

## Lesson 18

# Drawing on the Present

How does the land appear in different areas of the watershed?  
What are geological phenomenon's in the watershed?  
How can watershed alterations be depicted?

**GOAL** To understand that the geology of the Farmington River appears differently throughout the watershed.

**OBJECTIVES** Students will:

- ✓ draw a cross section of how the geology of the land appears in different areas of the watershed
- ✓ identify geological changes to the watershed
- ✓ research geological phenomenon and their affect on water storage capabilities

**MATERIALS** butcher block paper, markers, pencils, map

### CORE CURRICULUM CONTENT STANDARDS

- Language Arts 2(2,4)
- Science 6(3,4), 7(1,4,5), 8(2-4, 6), 14(3)
- Social Studies 3( 3,6,7), 9(1-5), 10(1-6), 11(1,4-6), 12(1-3), 13(1)
- Arts 1(1-3), 3(1), 4(1-3), 6(1)

**VOCABULARY** glacial, ridge, basalt, lava, fault, talus slide, boulder0, Precambrian rock

### PROCEDURES

1. Begin by passing out copies of the Farmington River Watershed map. As previously noted, students were able to follow the Farmington to the Connecticut River. After the simulated canoe trip and drawing on the past activity, they gained insight into aspects of how the land formed and appeared during other times of history.
2. Instruct students to imagine that they are following the Farmington River as it appears today. Ask them how they think the geology of the land appears along the different sections of the river. Have students imagine the geology of the land above the surface and below the surface of the land.
3. Break students up into four groups. Each team will be responsible for depicting the geology of an area along the river. Have students think about a cross section of the river and choose a section of the river from Becket, MA to Windsor, CT.
4. Before drawing aspects of the river, have students research Farmington River geology for their particular section. Examples might include alluvial floodplains, talus slopes, trap rock ridges, steep ridges and ledges, Precambrian rock, stratified drift, etc.
5. Have students discuss findings of research within group.

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6. Distribute a large piece of butcher block paper and markers to each group. Have them draw a cross section of the Farmington River depicting the area above and below the surface of the land.
7. If alternate materials are available, have students create models from re-used materials or clay.
8. Have student groups discuss how the geological formations affect water storage. Have them discuss with rest of the group.
9. Have student groups present to class.

## EXTENSIONS

1. Have students visit areas of the Farmington River watershed that demonstrate different geological formations.

## Background Information

Becket, Ma to Pleasant Valley, CT – steep ridges, boulders, ridges, ledges, rough waters

Pleasantvalley, CT to New Hartford, CT – widens, islands form and re-form as river moves sediment

Unionville to Tariffville - accumulation of sand, gravel and silt; debris left by melting glacier plugged the course forcing an abrupt change in a northerly direction at the river's southern most point in Farmington.

Farmington to Avon, Tariffville – a great lake grew in size; topped the ridge and cut a gorge permitting the Farmington to flow into the Connecticut River. Bedrock material changes to sedimentary rock, such as red sandstone (in Avon and Tariffville); alluvial floodplains

Avon to Simsbury – large faults tilted as a result of lava flows, leaving edges visible as north/south ridges, A trap rock ridge, Talcott Mountain is most prominent result of tilted lava flows; stratified drift

## GLOSSARY

**basalt** - a rock of igneous origin

**boulder** - a large rounded mass of rock lying on the surface of the ground or embedded in the soil

**fault** - a dislocation caused by a slipping of rock masses along a plane of fracture; also the dislocated structure from such slipping

**glacial** - having to do with a huge mass of ice slowly flowing over a land mass, formed from compacted snow in an area where snow accumulation exceeds melting

**lava** - the rock formed by the cooling and solidifying of molten rock that reaches Earth's surface through volcanic activity or fissure

**Precambrian rock** - rock traces belonging to the geologic time period between Hadean Time and the Cambrian Period, often subdivided into the Archean and Proterozoic eras, comprising most of the earth's history and marked by the appearance of primitive forms of life

**ridge** - a long, narrow area of hills and mountains

**talus slide** - sloping mass of rock debris at the base of a cliff