

Earth's Hidden Layers: A First Sensory Discovery

Lesson Overview

This lesson introduces the concept of Earth's layers to toddlers through high-contrast visuals, tactile exploration, and simple vocabulary. For a one-year-old, the focus is on "inside vs. outside" and identifying the three primary colors representing the crust, mantle, and core.

Materials Needed

- **Visual Aid:** A hard-boiled egg or an avocado.
- **Sensory Materials:** Child-safe playdough in three colors (Brown, Red, and Yellow).
- **Tactile Bin:** A small container with potting soil or kinetic sand.
- **Movement Tool:** A soft ball or globe.
- **Music:** A simple "The Earth is Round" song or upbeat rhythm for transitions.

Learning Objectives

By the end of this lesson, the learner will be able to:

- Identify the difference between the "outside" (crust) and "inside" (layers) of an object.
- Interact with three distinct colors representing Earth's layers (Brown, Red, Yellow).
- Practice fine motor skills by squishing, peeling, or poking "Earth" materials.

I. Introduction: The Hook (5 Minutes)

The "Magic Reveal"

- **Hook:** Hold up a hard-boiled egg (unpeeled) or an avocado. Let the child touch the hard/smooth outside.
- **Talking Point:** "Look! This is like our Earth. It's round! But wait... what's inside?"
- **Action:** Peel the egg or slice the avocado. Point to the different parts. "Look! White! Yellow! Layers!"
- **Objective:** Use the word "Inside" repeatedly while pointing to the center.

II. Body: Content and Practice (15 Minutes)

1. "I Do": The Playdough Earth

- **Demonstration:** Show three balls of playdough. A tiny yellow ball (Core), a medium red ball (Mantle), and a thin brown pancake (Crust).
- **Modeling:** Wrap the red around the yellow. Then wrap the brown around the red. "I am making a tiny Earth! Brown is on the outside where we walk."
- **The Reveal:** Use a plastic child-safe knife or a string to cut the ball in half. "Ooh! Look at the

colors inside!"

2. "We Do": Squish and Explore

- **Interactive Play:** Give the child the three colors of playdough.
- **Guidance:** Encourage them to squish the "Hot Red" (Mantle) and the "Hard Brown" (Crust).
- **Vocabulary Reinforcement:**
 - "Touch the brown. That's the dirt!"
 - "Touch the red. It's hot, hot, hot!"
 - "Touch the yellow. It's the middle!"

3. "You Do": Sensory Bin Discovery

- **Independent Exploration:** Place a small toy or a "yellow core ball" at the bottom of a bin filled with soil or kinetic sand (the crust).
- **Task:** Let the child dig through the "crust" to find the "hidden center."
- **Role Play:** Use words like "Dig, dig, dig!" and "You found the middle!"

III. Conclusion: Closure and Recap (5 Minutes)

- **Summary:** Hold the globe or soft ball. "The Earth is round. We live on the outside (pat the surface). Deep inside, it is red and yellow (point to playdough remnants)."
- **Recap Activity:** Ask the child, "Where is the inside?" and encourage them to point to the center of the sliced playdough or fruit.
- **Closing Song:** (To the tune of *The Wheels on the Bus*)
*"The crust of the Earth is brown and hard, brown and hard, brown and hard.
The middle of the Earth is red and hot, red and hot, red and hot.
The center of the Earth is a yellow ball, a yellow ball, a yellow ball!"*

Assessment

- **Formative:** During the "We Do" phase, observe if the child can distinguish between the colors by asking, "Where is the red?"
- **Summative:** At the end, present two items (one solid, one layered) and see if the child shows interest or recognizes the "inside" of the layered model.

Success Criteria

- The child engages with the sensory materials for at least 3-5 minutes.
- The child attempts to mimic the word "Earth," "Inside," or color names.
- The child successfully "digs" to find a hidden object, demonstrating an understanding of layers.

Adaptability & Differentiation

- **For High Engagement:** If the child is highly active, roll the playdough Earth across the floor and "chase the Earth" before cutting it open.
- **For Oral Learners:** Use edible "layers" (e.g., a graham cracker crumb crust, strawberry yogurt mantle, and a peach slice core) to incorporate taste.

- **For Classroom Context:** Set up three distinct stations (The Digging Station, The Squishy Station, and The Color Sorting Station) and rotate small groups.