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Play Doh Coring Sampler Teacher Guide

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Play Doh Coring—Hands on Sampler

Sediment cores are one of the most valuable types of samples for researchers who would like to learn about past climate or ecological changes. Cores can be retrieved from lakes, marshes, swamps, fields, and the ocean. The layers often reveal striking changes in color (see photos) reflecting changing sediment composition (i.e. more clay deposition or more microfossil s). This easy activity illustrates the basic geologic principle that horizontal layers of sediment become older the deeper you go below the Earth’s surface (Law of Superposition). Each layer contains sediment, fossils and organic matter etc. that can inform us about past changes in the associated water mass, and these changes are commonly associated with changes in the environment. This is also a way to demonstrate how geologists extract cores from lake bottoms or other areas.



Sediment cores taken from the Bering Sea showing alternating light and dark layers of sediment.

Making the “lake bottom”

Supplies: 8 jars of Play Doh

- Spray a flat bottomed plastic bowl with “Pam” and flour the bottom.
- Use a rolling pin to spread each layer of dough into a thin round layer. Rolling this out on a cutting board with wax paper underneath makes it easy to peel off the thin dough
- Lay the dough into the bowl and push it to the side of the bowl where needed with your fingers (this creates the geology!).
- Use clear straws to “core” the lake sediments.

- Cores can then be “extruded” from the straws by squeezing or left in the straws for examination.
- You might ask the students which layers were laid down first and last and how they could tell that from their cores.
- You could also put a layer of sand in between 2 clay layers to show how the composition of the layer not only changes how it looks, but it also changes how easy it is to retrieve a core. The point of the exercise is for students to grasp the notion that layers of sediment can be studied in sequence just like reading a book , page after page, chapter by chapter, to tell us about the past (temperature, precipitation, seasonality, etc.

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