



What Shapes Our Land? *Exploring Weathering and Erosion*

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What do you notice about these pictures? What do you wonder?



- Make some observations and write them down!
- How do you think these landscapes could have been formed?



**Now it's time to create your
own landscape!**

Materials

Ask for a parent's help to collect these things:

- Damp sand
- Sheet pan
- Ice cubes
- A straw
- A cup of water
- Watering can (or a paper cup with holes poked in it)
- Towel
- Something to prop your pan up with (I'm using my science books)
- Something to draw with



Creating Your Landscape

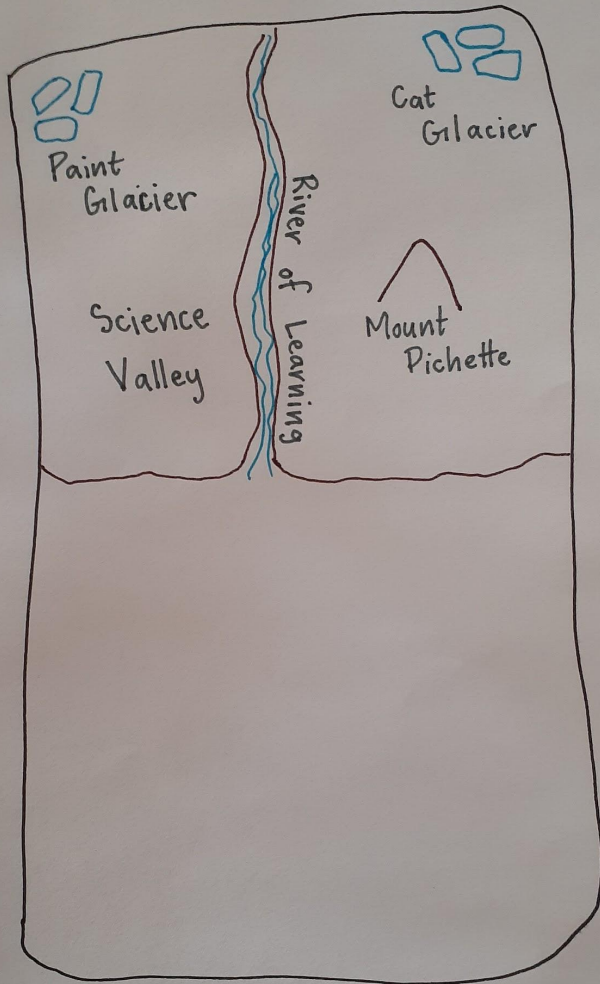
This could get a little messy - make sure it's okay with your parent first!

- 1) Prop up one end of your sheet pan so it's at an angle.
- 2) Put a towel at the other end of your sheet pan just in case some water spills out.
- 3) Pour the damp sand onto the top part of your sheet pan and start working on your landscape.

Get creative with it! You can add mountains or valleys to your landscape - whatever you want!

- 4) Make a riverbed down the center of your landscape - this will be important later.
- 5) Place ice cubes at the top of your landscape to be "glaciers."





Draw Your Landscape!

- 6) Draw what your landscape looks like right now.
- 7) Label the different parts of your landscape. Did you add mountains? Valleys? Come up with names for them!

Shaping Your Landscape

8) Take your cup of water and pour it at the top of your riverbed to simulate a flowing river.

9) Notice what is happening to your landscape. What is the water doing? What is happening to the sand?

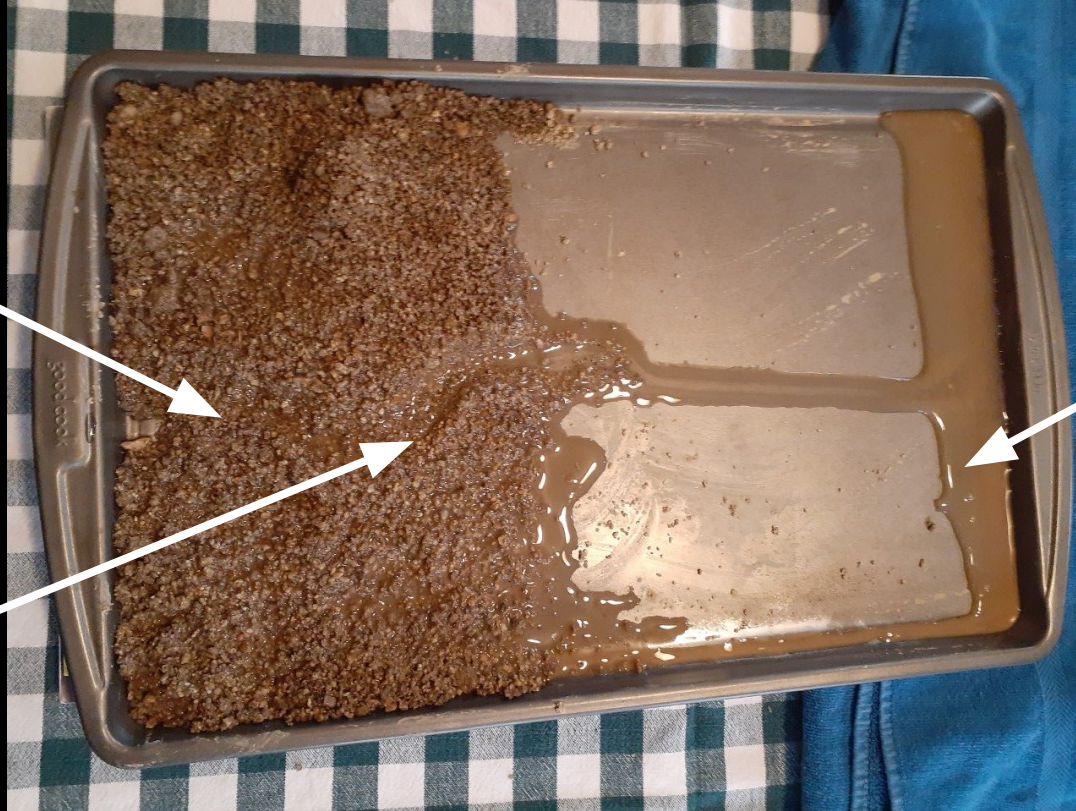




So, what is happening here?

The process of the sand being broken apart by the water is called **weathering**.

The sand getting carried away by the water is called **erosion**.



The sand settling in a new place is called **deposition**.



**Remember -
weathering *takes*,
erosion *breaks*, and
deposition *drops* in a
new place.**

What else causes weathering?

We know that rivers cause weathering, now let's try some other ways!



10) Use your straw to simulate wind hitting your landscape. Pick a spot and blow on it through the straw.

11) Use your watering can (or a paper cup with holes poked in it) to simulate rain on your landscape. Watch the water sprinkle and see what you notice.





Glacial Erosion

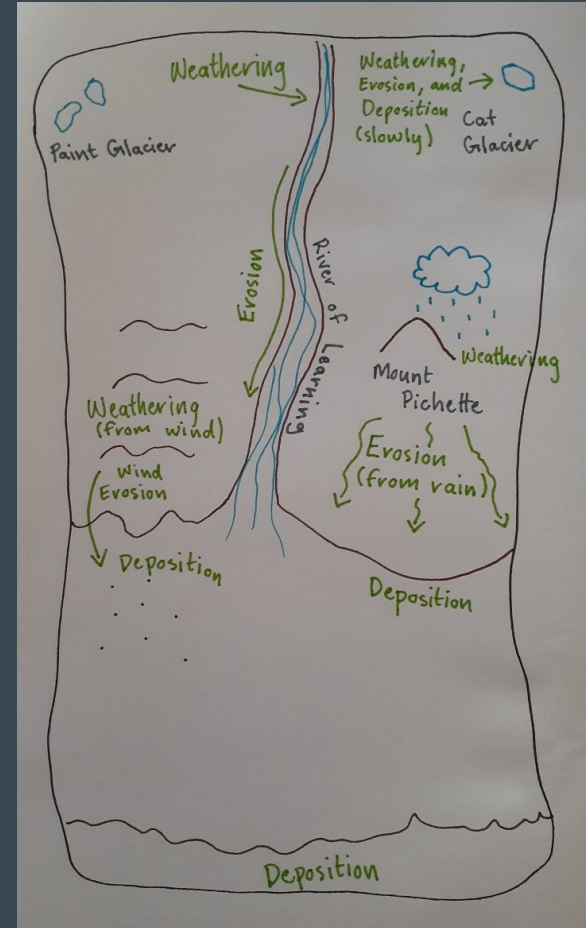
12) Look at your ice cube “glaciers.” Have they changed at all?

If not, that’s okay! Glaciers cause weathering and erosion as well, but it can happen very slowly.

Draw Your New Landscape!

13) Draw a new picture of your landscape after it has been shaped by weathering and erosion.

14) Label where weathering, erosion, and deposition took place (you can abbreviate W for weathering, E for erosion, and D for deposition).



Resources

- The Good and the Beautiful. (2020, August 4). Weathering, Erosion, and Deposition Experiment. Retrieved from <https://www.youtube.com/watch?v=-MFLgtti51I&t=2s>
- National Geographic Society. (2012, October 09). Erosion. Retrieved November 01, 2020, from <https://www.nationalgeographic.org/encyclopedia/erosion/>
- River. (n.d.). Retrieved November 01, 2020, from <https://www.britannica.com/science/river>