

Names: _____

Set up the lab.



1. Gather supplies:

- sand
- baking tray
- water dropper
- water in a cup
- full water bottle
- 10-12 rocks
- marker



2. Pour sand in your baking tray. Pull sand to one end and pat it down to make a hill. The rest of the space is the ocean.



3. Use the marker to carve a riverbed into your hill. (In real life, water carves out a riverbed as it flows.)



4. Set stones along the edges of your river.

Trial 1: Model a low flow of water, released when some snow in the mountains melts and trickles downhill.



1. In a moment, you will use the water dropper to release 20 drops of water at the headwaters (top) of the river. What do you think will happen to the sand and stones around the river?

2. Now try it! Use the water dropper to release 20 drops of water at the headwaters (top) of the river. Draw and describe what you observe.

Predict

3. Will any stones be deposited (carried and set down) in the ocean?

Yes No

4. How many?

Draw

Describe

3. Were any stones deposited in the ocean?

Yes No

4. How many?

Trial 2: Model a high flow of water, released when a lot of snow in the mountains melts at once and gushes downhill.



1. In a moment, you will tip the water bottle to release the water inside it at the headwaters (top) of the river. What do you think will happen to the sand and stones around the river?

2. Now try it! Release the water in the water bottle at the headwaters (top) of the river. Draw and describe what you observe.

Predict

3. Will any stones be deposited in the ocean?

Yes No

4. How many?

Draw

Describe

3. Were any stones deposited in the ocean?

Yes No

4. How many?

Results

1. In **Trial 1**, did the water erode away any sand (in other words, did it carry sand grains from one place to another)?

Yes No

Did the water erode away any larger size sediments (rocks)?

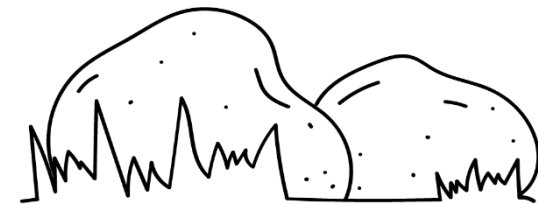
Yes No

2. In **Trial 2**, did the water erode away any sand?

Yes No

Did the water erode away any larger size sediments?

Yes No



3. Was there more erosion in **Trial 1** or **Trial 2**? Circle one, and explain how you know.

4. Based on this model, circle which conditions would probably cause the most erosion in real life.

low water flow

high water flow

5. What real life landscape does this model help us learn about?

6. There are no plants in this model. If the river was lined with lots of trees and bushes, do you think more rocks, fewer rocks, or the same number of rocks would get deposited in the ocean? Explain.

