landscape where water might collect? If you have a basin on your map, colour it in to make a lake.

Using a different colour (like red), find a place where a city could be located. A city would need a water source, so be sure that the city is somewhere near a lake or a river. Colour in the area of your city. Next, choose an area where you could place some agricultural land. Colour that area in a different colour (like green). Lastly, find an area on your landscape for industrial land. Use a different colour (like brown) to colour in an area of land for industry. What kind of effects do you think these three areas could have on your water sources?

Using your spray bottle and water, gently spray water over your landscape. Where is there water collecting? Where is there water flowing? Are any of the other colours mixing with the blue colour of your water sources? Using red water-based markers, have students draw in some pollutants that may be found in their watershed, such as industrial waste, pesticides from lawns, and animal waste from a nearby farm. Keeping the model on the desks, have visitors spray (or you go around with a sprayer and spray) a very light mist of water over it.

Debrief

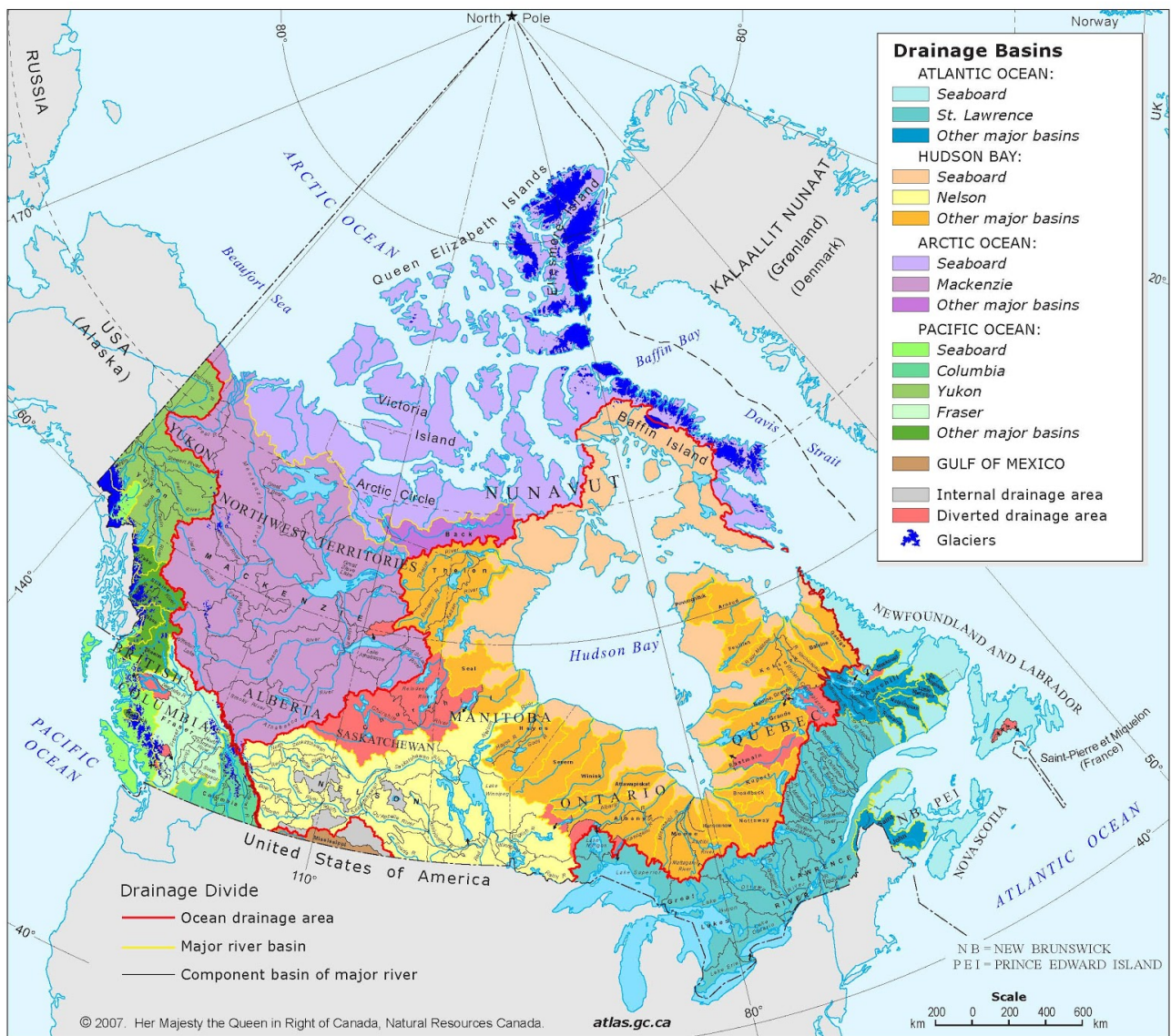
Pollutants from cities, agricultural and industry can have direct effects on our water. When planning communities and industrial projects, it's important to understand potential pollutants and build systems that prevent pollutants from entering our waterways.

Can you think of some ways that cities, industry and agriculture can prevent polluting our water?

Handout

What watershed or drainage basin do you live in?

Find your location on the map.

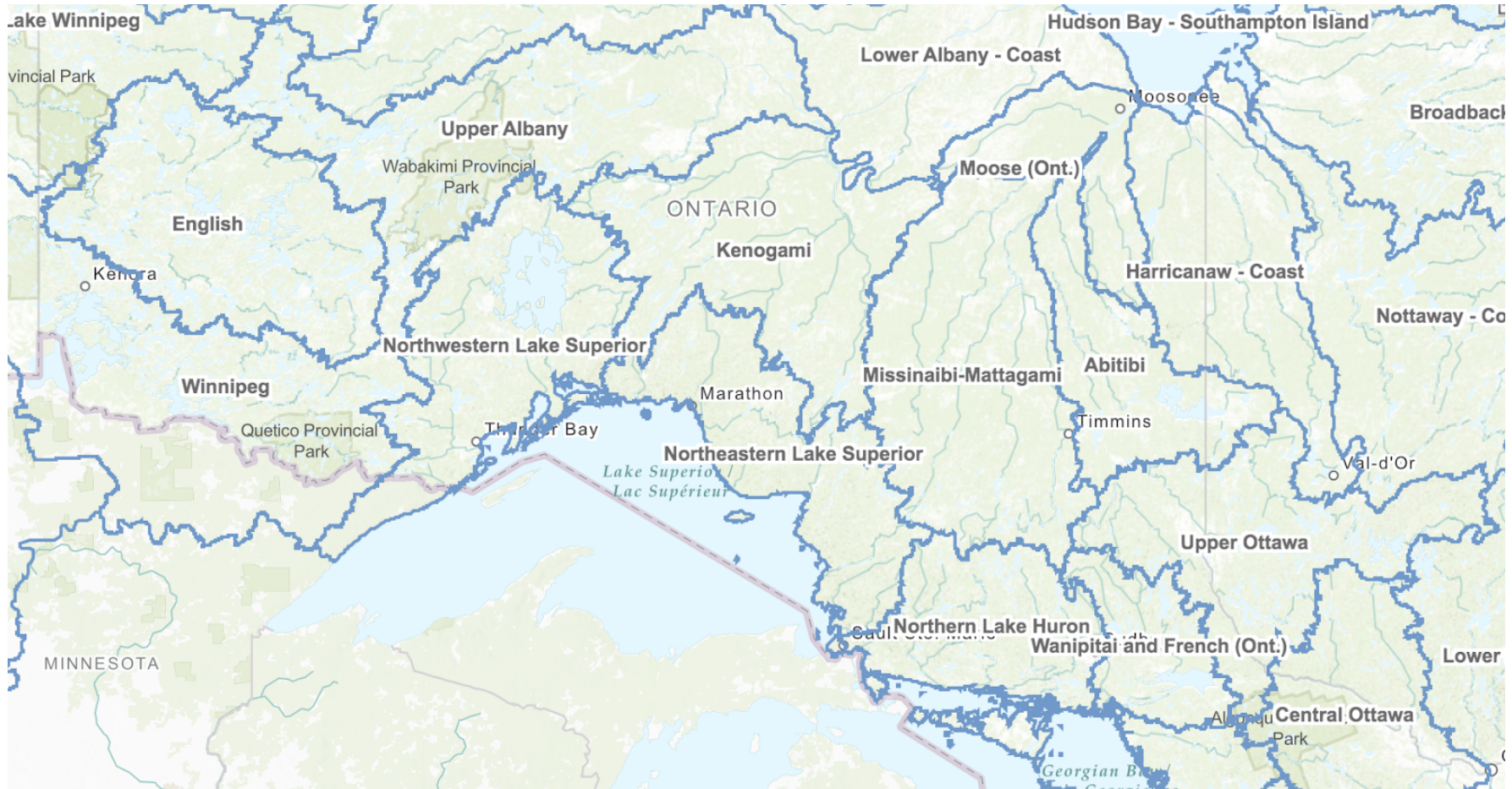


Can you find what sub-watershed you live in? Use the three maps to find your home and find the sub-watershed you live in.

Northern Ontario (Hudson Bay and James Bay Coast)



Northern Ontario (James Bay, Lake Superior, Northern Lake Huron)



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