

## Explore Watersheds Module Standard Correlations: Grades 3-7

### Next Generation Science Standards

Italics indicate connections between NGSS and Explore Watersheds Module.

Performance Expectation	Disciplinary Core Idea	Science and Engineering Practice	Crosscutting Concept
<p><b>5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.</b></p>	<p><b>ESS2.A: Earth Materials and Systems</b></p> <ul style="list-style-type: none"> <li>• Earth’s major systems are the geosphere (solid and molten rock, soil, and sediments), the hydrosphere (water and ice), the atmosphere (air), and the biosphere (living things, including humans). These systems interact in multiple ways to affect Earth’s surface materials and processes. The ocean supports a variety of ecosystems and organisms, shapes landforms, and influences climate. Winds and clouds in the atmosphere interact with the landforms to determine patterns of weather.</li> </ul> <p><i>Online Activity: Students study different ways that different components of a watershed (land, water, air and living things – including humans) interact.</i></p> <p><i>Students think about how different components (representing land, water, atmosphere and biosphere) interact in their watershed. (My Science Notebook and Educator Resources)</i></p>	<p><b>Developing and Using Models</b></p> <ul style="list-style-type: none"> <li>• Develop a model using an example to describe a scientific principle.</li> </ul> <p><i>Online Activity: Students observe and interact with a model of a watershed.</i></p> <p><i>Video: Student observe other students modelling a watershed.</i></p>	<p><b>Systems and System Models</b></p> <ul style="list-style-type: none"> <li>• A system can be described in terms of its components and their interactions.</li> </ul> <p><i>Students consider the interaction of different components of a watershed. (Online, My Science Notebook and Educator Resources)</i></p>
<p><b>5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment.</b></p>	<p><b>ESS3.C: Human Impacts on Earth Systems</b></p> <ul style="list-style-type: none"> <li>• Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth’s resources and environments.</li> </ul>	<p><b>Obtaining, Evaluating, and Communicating Information</b></p> <ul style="list-style-type: none"> <li>• Obtain and combine information from books and/or other reliable media to explain</li> </ul>	<p><b>Systems and System Models</b></p> <ul style="list-style-type: none"> <li>• A system can be described in terms of its components and their interactions.</li> </ul>

	<p><i>Online Activity: Watershed Activity – as students add human factors into the watershed, impacts are discussed.</i></p>	<p>phenomena or solutions to a design problem.</p> <p><i>Online Activity: Students obtain information about watersheds and human in watersheds on the Discoverwater.org site. They can also access additional information about their watershed through an outside link.</i></p>	<p><i>In the Seeing My Watershed Activity, students think about all the components of their own watershed (My Science Notebook and Educator Resources).</i></p> <p><b>Connections to Nature of Science</b>  Science Addresses Questions About the Natural and Material World.</p> <ul style="list-style-type: none"> <li>• Science findings are limited to questions that can be answered with empirical evidence.</li> </ul> <p><i>N/A</i></p>
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**Common Core ELA Standards**

NONE

## Ocean Literacy Standards

<p>(1) The Earth has one big ocean with many features</p>	<p>(f) The ocean is an integral part of the water cycle and is connected to all of the earth's water reservoirs via evaporation and precipitation processes.</p> <p>(g) The ocean is connected to major lakes, watersheds and waterways because all major watersheds on Earth drain to the ocean. Rivers and streams transport nutrients, salts, sediments and pollutants from watersheds to estuaries and to the ocean.</p>
<p>(3) The ocean is a major influence on weather and climate.</p>	<p>(d) Most rain that falls on land originally evaporated from the tropical ocean.</p>
<p>(5) The ocean supports a great diversity of life and ecosystems.</p>	<p>(i) Estuaries provide important and productive nursery areas for many marine and aquatic species.</p>
<p>(6) The ocean and humans are inextricably interconnected.</p>	<p>(a) The ocean affects every human life. It supplies freshwater (most rain comes from the ocean) and nearly all Earth's oxygen. It moderates the Earth's climate, influences our weather, and affects human health.</p> <p>(g) Everyone is responsible for caring for the ocean. The ocean sustains life on Earth and humans must live in ways that sustain the ocean. Individual and collective actions are needed to effectively manage ocean resources for all.</p>

Source: National Oceanic and Atmospheric Administration, et al. 2006. *Ocean Literacy: The Essential Principles of Ocean Sciences, K-12*. Washington, DC: NOAA.