



# Core Samples with Play Dough

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Science  
Grades 3–5



## Introduction

Not all parts of the earth are the same. In this lesson, students will use play dough that is designed to look like different types of earth. They will take samples from the play dough and use them to answer questions.

## Learning Objectives

([Earth's Systems](#))

- Students will understand not all areas of the earth are the same.
- Students will take samples of “earth” and answer questions using those samples.

## Materials Needed

- Cup of dirt
- Play dough in green, red, yellow, blue
- Recording sheet
- iPad
- *Exploring Soils: A Hidden World Underground* by Samantha Grover

## Procedure

1. Hold up a cup of dirt and ask students what they notice (answers may be that it's dirt, it's black, it has specks in it, etc.). Tell students that they are correct; this is dirt. It came from the ground. But if one were to dig deeper, they may notice that parts of the earth are different from each other.
2. Tell students that the earth has different layers. On the board write the following labels that describe different parts of the earth: soft top, water, soft sand or clay, harder rock. Tell students this is one way to describe different earth samples.
3. Read the book *Exploring Soils: A Hidden World Underground* by Samantha Grover to give students an overview of soil and the world underground. After reading, tell students that today they are going to take samples from some play dough you've created to look like the earth.
4. “You and a partner will use a straw (stick the straw straight down, pull up, and collect your sample on your desk) to take one sample from each of the two large chunks of play dough. You will use those two samples to answer questions.”

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5. Prep ahead of time: prep two large pieces of play dough.
  - Sample 1: The top layer should have a large amount of green, followed by different smaller sections of red, yellow, and blue.
  - Sample 2: The top layer should have a thin amount of green, followed by a large amount of blue and smaller amounts of red and yellow.
  - Note: The green represents the soft top layer. The blue represents water, and the red and yellow represent clay and harder soil, respectively.
6. Partner students up, and have each partner take a sample from one of the play dough creations. Have the class make a line behind each sample, quickly stick their straw in the play dough, pull up, and return to their desk. At their desk they can squeeze out the play dough (note, some will get stuck inside the straw, that is okay).
7. Once both partners have taken their sample, they can answer the questions listed below. Have them turn in those questions for grading.

## Evaluation

### Questions for students to answer:

1. Which sample would be best for building a house on?
2. Which sample would be best for building a pond on?
3. What might happen if you build a house on the other, less desirable sample?
4. What might happen if you try to build a pond on the other, less desirable sample?

### Answers:

1. Sample 1
2. Sample 2
3. If you try to build a house on sample 2, the house may get water in the basement or flood (optional answer).
4. If you try to build a pond on sample 1, the pond may dry up (optional answer).