



## Next Generation Science Standards

**Lesson:** [Exploring Watersheds](#)

**Activity:** [DIY Watershed](#)

### Prior Knowledge Should Include:

- Wind and water change the shape of the land.
- Four major Earth systems interact. Rainfall helps to shape the land and affects the types of living things found in a region. Water, ice, wind, organisms and gravity all break rocks, soil and sediment into smaller pieces and move them around.
- Water is found in many places and in different forms on Earth.

### Performance Expectations:

- MS-ESS2-1 Earth's Systems: Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.
- MS-ESS2-2 Earth's Systems: Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

### Disciplinary Core Ideas:

- **ESS2.A Earth Materials and Systems:** The planet's systems interact over scales that range from microscopic to global in size, and they operate over fractions of a second to billions of years. These interactions have shaped Earth's history and will determine its future.
- **ESS2.C The Roles of Water in Earth's Surface Processes:** Water's movements-both on the land and underground-cause weathering and erosion, which change the land's surface features and create underground formations.

### Practices:

- **Constructing Explanations and Designing Solutions (6)** – Progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific ideas, principles and theories.
- **Developing and Using Models (2)** – Progresses to developing, using and revising models to describe, test and predict more abstract phenomena and design systems (Middle school).

### Crosscutting Concepts:

- **Scale, Proportion and Quantity (3):** In considering phenomena, it is critical to recognize what is relevant at different measures of size, time and energy and to recognize how changes in scale, proportion or quantity affect a system's structure or performance.
- **Stability and Change** – For natural and built systems alike, conditions of stability and determinants of rates of change or evolution of a system are critical elements of study.

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