

# The Secret Life of Soil: Science, Art, and Stories from the Ground Up!

**Grade Level:** Approximately Age 10 (Adaptable)

**Students:** Daniella & Alisia

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## Lesson Activities:

### 1. Introduction: What is Soil? (10 minutes)

- Begin with a discussion: What do you already know about soil or dirt? Where do we find it? Why do you think it's important?
- Show different soil samples if available (e.g., sandy, clay-rich, dark humus). Ask: How are these different? How do they feel or smell?
- Explain that today you'll become soil scientists, artists, and storytellers!

### 2. Science: The Soil Shake Test (20-25 minutes)

- Take one of the clear jars. Fill it about 1/3 full with one of your soil samples.
- Add water until the jar is about 3/4 full.
- Add a tiny pinch of salt (optional, helps particles settle).
- Secure the lid tightly.
- Let Daniella and Alisia take turns shaking the jar vigorously for 1-2 minutes until the soil is well mixed with the water.
- Set the jar aside where it won't be disturbed. Explain that you'll observe it later as the different parts settle into layers.
- While waiting for initial settling, discuss: What do you think will happen? What parts make up soil? (Guide them towards sand, silt, clay, and organic matter/humus). Discuss why soil is vital " for growing food, as homes for creatures, filtering water, etc.

### 3. Art: Painting with Earth (25-30 minutes)

- Prepare your 'soil paints': In the small containers or palette wells, mix small amounts of different dried, sifted soil samples with a little bit of water (or diluted white glue for better binding " start with a tiny amount of binder and add more if needed) to create a paint-like consistency. Aim for different natural colors.
- Provide the heavy paper/cardstock and paintbrushes.
- Invite Daniella and Alisia to create paintings using the soil paints. They could paint a landscape, abstract designs, soil layers, or creatures that live in the soil.
- Encourage them to notice the different textures and colors the soils create.

### 4. English: Soil Stories or Poems (15-20 minutes)

- Ask the students to think about their soil exploration and artwork.
- Prompt them with ideas: Imagine you are an earthworm tunneling through the soil " what do you see, hear, feel? Write a short story about your journey. OR Write a descriptive paragraph or a poem about the soil painting you created, focusing on the colors and textures. OR Write about why soil is important in your own words.

- Provide paper and writing tools. Offer support with spelling or ideas as needed.

### **5. Observation and Conclusion (10-15 minutes)**

- Return to the soil shake jar. Observe the layers that have formed. The sand (largest particles) should be at the bottom, followed by silt, then clay (smallest particles). Any organic matter might float at the top or be mixed in the water. Help them identify the layers. Draw a quick diagram together.
- Have Daniella and Alisia share their soil paintings and read their stories or poems aloud.
- Review the learning objectives: What did we learn about what soil is made of? Why is it important? How did we use soil in art and writing?
- Discuss what they enjoyed most or found most interesting.

### **Differentiation/Choice:**

- Allow choice in the writing activity (story vs. poem vs. paragraph).
- Students can choose what to depict in their soil art.
- Adjust the complexity of the discussion based on their prior knowledge and questions.

### **Assessment:**

- Observe participation and engagement in activities.
- Check understanding through discussion questions.
- Review the soil shake jar observations for identification of layers.
- Evaluate the soil artwork for creative expression and use of the medium.
- Assess the written piece for descriptive language and connection to the topic.