



Teacher's Notes: Water Erosion

Science Standards: E1: The composition of the Earth and its atmosphere and the natural and human processes occurring within them shape the Earth's surface and its climate.

Learning Objectives:

- The students will be able to define erosion, sediment, and floods
- The students will be able to identify sediment and floods.
- The students will be able to describe what causes erosion.

NOTE: This unit includes an interactive workbook. Students use that while the ebook is projected on the SmartBoard. It is located in the worksheets and also posted as a book.

Activities:

- Make sediment jars. Fill a clear jar halfway with soil. Add water almost to the top of the jar. Cover and shake jar. Watch the sediments fall.
<https://inspirationlaboratories.com/sediment-jars/>
- Put sand in a box. Pour water into the box. Watch the water moving the sand to form trenches.
- Do a google image search for main idea words.

General Tips: The goal is to build background knowledge while leading an engaging discussion on any and all information that can be talked about on a given page. The items that you choose to bring up or focus on can be modified for the students you are working with. For example, if you have a student who can point to something in the picture, answer yes/no questions be sure to incorporate a lot more of that as you go through the book. On the same token, be sure to ask a lot of comprehension questions and critical thinking questions at the level appropriate for students working on those skills. There is something for everyone.

Page 1: Erosion is when wind, water or other natural forces move rocks and dirt from one place to another. **Point:** dirt, rocks **WH Questions:** What gets moved during erosion? What is it called when wind or water moves dirt and rocks from one place to another? **Yes/No:** Does erosion move people? Does erosion move rocks? Does erosion move dirt? **Peer Interaction:** After you read the page, have students read/show/point/eye gaze at either the main idea word or picture to a partner or the entire group. Have students ask talk to each other about erosion. What moves during erosion?

Page 2: The natural force that creates the most erosion is water. Water can be powerful. Water can move rocks and dirt.

Point: water, waterfall, rocks, tree **WH Questions:** What causes the most erosion? **Yes/No:** Does wind cause the most erosion? Does water cause the most erosion? **Applying/Analysis:** Can you think of some ways that water could move rocks and dirt? **Peer to Peer Interaction:** After you read the page, have students read/show/point/eye gaze at either the main idea word or picture to a partner or the entire group. Have students talk to each other about water erosion.

Page 3: Rain can come down hard and fast. When the raindrops hit the ground, they can move dirt and small rocks.

Point: mountain, rocks, waterfall, clouds **WH Questions:** What does water erosion use to move dirt and rocks? What is it called when water moves dirt and rocks? **Peer to Peer Interaction:** After you read the page, have students read/show/point/eye gaze at either the main idea word or picture to a partner or the entire group. Have students talk to each other about how water can move rocks and dirt.

Page 4: Sometimes it rains hard. Rain water can move dirt and rocks. That causes erosion.

Point: grass, trees, water **Questions:** What can move rocks? What moves dirt? What can rain water move? **Yes/No:** Can rain water cause erosion? Can rain water move rocks? Can rain water move dirt? **Applying/Analysis:** Do you like when it rains outside? **Peer to Peer Interaction:** After you read the page, have students read/show/point/eye gaze at either the main idea word or picture to a partner or the entire group. Have students talk about rain water.

Page 5: Melted snow turns into water. The water from the melted snow can cause dirt and rocks to move. This is called erosion. Have student view the following video of melting snow and glaciers.

<https://www.youtube.com/watch?v=Za5wpCo0Sgq>

Point: trees, snow, water, rocks **WH Questions:** What can cause erosion? What can melted snow move? **Yes/No:** Can snow melt? Does melted snow turn into fire? Does melted snow turn into water? Can melted snow move rocks? Can melted snow move dirt? **Applying/Analysis:** Have you ever been in snow? Snow melts when it gets warmer. Do you think it is a good thing that melted snow moves rocks and dirt? **Peer to Peer Interaction:** After you read the page, have students read/show/point/eye gaze at either the main idea word or picture to a partner or the entire group. Have students talk to each other about melted snow.

Page 6: The water in a river can move fast? The water can move the rocks and dirt in and near the river. Have students view the following video showing a river causing erosion.

Point: river, water, rocks **Yes/No:** Does river water move fast? Can river water

<https://www.youtube.com/watch?v=nER2-lyqVrY>

move dirt? Can river water move rocks? Can river water cause erosion? **WH Questions:** What can river water move? **Applying/Analysis:** Have you ever been to a river? **Peer to Peer Interaction:** After you read the page, have students read/show/point/eye gaze at either the main idea word or picture to a partner or the entire group. Have students talk to one another about river water?

Page 7: Sediment is the dirt that is at the bottom of rivers. When the river water moves, the sediment can mix up and move around in the water. Have students view the following underwater video of sediment. <https://www.youtube.com/watch?v=jpexS4-9IF0>

WH Questions: What is sediment? What is dirt at the bottom of a river called? What gets pushed and moved in a river? **Point:** water, fish, rocks, sediment **Yes/No:** Is sediment water? Is sediment dirt? Is Can the river water move sediment? Can river water move broken rocks? **Applying/Analysis:** Have student do the sediment jar experiment at the top of teacher notes page. **Peer to Peer Interaction:** After you read the page, have students read/show/point/eye gaze at either the main idea word or picture to a partner or the entire group. Have students talk about sediment and broken rocks.

Page 8: Oceans can have big waves! The waves can push the rocks and sand that is in the ocean. That can cause erosion. Have students view the following video about coastal erosion. Pause periodically to discuss. Have students view the following video showing how water can cause erosion. Pause periodically to discuss. <https://www.youtube.com/watch?v=qqsTS67BKmA> Have students view the following video showing waves causing erosion. <https://www.youtube.com/watch?v=CzrymETf9hY>

WH Questions: What can ocean waves push? **Point:** rocks, waves **Yes/No:** Can ocean waves push the sand? Can ocean waves push rocks? Can ocean waves cause erosion? **Applying/Analysis:** Have you ever been to the ocean. Ocean waves are very strong. Have you ever been in the ocean when there were a lot of waves? **Peer to Peer Interaction:** After you read the page, have students read/show/point/eye gaze at either the main idea word or picture to a partner or the entire group. Have students talk to each other about ocean waves.

Page 9: A flood is when a lot of water gets on land that should not be under water. A flood can cover roads, cars and parts of houses with water. Flood water can move dirt and rocks. That causes erosion. Have students view the following video showing how a flood can cause erosion. Pause periodically to discuss. https://www.youtube.com/watch?v=mXlr_Bgb-s0

Point: trees, rocks, water **WH Questions:** What is it called when a lot of water covers land? What is a flood? What can move rocks and dirt? **Yes/No:** Is a flood when snow covers land? Is a flood when water covers land? Can flood water move rocks and dirt? **Applying/Analysis:** How do you think people feel when there is a flood? Do you think they like that a flood causes erosion? **Peer to Peer Interaction:** After you read the page, have students read/show/point/eye gaze at either the main idea word or picture to a partner or the entire group. Have students talk to each other about floods.