

# Geology: Yummy Sediment Activity

**Grades:** pre K- 3rd

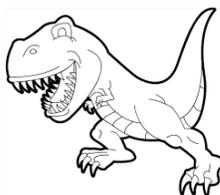
**Length:** 30-45 min

**Materials:**

- Clear cup or bowl
- Blue Jello
- Gummy candy (sour patch kids, Swedish fish)
- Cookie crumbs
- Chocolate pudding
- Vanilla Pudding
- Drawing paper
- Pencil, colored pencils, or markers
- Yummy sediment worksheet (found at the end of this document)

This fun (and tasty) experiment will introduce your student to the process of fossilization and how the earth's layers are formed and changed over time. A good question to ask before beginning the experiment may be, "Dinosaurs were giant creatures that lived in earth for a long, long time. Why do you think there are only fossils of their bones left today?" Tell students that they will discover the answer to this during their experiment.

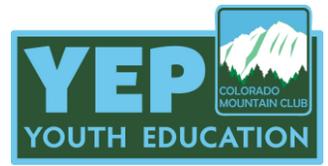
Before beginning, follow package directions to make the blue Jello and chocolate and vanilla pudding and set aside. To follow along with a Youth Education Program Instructor, play the "Yummy Sediment Experiment" video found on the [CMC's virtual learning webpage](#), or follow the instructions below:



Dinosaurs lived millions of years ago. Fossils are all that is left of them today. How did the dinosaurs become fossilized? Let's make some Yummy Sediment to find out!

1. Imagine a dinosaur walking through a river. Pour a layer of blue pudding into your cup. This is the ancient river bed.

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2. Add the dinosaur candy on top of the river. These are the dinosaurs that died millions of years ago in the river bed. The dinosaurs were able to be fossilized because they had hard parts, like bones. Tissue was generally eaten or rotted away.

3. Cover the dinosaurs with a layer of cookie crumbs. This is the mud and sand (sediment) that settled over the dinosaurs. This is a very important step and it had to happen quickly. If the dinosaurs were not covered quickly, they would be eaten by scavengers or would rot. These sediments were carried by rivers and streams and were deposited in the ancient river bed. The sediments are deposited in layers over time.

4. Put a layer of chocolate pudding into your cup, followed by white puddings and then cookie crumbs. Continue layering. The coloring of the various layers (sediment) is due to the particles that make up the soil, clay, mud, etc. at different times.

As sediments are deposited in the river bed, the deepest layers have more and more pressure put on them from the massive weight of the sediments on top. Eventually, these deep layers harden and sink. Through compaction and cementation, these layers of sediment become “glued” together, making **sedimentary rock**. For every three feet of sediment, the crust below sinks about two feet!

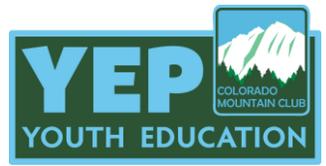
Over time, the preserved dinosaur or animal bones become completely replaced with minerals, creating a **fossil** in the sedimentary rock layer.

Eventually, as this sediment sinks more, The layers near the bottom also become hotter as they are pushed down to the earth’s core. When layers are pushed down so hard and become very hot, this heat and pressure changes sedimentary rock into metamorphic rock.

## Questions to think about:

- Do you think you can still see fossils in the metamorphic rock?
- Which layers in your cup would be the metamorphic rock?

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Junior Paleontologist \_\_\_\_\_

Draw and label your yummy sediment cup below.

Use these words for labeling:    Fossils  
   Sedimentary Rock  
   Sediment  
   Metamorphic Rock

