



Supplemental Information for 2021 Earth Science Week Activity titled *Erosion in a Bottle*
www.soils4teachers.org/esw

Erosion Photos





Why is it important to conserve soil on the surface?

Soil Quality—most of the nutrients needed to sustain plant and animal life are in the top layer (or horizon) of soil. If we lose this layer, this area will become useless to farmers and native plants.

Water Quality—large amounts of sediment in lakes and rivers can negatively impact the plants, fish, and insects that live in the water.

What are the implications of soil erosion?

Tillage—Farmers who practice no-till or another type of conservation tillage leave more cover on the ground minimizing soil erosion on their farm.

Gardens, Yards—In areas that have been dug up or where grass won't grow, putting down mulch or allowing fallen leaves to stay on the ground can help protect the soil. (Bonus: mulch can also help suppress weeds in a garden.)

Recreation—Plants and grass that are maintained along riverbanks can help keep the water clean which makes for better swimming and fishing.

Helpful Vocabulary (from the www.soils4teachers.org glossary):

Erode (Erosion)—To wear away, or remove, rock or soil particles by water, ice, and/or gravity

Horizon—A layer of soil with properties that differ from the layers above or below it

Humus—Organic matter such as highly decomposed leaves
No-till—A way of growing crops that doesn't disturb the soil surface minimizing soil erosion

Sediment—Any particle of soil or rock that has been deposited by water, wind, glaciers, or gravity

Sedimentation - tendency for particles in suspension to settle out of fluid

Slope—A landscape, or surface, that is tilted or inclined

Suspension—a fluid containing solid particles that are large enough for sedimentation

Topsoil (A horizon)—Mostly weathered minerals from parent material with a little organic matter added, the horizon that formed at the land surface

Turbidity—The cloudiness of a liquid caused by individual particles suspended in the liquid