

# Lesson Plans



# MOSS

McCALL OUTDOOR SCIENCE SCHOOL

**University of Idaho**

College of Natural Resources



**Title:** What is a watershed?

**Grade Level:** 5<sup>th</sup>-8<sup>th</sup> grade

<b>Topic:</b>	<b>Watersheds</b>
<b>Background:</b>	A watershed is a region of land that drains to a particular body of water such as a river or a lake. Rain or snow that falls anywhere in that watershed eventually flows to that water body. It may travel overland as surface water or flow underground as groundwater.
<b>Next Generation Standards:</b>	<b>ESS2.C</b>
<b>Goals:</b>	Students will think about where water flows to and will be introduced to the concept of a watershed. To further their understanding of a watershed, students will use paper and a spray bottle to model the flow of water and how that fits into the greater watershed. Students will also brainstorm ideas on why it is important to protect our watersheds.  What is a watershed and how does water flow? Why is it important to protect our watershed?
<b>Objectives:</b>	<ul style="list-style-type: none"> <li>• Students will understand what a watershed is and how water flows within a watershed.</li> <li>• Students will recognize why it is important to protect our watershed.</li> </ul>
<b>Materials:</b>	<ul style="list-style-type: none"> <li>• Washable Markers</li> <li>• Spray bottle or water bottle</li> <li>• White paper or wax paper</li> <li>• Laminated Topographic Map of Area</li> </ul>
<b>Set up:</b>	Watch 'Paper Watershed' video beforehand to get an idea of the activity the students will do. <a href="http://www.screencast.com/t/6piMaS1q">http://www.screencast.com/t/6piMaS1q</a>
<b>Classroom Time:</b>	15 minutes for lesson, 25 minutes for activity
<b>Introduction (Engage):</b>	Ask a question: When it rains or snows, where does the water go? Write down answers on the board.
<b>Activity (Explore):</b>	Make your own watershed, following the directions from the video. Written directions: <ol style="list-style-type: none"> <li>1. Give each student a piece of paper, wax paper or parchment paper work best. Have them crumple it slightly and then un-crumple it to create a mock topographic map with mountains and valleys.</li> <li>2. Students will then use a marker to trace the</li> </ol>

	<p>major ridgelines on the paper.</p> <ol style="list-style-type: none"> <li>3. With a different color, students will sketch where they predict water will run off the ridgelines to create rivers and streams.</li> <li>4. With a third color, students will shade in areas where they predict the water will collect and create lakes and ponds.</li> <li>5. Students will then apply precipitation using a spray bottle, making observations about the pattern the water flows in and the rate at which it flows.</li> </ol> <ul style="list-style-type: none"> <li>• Where is the water flowing the fastest? Where is the water going?</li> <li>• Where does the water collect? Why is it pooling in these areas?</li> </ul>
<p><b>Explanation</b></p>	<p>Define a watershed and explain how water drains off the land.</p>
<p><b>Elaboration:</b></p>	<p>Think/Pair/Share: Brainstorm ideas about why protecting a watershed is important.</p> <ul style="list-style-type: none"> <li>• Our drinking water comes from our watershed.</li> <li>• The water in our watershed eventually flows to a greater body of water that may be used by other people.</li> <li>• Plants and animals need a healthy watershed!</li> </ul>
<p><b>Evaluation:</b></p>	<ul style="list-style-type: none"> <li>• Using a laminated topographic map of your area, have students trace the outline of the watershed with a marker, paying close attention to elevation and contour lines. This will help students reflect on what they have just learned about watersheds.</li> <li>• Review the questions from the video.</li> </ul>

**Additional resources:**

[Adopt-A-Watershed](#) Curriculum units are organized by grade level online. Each curriculum unit features projects, field study projects and community action materials. Call 1-530-628-5334 or visit [www.adopt-a-watershed.org](http://www.adopt-a-watershed.org)

[Rivers of Life, Center for Global Environmental Education](#) A full model for contextual

learning; a flood of projects, adventures, and resources to help K-12 teachers and students learn about and from their watershed. <http://cgee.hamline.edu/rivers/>

Online Classroom Projects, The Center for Improved Engineering and Science Education The CIESE has several collaborative online classroom projects that allow students from around the world to compare the quality of their local waters. Projects include: Global Water Sampling Project, Down the Drain, Bucket Buddies, Take A Dip, etc. <http://k12science.stevens-tech.edu/collabprojs.html>

A resource site for wetlands education, Ducks Unlimited Activities about wetlands issues: plants, animals, ecosystems, water quality, weather and more. Lesson plans include art projects, worksheets, experiments and outdoors activities. [www.greenwig.org/dueducator/alph\\_educator.html](http://www.greenwig.org/dueducator/alph_educator.html)

Freshwater Wetlands Teaching Guide, Environmental Media Corp./Snyder Productions, Ltd Freshwater Wetlands Teaching Guide contains six-programs, each 10 minutes long. Wetlands topics addressed include lakes, ponds, pools, marshes, forested wetlands, rivers, streams, floodplain communities and water use. [www.envmedia.com/guides/freshwater\\_wetlands.pdf](http://www.envmedia.com/guides/freshwater_wetlands.pdf)

Office of Wetlands, Oceans and Watersheds, Environmental Protection Agency Activities, projects, information magazines and curricula on wetlands, water resources, ecosystems, watersheds, wildlife and more. Links to educational resources produced by other organizations are also provided. [www.epa.gov/owow/wetlands/education](http://www.epa.gov/owow/wetlands/education)





