

The Nature of Watersheds

Age: High School

Objective

- To examine a topographical map and determine where local watersheds are located
- To determine how the use of water has a larger impact in other areas
- To use geographical skills to trace water's path to the ocean

The Activity

Materials

- Topographical map of your local area
- Atlas or map of Canada

Procedure

- With the topographical (topo) map, take the class outdoors. Choose a predetermined high point that you and the class can climb to and view the surrounding area. See if you can tell where your local watershed is located. Where does this water drain to once it leaves the watershed? With your topo map see if you and the class can determine where the water flows to from your watershed.
- With a dry-erase marker and your topo map, connect all the high points in your local area. This is the area of the watershed. From your knowledge of the area and the map, what land use activities are taking place in your watershed? How might land use activities affect the water leaving the watershed (fertilizer, pesticides, commercial pollutants, residential pollutants, etc.)?
- Head back to the classroom and review where you traced the watershed on the topo map. From your watershed, where will the water go next? What river or stream will it flow to? With the help of an atlas or map of Canada, follow and trace the path of the water from your local watershed to the ocean.
- Does your class recognize any areas the water is traveling through? Have they been to any of these areas? How would you feel about drinking the water in these areas?
- Does the water traveling from your watershed affect the water elsewhere on its way to the ocean? Have the class think about what life would be like if they lived beside the ocean. Then have them think about whether they would be eager to drink the water after it has made such a long journey through so many other places.
- With the traced path you made following the water from you watershed to the ocean, identify a number of cities located along the water's path. With the use of an atlas or the internet, determine the population size of these

cities. Add the populations together to determine the approximate number of people affected by your watershed.

- What water issues do these people have to worry about? How do these populations clean their water at the end of their path? What happens when the water finally reaches the ocean?
- It is important to note that not all water from watersheds enter rivers and streams to travel to the ocean, as some enters local groundwater supplies. Many populations receive a great deal of their water straight from these underground sources. What does this water have to go through before it settles underground? Does your community use groundwater? What goes into the ground before the water gets to you? Does this affect the quality of the groundwater?

Suggestion

To have your students gain a better understanding of groundwater, after you have completed this lesson, utilize “The Nature of Groundwater” lesson to tie it all together.

One Fish at a Time