Build a Watershed - GRADE FIVE

[CA Science Framework](#) (p.228-252)

GRADE FIVE INSTRUCTIONAL SEGMENT 3: INTERACTING EARTH SYSTEMS

Guiding Questions
• How can we represent systems as complicated as the entire planet?
• Where does my tap water come from and where does it go?
• How much water do we need to live, to irrigate plants? How much water do we have?
• What can we do to protect Earth's resources?

Performance Expectations
Students who demonstrate understanding can do the following:

5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact [Clarification Statement: The geosphere, hydrosphere (including ice), atmosphere, and biosphere are each a system and each system is a part of the whole Earth System (CA) Examples could include the influence of the ocean on ecosystems, landform shape, and climate; the influence of the atmosphere on landforms and ecosystems through weather and climate; and the influence of mountain ranges on winds and clouds in the atmosphere. The geosphere, hydrosphere, atmosphere, and biosphere are each a system] [Assessment Boundary: Assessment is limited to the interactions of two systems at a time.]

5-ESS2-2. Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth [Assessment Boundary: Assessment is limited to oceans, lakes, rivers, glaciers, ground water, and polar ice caps, and does not include the atmosphere.]

5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment

3–5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost

3–5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet criteria and constraints of the problem

3–5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved