Lesson Plans











McCALL OUTDOOR SCIENCE SCHOOL University of Idaho College of Natural Resources

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ACCALL OUTDOOR SCIENCE SCHOOL

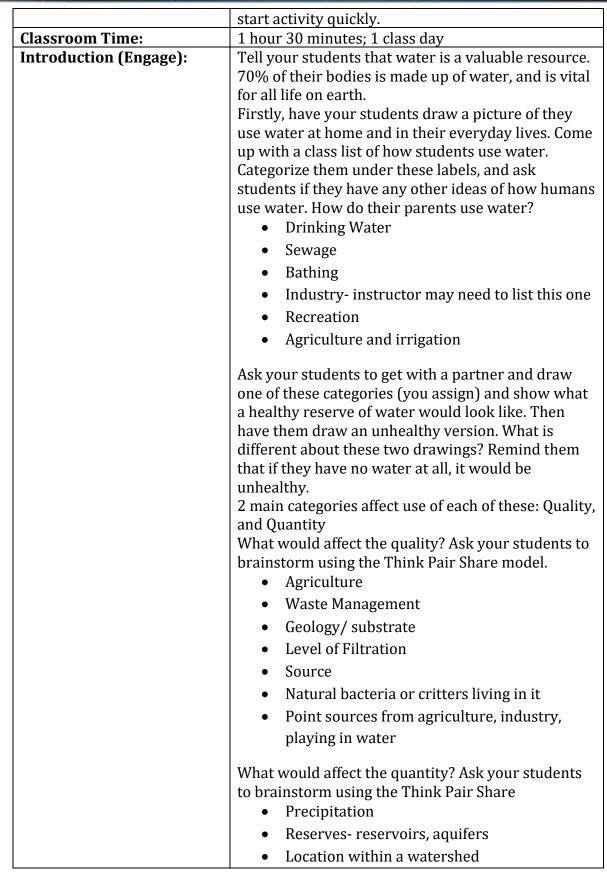
Title: Water for People	
Grade Level: 5th or 8th	1

human activities affect water quality?Background:Look up your watershed address for the place your school is, or where your students live. This would look like your immediate drainage and the drainages that lead out to the closest ocean or large reserve. Also look at the USGS water quality website and get acquainted with navigating the pages to search for streams or bodies of water within your watershed.Next Generation Standards:ESS 2.C, ESS 3.A, ESS 3.CGoals:Students will participate in discussions and activities to understand their place in the water cycle. Students will firstly talk about how they use water and understand where their drinking water comes from. Students will then do an activity to learn how pollution moves through surface-water in a watershed. Finally, students will discuss ways in which their actions can affect other organisms that use water in their watershed, including other people.Objectives:• Students will be able to explain where the water they use in their day-to-day lives comes from somewhere- not just out of the faucet (etc.)• Students will understand how pollution move through water systems • Students will understand how pollution moves through water systems • Students will apply their understanding of how wheir actions (good or bad) can affect water and others who depend on it.Materials:• Plastic water/milk jug or spray bottle • One rectangular pan or cooking sheet • Paper cups	Grade Level: 5th or 8th	
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 Food coloring 		
 Topographic maps of your area 		_
Set up: Have materials on each group of tables to be able to	Set up:	Have materials on each group of tables to be able to

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AL Water Expeditions



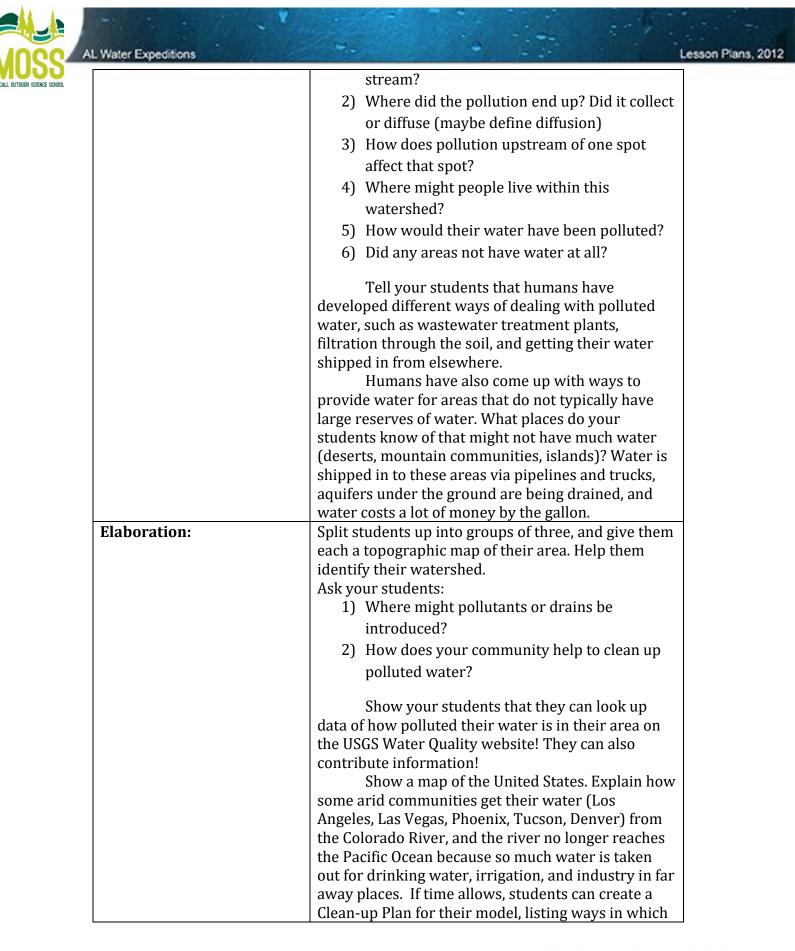
University of Idaho College of Natural Resources AL Water Expeditions

MCCALL OUTDOOR SCIENCE SCHOOL

	Time of Year
Activity (Explore):	Create a Model Watershed In this activity you are going to create a watershed that represents the one in your area to see how water quality/ quantity may affect your school. What you will need: • A plastic water/milk jug or spray bottle. • One rectangular pan or cooking sheet • Paper cups • Aluminum foil • Food Coloring The first thing you need to do is to cut the paper cups into different heights. These will represent the mountains and hills in your area. The next step is to
	mountains and hills in your area. The next step is to place them on the tray, bottom up, and arrange them according to how you would best represent the mountains in your watershed. Then, take the aluminum foil and roll it out over your cups. Make sure you have enough to create high and low areas around your mountains, where valleys, streams, and lakes might be. Remember to tuck the aluminum foil into the bottom of the pan so that water stays in the pan and you avoid creating a mess. Next, place food coloring on the aluminum foil where you think pollutants may be introduced into your watershed. Create your rain maker by punching some small holes into the side of your plastic jug and filling it with water and let the "rain" sprinkle out of the holes. If you have a spray bottle, this could work more effectively and a "rain" maker. Watch how the food coloring, or "pollution," enters and travels through different parts of your watershed. Encourage students to predict prior to adding the rain and explain their observations after it rains.
Explanation	Generate discussion of how these pollutants may affect water quality in different parts of your watershed. Ask your students: 1) Did pollution stay where it entered into the

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L Water Expeditions	
	residents can reduce the impact on their watershed.
Evaluation:	 Ask your students to refer back to how they use water. Ask them to how those uses might pollute or deplete the water for other people in their watersheds. These answers can be apart of a journal entry or assignment to be turned in before the end of the day. 1) In what ways can your day-to-day actions affect water quality? 2) How can you help to keep your water plentiful and clean?
	End on a positive note that they can really do great
	things to positively impact their water!!

Additional resources:

- USGS Water Quality site: <u>http://waterdata.usgs.gov/nwis/qw</u>
- Print or order topographic maps for your area: <u>http://store.usgs.gov/b2c_usgs/usgs/maplocator/(ctype=areaDetails&xcm=</u> <u>r3standardpitrex_prd&carea=%24R00T&layout=6_1_61_48&uiarea=2)/.do</u>
- Project WET (activity): <u>http://projectwet.org/</u>
- http://water.epa.gov/polwaste/nps/watershed/concept.cfm
- <u>http://water.epa.gov/type/watersheds/index.cfm</u>
- <u>http://www.watershedatlas.org/fs_indexwater.html</u>

