



## Lesson 2: Exploring Soil Textures

**Grade Level:** Kindergarten

**Time:** 1 hour

**Subjects:** ELA, Science

**Overview:** This lesson is Lesson 2 of 5 in *The Soil Neighborhood* unit within the *Growing Readers* micro-curriculum, based on a series of books by Kansas author Dan Yunk. It is a hands-on science and literacy lesson focused on exploring the textures and components of soil through direct observation and investigation. Students build understanding by examining sand, clay, rocks, and topsoil, engaging in structured discussions, and drawing on their experiences with soil, land, and agriculture in Kansas. This lesson reinforces foundational print concepts and phonological awareness through explicit instruction in letter–sound correspondence, spacing, capitalization, and ending punctuation, supporting deeper learning and cross-curricular connections in subsequent lessons.

**Skillset:** Soil types, texture exploration, observation, vocabulary, descriptive language, print concepts, phonological awareness, phonics, comprehension, informative drawing, and writing.

### **Kansas Academic Standards:**

#### *Kansas ELA Standards*

**RF.K.1** Demonstrate understanding of the organization and basic features of print.

**RF.K.1.a** Follow words from left to right, top to bottom, and page by page.

**RF.K.1.b** Recognize that spoken words are represented in written language by specific sequences of letters.

**RF.K.1.c** Understand that words are separated by spaces in print and demonstrate one-to-one correspondence.

**RF.K.1.d** Recognize and name all upper- and lowercase letters of the alphabet.

**RF.K.2** Demonstrate understanding of spoken words, syllables, and sounds.

**RF.K.2.a** Recognize and produce rhyming words.

**RF.K.2.b** Count, pronounce, blend, and segment syllables in spoken words.

**W.K.2** Use drawing, dictating, and writing to compose informative texts.

#### *Science Standards*

**K-ESS3-1** Use a model to represent the relationship between the needs of plants and the places they live.

### **National Agriculture Literacy Outcomes:**

#### *Plants and Animals for Food, Fiber, and Energy*

**T2.K-2.e** Identify the importance of natural resources (e.g., sun, soil, water, minerals) in farming.

### **Objectives**

### Science Objectives

Students will be able to:

- observe and describe the texture of different soil types (sand, clay, rocks, topsoil).
- compare the texture of different soils and discuss where they might be found.
- explain the parts of soil that help plants grow.

### English Language Arts Objectives

Students will be able to:

- demonstrate print awareness by tracking text left-to-right and top-to-bottom.
- utilize one-to-one correspondence when pointing to words in a shared sentence.
- recognize and name letters in soil vocabulary words.
- identify rhyming words related to soil.
- clap and count syllables in soil-related words.
- draw and write an informative sentence describing soil textures.

### Materials Needed

- Soil samples in labeled containers:
  - Sand
  - Clay
  - Rocks
  - Topsoil
- Small trays or paper plates (one per soil type)
- Magnifying glasses (optional)
- Chart paper and markers
- Student writing/drawing paper
- Crayons or pencils
- Hand wipes or paper towels

### Lesson Procedures

1. Activating Prior Knowledge (Connecting to *The Soil Neighborhood*)
  - a. Explain to students: "In *The Soil Neighborhood*, we learned that soil is made of different neighbors like sand, clay, and rocks. Even though we are not reading the book today, we are going to explore those soil neighbors with our hands and eyes, just like scientists."
  - b. Show pictures from the book or briefly reference familiar characters (Clay, Rocky, Sandy) without rereading.
  - c. Ask students:
    - "What kinds of soil neighbors do you remember?"
    - "Do you think all soil feels the same?"
2. Soil Texture Exploration (Hands-On Investigation)

Set up four soil sample stations with trays. Each station should have one soil sample.

  - a. Teacher models expectations:
    - "We look, touch gently, and talk about what we notice."
    - "We do not throw soil."
    - "We do not put soil in our mouths."
  - b. At each soil sample station, prompt students to describe:
    - How does it feel? (smooth, rough, sticky, gritty)
    - Does it stick together or fall apart?
    - Is it made of big pieces or tiny pieces?



- c. Explain to students: “Scientists use their senses to learn. Today, we are soil scientists.” Record student responses on chart paper under the headings: sand, clay, rocks, and topsoil.
3. Vocabulary & Oral Language Development
  - a. Introduce and reinforce vocabulary using real samples:
    - Soil – all layers of dirt
    - Sand – tiny, gritty pieces
    - Clay – smooth and sticky soil
    - Rocks – hard pieces in soil
    - Topsoil – the top layer of soil where plants grow best
  - b. Ask Students:
    - “Which soil feels smooth?”
    - “Which soil is rough?”
    - “Which soil would plants like best?”
4. Phonological Awareness
  - a. Rhyming: Say:
    - *Sand* → “What rhymes with sand?” (hand, land)
    - *Clay* → “What rhymes with clay?” (day, play)
  - b. Have students repeat and generate rhymes orally.
  - c. Syllable Work. Prompt: “Let’s find out how many syllables are in these soil words. Each clap represents one syllable.” Clap syllables together:
    - soil (1 clap)
    - sand (1 clap)
    - clay (1 clap)
    - rocks (1 clap)
    - top-soil (2 claps)
  - d. Ask students: “Which word had the most syllables?”
5. Shared Writing & Print Concepts
 

Explain to students: “When soil scientists are at work, it is very important that they write down their observations, or what they see. Since we are soil scientists today, we are going to write ours down also. Watch me first.”

  - On chart paper, write a simple sentence: “Soil is made of sand, clay, and rocks.”  
Teacher models:
    - Tracking words left-to-right
    - Pointing to each word with one-to-one correspondence
    - Noticing spaces between words
    - Identifying letters (S in Soil, C in clay, R in rocks)
    - Identifying the uppercase letter at the beginning of the sentence
    - Identifying punctuation at the end of the sentence
  - Ask students:
    - “Where does the sentence start?”
    - “Where does it end?”
    - “Can you find the word soil?”
6. Student Writing Component
  - a. Gather students where they can clearly see the chart paper.  
Prompt: “Now it is your turn.” Explain to students: “When we write a sentence, we have rules that help the reader.” A good sentence:
    - starts with an uppercase letter,

- has spaces between words,
  - uses letters that match the sounds we hear, and
  - ends with a punctuation mark to tell the reader we are finished.
- b. The teacher will model writing a complete sentence on chart paper, pausing between each step to model sentence rules: Soil feels sandy.
- write the word 'Soil'
  - point to the S in Soil.
  - Prompt: "Every sentence starts with an uppercase letter. I used an uppercase S because it is the first letter in my sentence." Ask students: "Is this an uppercase S or a lowercase s?"
  - Explain to students: "I finished my first word. Now I need a space so the reader knows a new word is starting." Use your finger or pencil to show the space after the word 'Soil' before writing the word 'feels.'
  - Use your finger or pencil again to indicate another space after the word 'feels', and then write 'sandy' and place a period after the word.
  - Reread out loud while pointing: "Soil / feels / sandy."
  - Ask students:
    - "How many words are in my sentence?"
    - "What helps us see where one word ends?"
    - Point to the word sand in sandy. Prompt: "Let's say 'sand' slowly: /s/ /a/ /n/ /d/. I wrote the letters that match the sounds I hear."
- Repeat with:
- soil → /s/
  - feels → /f/
- Prompt: "Writers listen for sounds and write the letters that match."
  - Point to the period and explain to students: "This dot is called a period. A period tells the reader my sentence is finished."
  - Ask students:
    - o "What does the period mean?"
    - o "Do we put the period at the beginning or the end of the sentence?"
- c. Students complete a draw-and-write response.
- Display sentence frames so students can copy onto their paper:
    - o "Soil feels \_\_\_\_\_."
    - o "I touched \_\_\_\_\_ soil."
  - Prompt: "When you write today, remember our sentence rules:
    - o Start with an uppercase letter
    - o Say one word at a time
    - o Leave a space before your next word
    - o Listen for the sounds in each word
    - o End with a period
  - Students may:
    - o Draw the soil they explored
    - o Copy one sentence
    - o Dictate ideas to the teacher
    - o Label soil types using initial letters
  - While students are working on the draw-and-write, the teacher circulates the room and offers support in the following categories, which also supports the formative assessment:
    - o letter recognition

- o spacing between words
  - o Punctuation
  - o tracking words while reading their sentence aloud
7. Discussion & Reflection
- o Ask students:
    - “Which soil was your favorite to touch?”
    - “Why do you think soil needs different parts?”
8. Kansas Connection
- o Explain to students: “We live in Kansas, and Kansas is a farming state. That means a lot of our food comes from plants and animals grown right here. For farmers to grow crops and raise animals, they need healthy soil.”
  - o Show a simple map of Kansas and point to the school’s location.
  - o Explain to students: “Kansas has many different landscapes. Some places have sandy soil, some places have clay soil, and many places have topsoil mixed with rocks. Some soil is even different colors. The kind of soil in the ground helps farmers decide what they can grow.”
  - o Connect to students’ experiences:
    - Gardens at home
    - Fields they pass while riding the bus
    - Ranches, pastures, or wheat fields nearby
  - o Ask students
    - “Have you seen fields like this near your house?”
    - “What do you think farmers grow in those fields?”
9. Vocabulary Review
- o Review vocabulary words
    - Soil – all layers of dirt
    - Sand – tiny, gritty pieces of rock
    - Clay – smooth, sticky soil
    - Rocks – hard pieces in soil
    - Topsoil – the top layer of soil where plants grow best

**Assessment:**

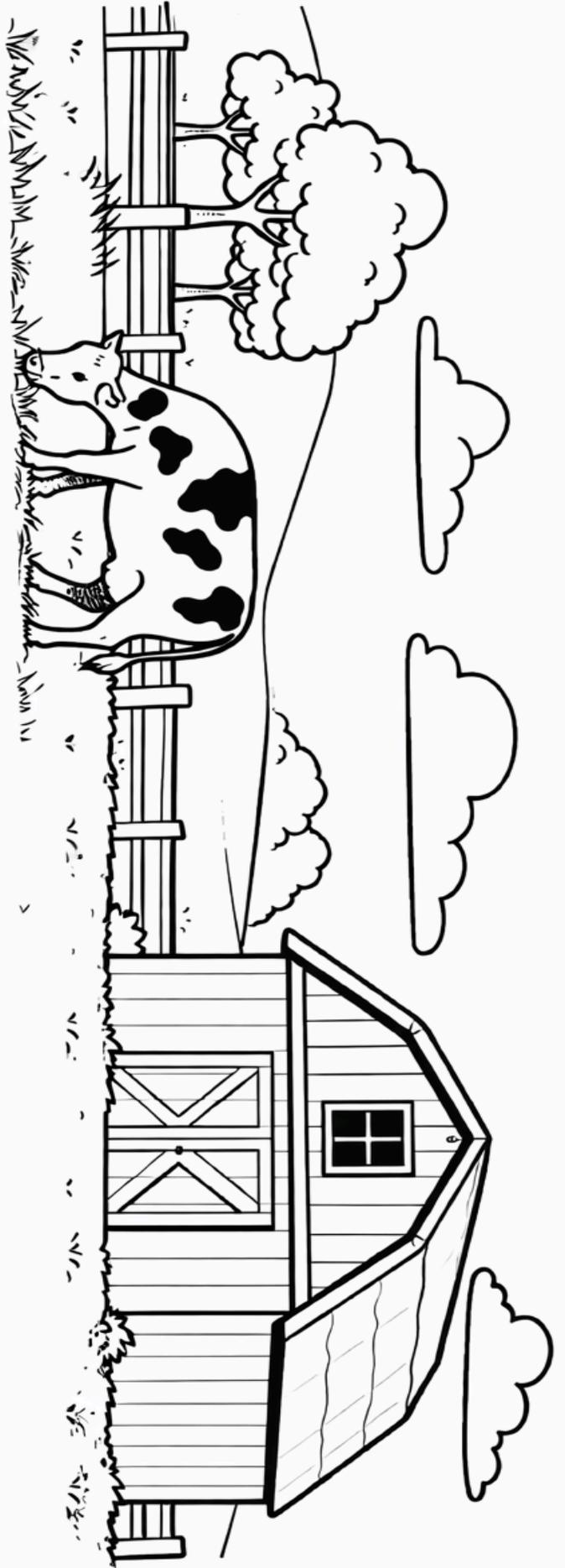
Student understanding is assessed through ongoing formative and observational measures embedded throughout the lesson, including teacher observation, student discussion, hands-on investigations, and the application of foundational literacy skills in writing.

**Supplemental Activities:**

Have students color the soil layers coloring sheet provided below.

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**TOPSOIL**

**SAND**

**CLAY**

**ROCK**

