Wednesday, Dec 5, 2018

Pick up: Article pg 86 (leave loose-turn in tomorrow)

Today you will:

- Finish Notes on Erosion
- Read and complete text-based questions-due tomrrow

HOMEWORK:

Quiz on Erosion Thursday 12/6

2

Water

- Water that flows over Earth's surface is called **runoff**.

- The more speed water has, the more material it can carry with it.

2

Sheet Flow

- When water flows downhill as a thin sheet, it is called sheet flow.
- This thin sheet of water can carry loose sediment grains with it, causing erosion of the land.
- This erosion is called sheet erosion.

2

Rills and Gullies

- Where a sheet of water flows around obstacles and becomes deeper, rills can form.
- Rills are small channels cut into the sediment at Earth's surface.

2

Rills and Gullies

- As runoff continues to flow through the rills, more sediment erodes and the channel widens and deepens.

- When the channels get to be about 0.5m across, they are called gullies.

2

Streams

- Gullies often connect to stream channels.
- Most streams have water flowing through them continually, but some have water only during part of the year.

2

Streams

- In mountainous and hilly regions, streams flow down steep slopes.
- This type of stream typically has white-water rapids and may have water falls.

2

Streams

- As streams move out of the mountains and onto flatter land, they begin to flow more smoothly.
- The streams might snake back and forth across their valley, eroding and depositing sediments along their sides.

Click image to view movie.

2

Shaping Earth's Surface

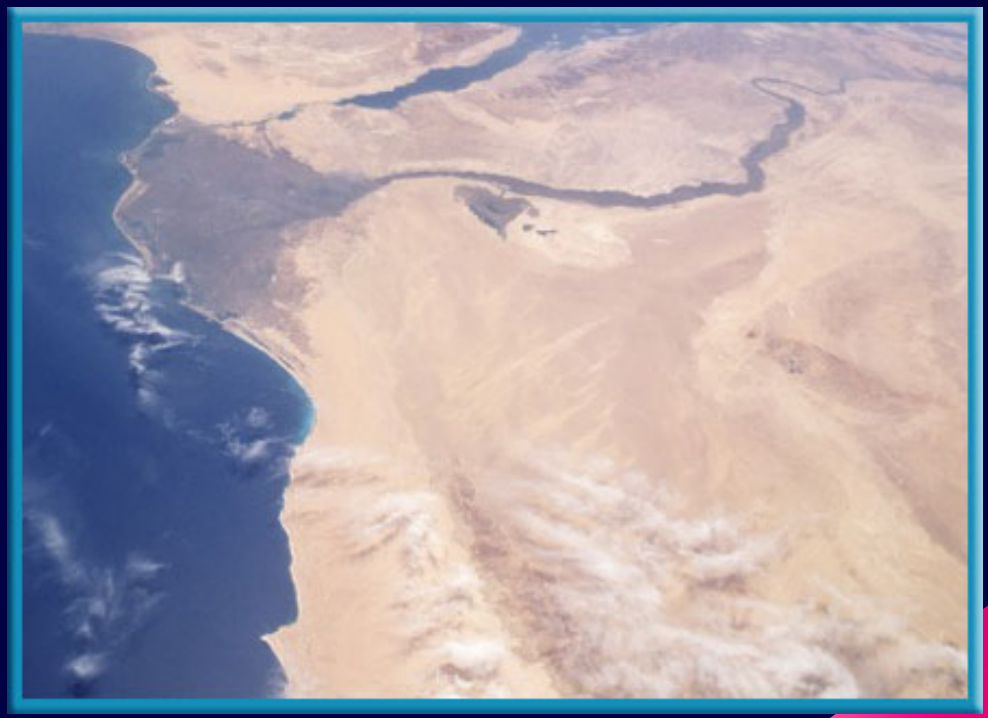
- Over long periods of time, water moving in a stream can have enough power to cut large canyons into solid rock.

- Many streams together can sculpt the land over a wide region, forming valleys and leaving some rock as hills.

2

Shaping Earth's Surface

- When rivers enter oceans or lakes, the water slows and sediment is deposited.
- This can form large accumulations of sediment called deltas.



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Shaping Earth's Surface

- In arid regions, a mountain stream may flow onto flatter land. The stream comes to a stop rapidly. The deposits form an **alluvial fan**

An **ALLUVIAL FAN** is a fan- or cone-shaped deposit of sediment built up by river streams.

2

Shaping Earth's Surface

- **Floodplains-**As the water spreads out over the land, it slows down and drops its sediment. If a river floods often, the floodplain develops a thick layer of rich soil because of all the deposits.
- That's why floodplains are usually good places for growing plants.
  - For example, the Nile River in Egypt provides both water and thick sediments for raising crops in the middle of a sandy desert.

2

Shaping Earth's Surface

- A flooding river often forms natural levees along its banks. A **levee** is a raised strip of sediments deposited close to the water's edge.
- Levees occur because floodwaters deposit their biggest sediments first when they overflow the river's banks.

2

Question 1

Compare and contrast continental glaciers and valley glaciers.

2

Answer

Continental glaciers are located in Polar Regions and are very large and thick. Valley glaciers are much smaller and are found high up in the mountains where the average temperature is not warm enough to melt the ice. Glaciers can erode rock by pulling out pieces of rock underneath them and dragging them along the surface as the glacier moves.

2

Question 2

Which is NOT caused by water erosion?

A. abrasion
B. canyons
C. gullies
D. sheet erosion

2

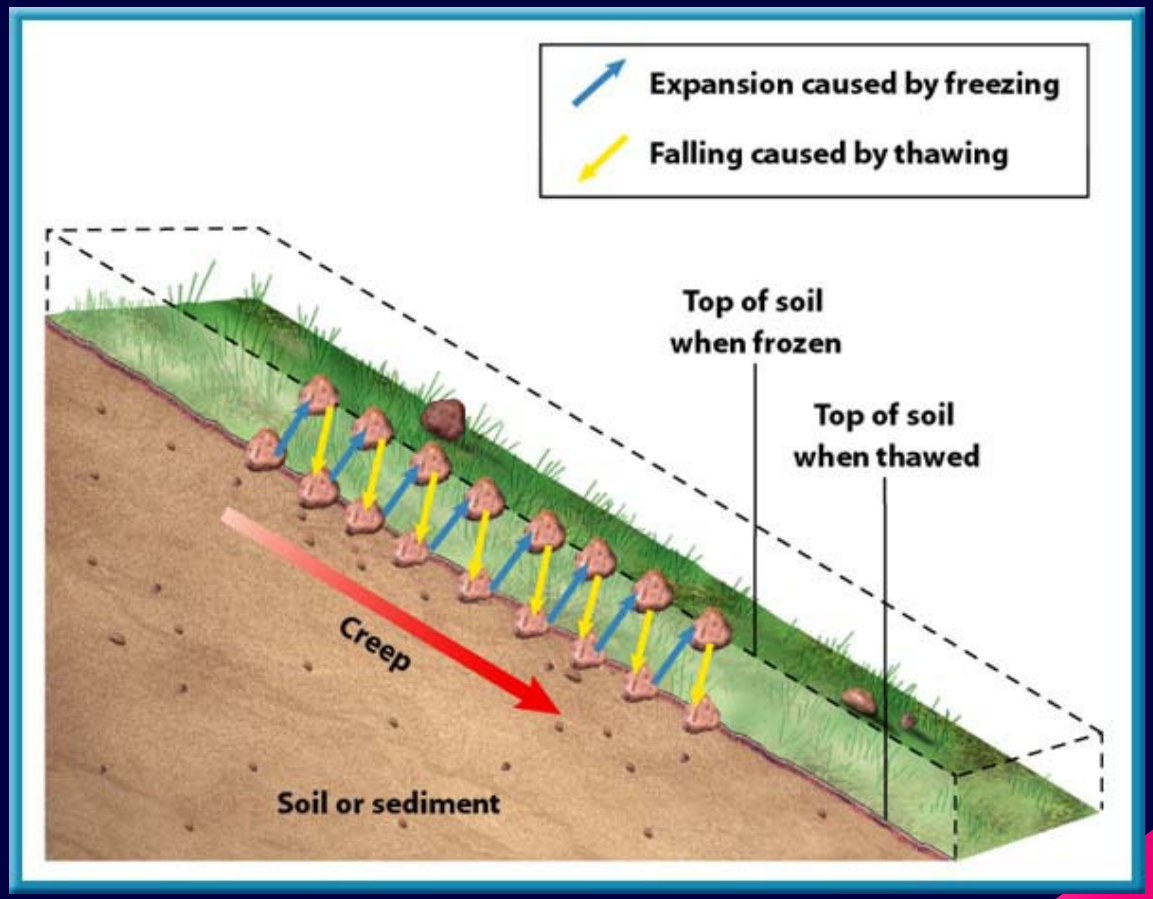
Answer

The correct answer is A. Abrasion results when wind carrying sediment wears down other rocks.

2

Question 3

Identify and describe the process being illustrated by this diagram?



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Answer

The process shown is called creep. Creep occurs when sediments slowly move downhill. It is common in areas where freezing and thawing occur. As the ice expands in the soil, sediments move up. When the soil thaws, the sediments move further downslope by gravity.