

Tuesday, April 7, 2020

Earth Science:
Erosion

Objective: Students will be able to describe four means of sediment transport and the factors that contribute to erosion.

Lesson Starter

Watch this video: [Erosion](#)

Thought Question:

What are some of the forces in nature that cause erosion?

Erosion & Transport

Read page 7 - “*Erosion & Transport*” from the *Geological Society* website.

[Link to page 7](#)

Complete the guided reading questions on the following slide.

Erosion & Transport

1. How does erosion differ from weathering?
2. List four causes of erosion on Earth.

Gravity

Read page 8 - “Gravity” from the *Geological Society* website.

[Link to page 8](#)

Complete the guided reading questions on the following slides.

Gravity

1. What is “mass-wasting”?
2. List four examples of mass-wasting.

Wind

Read page 9 - “*Wind*” from the *Geological Society* website.

[Link to page 9](#)

Complete the guided reading questions on the following slides.

Wind

1. What environmental problems are caused by wind erosion?
2. Piles of wind blown deposits of sand or dust are referred to as _____.

Water

Read pages 10, 11, 12 - “*Water*”, “In the Rivers”, “In the Sea” from the *Geological Society* website.

[Link to page 10](#)

[Link to page 11](#)

[Link to page 12](#)

Complete the guided reading questions on the following slides.

Water - In the Rivers, In the Sea

1. Define the following terms:
 - a. Traction -
 - b. Saltation -
 - c. Suspension -
 - d. Solution -
2. How do upland river valley shapes differ from mature river valley shapes?
3. Where does most erosion in the ocean occur?

Ice

Read page 13 - “Ice” from the *Geological Society* website.

[Link to page 13](#)

Complete the guided reading questions on the following slides.

Ice

1. A _____ is a river of ice formed from compacted snow.
2. Two ways glaciers erode Earth's surface are by _____ and _____.
3. Describe the shape of mountain valleys formed by glaciers.

Erosion

Extensions:

Quick Quiz - Check your understanding with this quick, self-grading quiz.

[Link to Quiz](#)

Erosion Article - National Geographic

[Link to Article](#)

Question: Name four natural factors impacting erosion in a landscape.

Answers

Erosion & Transport

1. How does erosion differ from weathering? Erosion involves removal of solid material by a transporting agent. Weathering is the breakdown of rock into fragments at the Earth's surface. No movement is involved in weathering.
2. List four causes of erosion on Earth. Gravity, wind, water, and ice

Gravity

1. What is “mass-wasting”? Mass–wasting is the down-slope movement of loose rock and soil due to gravity
2. List four examples of mass-wasting. Soil creep, rock falls, landslides, mud flows

Wind

1. What environmental problems are caused by wind erosion? **removing soil from farmland and covering whole towns with sand and dust**
2. Piles of wind blown deposits of sand or dust are referred to as dunes.

Water - In the Rivers, In the Sea

1. Define the following terms:
 - a. Traction - the rolling or dragging of large grains along a river bed or shore
 - b. Saltation - the bouncing of sand grains as they are picked up, carried along, and dropped repeatedly by flowing water
 - c. Suspension - Fine particles (silt and clay) are carried in water.
 - d. Solution - Soluble salts are dissolved and carried in Solution
2. How do upland river valley shapes differ from mature river valley shapes?

Upland streams form narrow V-shaped valleys. Mature streams form broader, more gentle valleys.
3. Where does most erosion in the ocean occur? Erosion by the sea occurs mainly on exposed shorelines where waves constantly wear away the cliffs and foreshore

Ice

1. A glacier is a river of ice formed from compacted snow.
2. Two ways glaciers erode Earth's surface are by plucking and abrasion.
3. Describe the shape of mountain valleys formed by glaciers. **Glaciers erode rapidly downward, forming deep, U-shaped valleys**

Erosion

Extensions:

Quick Quiz - Check your understanding with this quick, [self-grading quiz](#).

Erosion Article - National Geographic

Question: Name four natural factors impacting erosion in a landscape.

Some of the natural factors impacting erosion in a landscape include climate, topography, vegetation, and tectonic activity.