Lesson 3: Wheat Has Friends

Grade Level: Kindergarten

Time: 1 hour (with additional days for germination observation)

Subjects: ELA, Science

Overview: This lesson is Lesson 3 of 5 in the *Celebrate Wheat* unit within the Growing Readers micro-curriculum, based on a series of books written by Kansas author Dan Yunk. In this lesson, students engage in a purposeful reread to deepen their understanding of how wheat grows and becomes food, then expand their learning to include other major Kansas crops: corn, soybeans, sorghum, and sunflowers. Students examine real seeds, record observations through drawing and phonetic spelling, and compare similarities and differences across crops. The lesson emphasizes explicit instruction in letter–sound correspondence, CVC word construction, spacing, and phoneme isolation while integrating science concepts related to germination. Students conclude by creating a "farm in a glove" model to observe seed sprouting and connect their classroom learning to agriculture in Kansas. Connections to *The Soil Neighborhood* are revisited as students explore how soil nutrients support plant growth beyond germination.

Skillset: Activating and connecting prior knowledge across units, seed observation and comparison, oral language, vocabulary, descriptive language, print concepts, phonological awareness (CVC sounds), phonics, phonetic spelling, sentence construction, informative drawing and writing, germination understanding, and agricultural awareness.

Kansas Academic Standards:
Kansas ELA Standards
W.K.10.a Print many upper and lowercase letters.
W.K.11.c Write a letter or letters for most consonant and short vowel sounds.
W.K.11.d Spell simple words phonetically, drawing on knowledge of letter-sound relationships.
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 can point with one-to-one correspondence.
RF.K.2.d Isolate and produce the initial, medial vowel, and final sounds (phonemes) in three-phoneme (consonant-vowel-consonant, or CVC) words. (This does not include CVC ending with /l/, /r/, or /x/)

Science Standards
K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.
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.a Describe how plants are grown and used for food.

T2.K-2.e Identify the importance of natural resources (e.g., sun, soil, water) in farming.
T4.K-2.a Describe how farmers use tools and equipment to plant, grow, and harvest crops.

Objectives
Science Objectives
Students will be able to:

- Recognize that wheat, corn, soybeans, sorghum, and sunflowers all begin as seeds.
- Observe and describe similarities and differences among seeds.
- Explain that seeds need water, air, and warmth to begin growing.
- Describe germination as the process of a seed sprouting.
- Relate the role of healthy soil and the soil helpers from *The Soil Neighborhood* to what a plant needs once it begins to grow.

English Language Arts Objectives
Students will be able to:

- Isolate and produce the initial, medial vowel, and final sounds in CVC words.
- Write letters that represent consonant and short vowel sounds.
- Spell simple CVC words phonetically.
- Follow words from left to right and demonstrate one-to-one correspondence when reading and writing.
- Correctly use spacing between words in a simple sentence.

Materials Needed

- Book: *Celebrate Wheat* by Dan Yunk
- Seed Scientist Observation Sheet, provided below (one per student)
- Labeled food service gloves, teacher labels before lesson (one per student)
- Masking tape strips, for student name labels (one per student)
- Student markers or pencils
- Cotton balls (5 per student)
- Small bowls of water (one per group)
- Soybean, wheat, corn, sorghum, sunflower seeds (one each per student)
- Tape, to secure gloves
- Simple map of Kansas

Lesson Procedures

1. Activating Prior Knowledge
    a. Gather students and explain: "*In our last lesson, you planted your own wheat seed in a cup, just like farmers do. Today, we are going to read Celebrate Wheat again. This time, we are listening very carefully because we want to connect what we planted to what happens to wheat as it grows and becomes food."*
    b. Explain the purpose of a second read: *"Remember, good readers, read books more than once. The first time we read to understand the story. The second time, we read to listen for new details and important information."*
    c. Ask students:
        - *"What did you plant in your cup?"*
        - *"What did your wheat seed need to start growing?"*
        - *"Who planted wheat in our story?"*
    d. Bridge to The Soil Neighborhood: "*We also know from The Soil Neighborhood that healthy soil is full of helpers. Once a seed sprouts and grows roots, those*

soil helpers give the plant nutrients it needs to keep growing. Today, as we listen to the story again, think about all the things working together to help wheat grow: sun, water, and the soil neighborhood underground."

2. Purposeful Second Read-Aloud
    a. Set a listening purpose: *"While I read today, listen for what happens to wheat after it is planted and how it becomes the food we eat."*
    b. Read *Celebrate Wheat* aloud.
    Pause at key pages to:
        - highlight illustrations,
        - clarify vocabulary (seed, wheat, farmer, harvest, flour),
        - connect the text to the students' planting experience.
    c. Ask students during reading:
        - *"What does the wheat look like when it first starts growing?"*
        - *"What helps the wheat grow taller?"*
        - *"What do farmers use to harvest the wheat?"*
        - *"What food does wheat turn into in the story?"*
    d. After reading, ask students:
        - *"How is the wheat in the story like the seed you planted?"*
        - *"What happens to wheat after farmers harvest it?"*
        - *"Why do you think wheat is important to people?"*

3. Transition from Wheat to Other Crops
Prompt: *"We have been learning a lot about wheat. You planted a wheat seed, and in the story we learned how wheat grows and becomes food."*
    a. Pause and ask: *"Do Kansas farmers only plant wheat?"*
    b. Explain to students: *"Kansas farmers plant wheat, but they also plant many other crops. Crops are plants that farmers grow to make food and other things that people need."*
    c. Show the wheat, soybean, corn, sorghum, and sunflower seeds.
    d. Explain to students: *"Just like wheat, Kansas farmers plant these seeds to produce different crops."*
    e. Ask students:
        - *"Do these seeds look the same or different?"*
        - *"What do you notice when you look at them?"*
        - *"What crops do you think these seeds will grow into?"*
    f. Explain to students: *"Today, we are going to be seed scientists. Scientists look closely at details and record what they notice. You are going to draw and write about each seed on your Seed Scientist Observation Sheet."*

2. Seed Examination (Hands-on Investigation)
    a. Distribute a set of seeds to each student (wheat, corn, soybean, sorghum, and sunflower). Ensure each student has their own seeds and a copy of the **Seed Scientist Observation Sheet**.
    b. Explain to students: *"Each of you has your own seeds to look at closely. Scientists observe and record what they notice. You will draw and write about each seed on your Seed Scientist Observation Sheet."*
    c. Remind students of expectations:
        - *"We use our eyes to look closely.*
        - *We do not put seeds in our mouths.*
        - *We handle them gently."*

d. Explain to students: *"For each seed, you will draw what you see in the drawing space on your paper. Then, you will circle the word that best describes the seed. Last, you will write that word in the space provided to complete the sentence."*
e. Model expectations using one seed (for example, wheat).
f. Hold up a wheat seed and say: *"Watch how I look closely. I notice the seed is small and tan. In my paper, I will draw what I see. Then I will circle the word that best fits my observation. Finally, I will write my circled word on the space provided to complete my sentence."*
g. Model stretching a CVC word and say: *"If I write tan, I stretch it: /t/ /a/ /n/. I write the letters that match the sounds I hear."*
h. Guide students through one seed at a time. Allow students to hold and examine their own seed while completing the matching section on their worksheet.
i. Provide structured prompts while students are working:
- *"Is your seed big or little?"*
- *"What color do you see?"*
- *"Does the word mud describe your seed? Why or why not?"*
- *"Which word matches what you see?"*

j. Encourage students to say their sentence before writing.
k. As students work, the teacher circulates and provides support with:
- Letter-sound correspondence
- Correct letter formation
- Identifying and reading sight words (little, yellow)
- Using correct letter spacing

l. After students complete all five sections, guide them to the comparison portion at the bottom of the page.
m. Ask students:
- *"Which seed was the biggest?"*
- *"Which seed was the smallest?"*
- *"Did any of your seeds look the same?"*
- *"How were the seeds different?"*

n. Explain to students: *"Even though these seeds look different, Kansas farmers plant all of them. Each seed can grow into a different crop."*

3. Seed Sprouting Activity
Prompt: "We just looked closely at seeds from different Kansas crops. All of these seeds can grow into plants."
a. Ask students:
- *"What do farmers do first if they want to grow a crop?" (plant a seed)*
- *"What do you think a seed needs to start growing?"*

b. Explain to students: *"When a seed starts to grow, we say it sprouts. Sprouting is a scientific word for germination. Today we are going to help our seeds germinate by giving them what they need, just like farmers do."*
c. Ask students:
- *"What do seeds need to start growing?"*

d. Guide students to identify:
- Water
- Air
- Warmth

e. Explain to students: *"When a seed starts to grow, we say it sprouts. Germination is the scientific word for a seed beginning to grow, or sprout. Today, we are going to help our seeds germinate by giving them what they need, just like farmers do."*
f. "*When the seed grows bigger, it will also need light and nutrients from the soil. Remember the helpers in the soil neighborhood? Once roots form, those helpers get to work providing nutrients to help the plant grow strong. Right now, we are just helping the seed start."*
g. Show a glove and say: *"We are going to make a tiny farm with our seeds, a farm in a glove. Each finger of the glove will hold a different seed. The glove helps us watch how seeds sprout."*
h. Explain to students: *"I have already written the name of each seed on the fingers of your glove so you can match your seed to the correct finger."* (Hold up a sample glove with fingers labeled: wheat, corn, soybean, sorghum, sunflower.)
i. Model each step slowly while students watch:
   - Show the labeled glove.
   - Place a strip of masking tape across the palm of the glove.
   - Write your name on the masking tape.
j. Explain to students: *"You will write your name on masking tape and stick it to your glove, so we know which glove belongs to you."*
k. Dip a cotton ball in water and gently squeeze it so it is wet but not dripping.
l. Hold up one seed and identify it clearly:
   - *"This small tan seed is wheat."*
   - *"This big yellow seed is corn."*
m. Briefly review visual characteristics to help students identify their seeds.
n. Place one seed on the cotton ball.
o. Put the cotton ball into the matching labeled finger of the glove.
p. Say aloud what you are doing:
   - *"I am putting the wheat seed on the wet cotton ball."*
   - *" I am matching the wheat seed to the finger that says wheat."*
   - *"The water will help the seed sprout."*
q. Distribute labeled gloves, masking tape strips, markers, cotton balls, water bowls, and seeds.
r. Support students as they:
   - Write their names on masking tape and attach it to their glove.
   - Dip and squeeze cotton balls.
   - Place the correct seed on each cotton ball
   - Match the see to the labeled glove finger
s. Use oral language prompts:
   - *"I put the seed in the glove."*
   - *"My seed is on the wet cotton ball."*
   - *"This seed needs water to grow."*
   - *"I matched the corn seed to the finger that says corn."*
t. After students are done putting seeds in the gloves, help them fold down the glove opening and secure it with tape.
u. Hang gloves with fingers pointing downward.
v. Explain to students: *"We do not need to add more water. The cotton ball has enough water for the seed to start growing."*

4. Prediction & Discussion
   a. Ask students:

- *"What do you think will happen to the seeds?"*
- *"Which seed do you think will sprout first?"*
- *"Will all of the seeds look the same when they sprout?"*

b. Explain to students: *"We will watch our seeds over the next few days and see how they change."*

5. Discussion & Reflection
   a. Gather students near the hanging gloves.
   b. Ask students:
      - *"What did we learn today about seeds?"*
      - *"What does a seed need to start growing?"*
      - *"What was different about the seeds we looked at?"*
      - *"How are the seeds we looked at the same?"*
   c. Guide students to reflect on the germination activity:
      - *"Why did we put the seed on wet cotton balls?"*
      - *"Why did we match each seed to the correct finger on the glove?"*
      - *"What do you think will happen inside the seed first?"*
   d. Reinforce vocabulary and explain to students: *"Today we learned that when a seed starts to grow, it sprouts. The big science word for sprouting is called germination. In our book Celebrate Wheat, Grandma told Kailey that wheat starts as a seed. Today, we helped wheat and other crops begin that same process."*
6. Kansas Connection
   a. Display a simple map of Kansas.
   b. Explain to students: *"We live in Kansas, and Kansas is a farming state. Farmers in Kansas plant many crops."*
   c. Review the five crops from the lesson:
      - Wheat
      - Corn
      - Soybeans
      - Sorghum
      - sunflowers
   d. Briefly explain what each crop is used for:
      - Wheat – flour for bread, pasta, and pizza crust.
      - Corn – eaten by people; used to feed livestock.
      - Soybeans – cooking oil, animal feed, and many food products.
      - Sorghum – ground into flour, made into molasses syrup, and used as animal feed.
      - Sunflowers – seeds for snacks and sunflower oil.
   e. Explain to students: "*The seeds you held today, wheat, corn, soybeans, sorghum, and sunflowers, are not just classroom materials. They are the same seeds that Kansas farmers plant in their fields every year. In Kansas, those fields stretch as far as you can see. Some of you have driven past them, or maybe you've helped plant a garden at home or on your family's land and know what it feels like to put a seed in the ground. Others of you might not have thought much about where seeds come from before today, and that is okay, because now you do. Every loaf of bread, every bag of chips, every bottle of cooking oil has a seed story behind it, and a lot of those stories start right here in Kansas. The farmers who grow these crops work hard every season, planting, caring for the land, and harvesting so that people everywhere have food to eat. The steps you practiced in your*

glove—planting seeds and helping them grow—are the same steps farmers use to grow crops, only on a much bigger scale."

f. Ask students:
   - *"Have you ever seen fields of corn or wheat when you are driving?"*
   - *"Has anyone seen sunflowers growing?"*
   - *"Do you know someone who is a farmer or rancher?"*
   - *"How does planting your own seeds help you understand what farmers do?"*

Assessment:
Student understanding is assessed through ongoing formative observation throughout the lesson, including participation in the purposeful reread and discussion, completion of the Seed Scientist Observation Sheet, accurate seed identification and comparison, engagement in the seed sprouting activity, and application of foundational literacy skills such as phoneme isolation, phonetic spelling of CVC words, left-to-right tracking, and correct spacing in sentence writing. The teacher should note whether students can articulate what seeds need to germinate, connect the planting experience to the text, and independently stretch and record CVC words. Students who make unprompted connections to The Soil Neighborhood, particularly around the role of soil nutrients once roots form, demonstrate meaningful cross-unit learning transfer and should be noted.

Supplemental Activities:
Germination Observation Journal — Ongoing Compare and Contrast: Over the days following this lesson, give students regular opportunities to observe their farm-in-a-glove and record what they notice. During each observation session, students choose two seeds from their glove, draw them side by side, and write or dictate one descriptive word beneath each drawing (e.g., "wet," "big," "green"). Then prompt students to respond to: "How are these two seeds the same right now?" and "How are they different?" Because seeds germinate at different rates, the compare-and-contrast observations will naturally change from day to day; one seed may have a visible root while another has not yet sprouted, giving students authentic, ever-changing material to describe and compare. Simple sentence frames support early writers: "Both seeds are ___." and "The ___ seed is ___, but the ___ seed is ___." Ready students can attempt phonetic spelling; others may dictate while the teacher scribes. Returning to the same two seeds across multiple observations also builds sequencing and scientific thinking. Students begin to see change over time rather than a single snapshot, connecting their writing directly to the living science happening in their glove.

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Name: _____

Seed Scientist Observation Sheet

1. **Look closely at each seed.**
2. **Draw the seed.**
2. **Circle the word that best describes the seed.**
3. **Write the word to complete the sentence.**

Wheat

1. **Draw:**

2. **<u>Circle</u> the word that fits:**

big tan red hot sad mud

3. **<u>Write</u> the word that fits:**

The wheat seed is: _____

Corn

1. **Draw:**

2. **<u>Circle</u> the word that fits:**

big wet red hot mud yellow

3. **<u>Write</u> the word that fits:**

The corn seed is: _____

Seed Scientist Observation Sheet

Soybean

1. Draw:

2. <u>Circle</u> the word that fits:

big tan black hot sad mud

3. <u>Write</u> the word that fits:

The soybean seed is: _____

Sorghum

1. Draw:

2. <u>Circle</u> the word that fits:

big mad red hot mud little

3. <u>Write</u> the word that fits:

The sorghum seed is: _____

Seed Scientist Observation Sheet

Sunflower

1. Draw:

2. <u>Circle</u> the word that fits:

big tan red wet sad black

3. <u>Write</u> the word that fits:

The sunflower seed is: _____

Compare the seeds!

1. Circle the BIGGEST seed.

wheat corn soybean sorghum sunflower

2. Circle the SMALLEST seed.

wheat corn soybean sorghum sunflower

3. These two seeds look the same:

_____

4. These two seeds look different:

_____