



Geology Settling Tube

Building Activity

Earth's crust is made up of three different types of rocks: Igneous, Metamorphic, and Sedimentary.

- *Igneous rocks come from volcanoes. The youngest rocks in the United States can be found on the Hawaiian Islands. Some are just a couple years old! In 2018, magma was pouring out of the Mt. Kilauea. There are no lava rocks in Nebraska, but we do have volcanic ash.*
- *Metamorphic rocks are rocks that have undergone heat and pressure, and they are often bent and folded. Nebraska does not have any metamorphic rocks.*
- *Nebraska does have lots of sedimentary rocks! Sedimentary rocks are made up of sediments, or bits and pieces of rock, like gravel, sand, silt, and clay. These sediments form layers. The key ingredient in making a rock out of the layers is water and the minerals in the water. Over time, the minerals will precipitate (come out of the water) and glue each of the grains of sediment together to form a sedimentary rock. You can see how the layers form and create your own sedimentary rock by making a settling tube.*

What you need:

- Gather pebbles/gravel, sand, mud, twigs, and leaves (you will need items of several sizes)
- Water
- Plastic or glass jar with a tight-fitting lid
- ¼ cup Epsom salts (optional – if you want to form your own sedimentary rock)

LEARN

LAYER



What you'll do:

1. Put all the ingredients into the jar.
2. Add water until there is about 2 inches of air space left at the top.
3. Make a prediction! What do you think will settle to the bottom first? What will fall to the bottom second? What will fall to the bottom last? Will something stay floating on the top?
4. Shake the jar until everything is thoroughly mixed. Set it on a flat surface.
5. What do you see? Make a note of what fell first, second, and third.
6. Check on your jar every hour or so to see what is happening.
7. Can you see the layers forming? Why did it form layers? What materials settled at the bottom of the jar? Why?
8. If you used Epsom salts you will have made your own sedimentary rock! To see the 'rock' wait until everything has completely settled, and your water is fairly clear (this may take overnight). Then carefully pour the water out of the jar and let the layers dry completely. The drying process will take several days. How does your sedimentary rock compare to rocks you have seen elsewhere? What do you think your rock would look like after being underground for millions of years? The Epsom salts are minerals (magnesium and sulfur) that dissolved in the water. When the water evaporates, and the layers dry the minerals precipitate (come out of the water) and glue your sediments together to make your own homemade sedimentary rock.

