



### Lesson 3: From Milk to Butter

**Grade Level:** 1st Grade

**Time:** 60 minutes

**Subjects:** ELA, Science

**Overview:** This lesson is Lesson 3 of 5 in the *Milk Comes From a Cow?* unit within the *Growing Readers* micro-curriculum, based on the book series by Kansas author Dan Yunk. Building on the first read and hands-on learning from the previous lessons, students participate in a purposeful second read of *Milk Comes From a Cow?* to identify the main topic, retell key details, clarify vocabulary, and compare the text with *Celebrate Wheat*. Students then investigate how butter is made through a hands-on butter-making activity before writing a narrative that recounts the experience using sequenced events and details. Throughout the lesson, students deepen their understanding of the farm-to-table journey while making meaningful connections between dairy and wheat production on Kansas farms.

**Skillset:** Activating and connecting prior knowledge across units and readings, purposeful rereading for key details and connections, determining and clarifying the meaning of unknown and multiple-meaning words, comparing two texts on the same topic, phoneme blending and isolation including consonant blends, hands-on science investigation, sequencing events with temporal words, and narrative writing with details and closure.

#### **Kansas Academic Standards**

##### *Kansas ELA Standards*

**RI.1.2** Identify the main topic and retell key details of a text.

**RI.1.3** Describe the connection between two individuals, events, ideas, or pieces of information in a text.

**RI.1.4** Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.

**RI.1.9** Identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).

**RI.1.11** Determine or clarify the meaning of unknown words and multiple-meaning words and phrases to expand language comprehension.

**RF.1.2.b** Orally produce single-syllable words by blending phonemes, including consonant blends in the initial and final position.

**RF.1.2.c** Isolate and produce initial, medial vowel, and final phonemes in spoken single-syllable words.

**W.1.3** Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order and provide some sense of closure.

### Science Standards

**1-LS1-1** Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

### National Agriculture Literacy Outcomes

Plants and Animals for Food, Fiber, and Energy

**T2.K-2.b** Identify animals involved in agricultural production and their uses (i.e., work, meat, dairy, eggs).

**T2.K-2.d** Identify examples of food and fiber products that come from plants and animals.

### Objectives

#### Science Objectives

Students will be able to:

- Explain that butter is made from cream, which comes from cow's milk.
- Observe and describe the changes that occur when heavy whipping cream is shaken over time.
- Relate the butter-making process to what was learned about dairy farming in the book.
- Describe how people designed butter churns after observing that shaking cream causes fat to separate.

#### English Language Arts Objectives

Students will be able to:

- Identify the main topic of *Milk Comes From a Cow?* and retell at least two key details.
- Describe the connection between two individuals, events, or pieces of information in the text.
- Ask and answer questions to determine or clarify the meaning of words and phrases encountered in the text.
- Determine or clarify the meaning of unknown and multiple-meaning dairy vocabulary words using context clues.
- Compare *Milk Comes From a Cow?* and "*Celebrate Wheat*." by identifying at least one basic similarity and one difference.
- Blend phonemes, including consonant blends, to orally produce single-syllable dairy vocabulary words.
- Isolate the initial, medial, and final phonemes in spoken single-syllable dairy vocabulary words.
- Write a narrative that recounts two or more sequenced events using temporal words, details, and a sense of closure.

### Materials Needed

- Book: *Milk Comes From a Cow?* by Dan Yunk, illustrated by Michelle Johnson
- Book: *Celebrate Wheat* by Dan Yunk (physical copy, for text comparison)
- Heavy whipping cream (approximately 1/4 cup per student or small group)
- Small plastic jars with tight-fitting lids (one per student or pair)
- Plastic knives for spreading butter
- Salt (optional, a small pinch per jar)
- Crackers or bread for tasting

- Paper towels or napkins
- Chart paper and markers
- Lined writing paper (one per student)
- Pencils and crayons

## Lesson Procedures

### 1. Connecting to What We Know

- Explain to students: “We have already read *Milk Comes From a Cow?* once and visited three centers to learn more about dairy farming. Today we are going to read our book again with a specific purpose. Good readers read a book more than once — the second time, we read to look more closely at key details, connections, and words we want to understand better.”
- Ask students:
  - “What do you remember about where milk comes from?”
  - “What is one key detail you remember from our book?”
  - “At our centers, we tasted three kinds of milk. Which one was the thickest? What did it feel like in your mouth?”
- Explain to students: “Heavy whipping cream is one of the thickest dairy products that comes from a cow’s milk. Today we are going to use heavy whipping cream to make butter. But first, let’s reread our book and pay close attention to words, connections, and how this book compares to *Celebrate Wheat*.”

### 2. Purposeful Second Read-Aloud

- Set a listening purpose: “This time as we read, listen for three things: the key details about how cows make milk, any words or phrases you want to understand better, and ways this book is similar to or different from *Celebrate Wheat*.”
- Read *Milk Comes From a Cow?* aloud. Pause at key points:  
Stopping Point Suggestions (3 total, brief stops to maintain flow):
  - Stop #1 — Main Topic, Key Details & Word Meaning: After Farmer George introduces the Holstein cows.  
Ask students:
    - “What is the main topic of our book so far?”
    - “What is one key detail we have learned about dairy cows?”
    - “Farmer George said Holsteins are the most common dairy cow. What does common mean here? Is there more than one meaning for the word common? How do the words around it help you figure out which meaning fits?”
  - Stop #2 — Connections & Word Clarification: After the milking parlor is described  
Ask students:
    - “What is the connection between the cow eating hay and drinking water and producing milk?”
    - “The book says milk is transported by trucks. What does transported mean? What context clues help you?”
    - “How does what happens on the farm connect to what ends up in our refrigerator at home?”
  - Stop #3 — Text Comparison & Kailey’s Question: After the chocolate milk question

Ask students:

- “Kailey asked a question about chocolate milk. What was her question and what was the answer?”
- “In *Celebrate Wheat*, Kailey also asked questions and learned something surprising. How are the two books similar? How are they different?”

Keep stops short to maintain the flow of the story.

3. Retelling & Text Comparison: After the read-aloud, gather students together.

a. Ask students:

- “What is the main topic of this book?”
- “Can you retell two key details you remember?”
- “What is the connection between Farmer George and Kailey in this story?”
- “What is the connection between the cow and the milk carton in Kailey’s refrigerator?”

b. Record key details on chart paper. Help students see the chain of connections:

- Cow eats and drinks → cow produces milk → milking machine collects milk → truck transports milk → processing plant → store → our homes

c. Text Comparison:

d. Hold up both books and explain to students: “We have *Celebrate Wheat* and *Milk Comes From a Cow?* by author Dan Yunk. Both books are about where our food comes from. Let’s look at how they are similar and different.”

e. Guide students through the comparison:

- “How are the two books similar? Think about the topic, the characters, and the journey each food takes.”
- “How are the two books different? Think about the type of farm, the food we get, and how it is made.”
- “Both books show that food has a farm story. What is one thing you know about Kansas farming from reading both books?”

f. Record student responses in a simple two-column chart: *Celebrate Wheat* | *Milk Comes From a Cow?* Leave the chart visible during writing.

4. Phonemic Awareness — Blending & Isolating Phonemes with Consonant Blends

a. Explain to students: “Now we are going to do some word work with dairy words from today’s lesson. In first grade, we work with words that have consonant blends — that means two consonants that work together at the beginning or end of a word. Let’s practice blending and isolating sounds.”

b. Blending phonemes, including consonant blends:

c. Explain to students: “I am going to say a word in separate sounds. Your job is to blend them together to say the whole word. Listen carefully for consonant blends — two consonants side by side.”

d. Practice blending — teacher says sounds, students blend and say the word:

- /k/ /r/ /ee/ /m/ — “What word? Cream. The /kr/ at the beginning is a consonant blend.”
- /g/ /r/ /a/ /s/ — “What word? Grass. Dairy cows eat grass. The /gr/ is a consonant blend.”
- /d/ /r/ /i/ /n/ /k/ — “What word? Drink. Cows drink water. The /dr/ is a consonant blend.”

- /p/ /l/ /ae/ /n/ /t/ — “What word? Plant. Milk goes to a processing plant. The /pl/ is a consonant blend.”
  - e. Isolating initial, medial vowel, and final phonemes:
  - f. Explain to students: “Now I will say a whole word. Your job is to tell me the individual sounds — the first sound, the middle vowel sound, and the last sound.”
  - g. Practice isolating phonemes in single-syllable dairy words:
    - cud — “First sound? /k/. Middle vowel? /u/. Last sound? /d/.”
    - churn — “First sound? /ch/. Middle vowel? /er/. Last sound? /n/.”
    - pat (of butter) — “First sound? /p/. Middle vowel? /a/. Last sound? /t/.”
    - jug — “First sound? /j/. Middle vowel? /u/. Last sound? /g/.”
    - vat — “First sound? /v/. Middle vowel? /a/. Last sound? /t/.”
5. Butter Making Activity (Hands-On Science Investigation)
- a. Explain to students: “We learned that people watched how a calf drinks from its mother and designed a baby bottle to work in a similar way. We called this process ‘biomimicry.’ Today we’re going to learn about another invention connected to milk. You have learned that heavy whipping cream comes from cow’s milk. Today we are going to use heavy whipping cream to make butter — the same way people have made it for hundreds of years.”
  - b. Explain to students: “Long ago, people noticed something: that cream changed when it was shaken over and over. The fat clumps together and separates from the liquid. They used that observation to design and invent a butter churn, a tool that used a crank or plunger to turn the cream and make butter more quickly and easily. They were mimicking something that happens naturally when fat is agitated; this is an example of looking at nature, understanding how something works, and using that understanding to solve a problem. Today, our jar is doing the same job as a butter churn does. Ask students:
    - “How is our jar similar to a butter churn?”
    - “How did people design the butter churn by observing what happens to cream?”
  - c. Distribute jars and pour approximately 1/4 cup of heavy whipping cream into each jar. Add a small pinch of salt if desired.
  - d. Explain to students: “We are going to shake our jars. While we shake, watch, and feel what is happening, pay close attention — you are going to write about this experience afterward, so notice every change.”
  - e. Students shake their jars. This will take approximately 10–15 minutes. Rotate shaking if students tire. Stages to narrate as they happen: (1) cream sloshes, (2) cream thickens into whipped cream, (3) liquid separates — this is buttermilk, (4) solid yellow butter forms.
  - f. Prompt oral language throughout shaking:
    - “What does the cream feel like now compared to when we started?”
    - “What do you see happening inside the jar?”
    - “It is getting thicker! What do you think will happen next?”
    - “We have butter! Where did the butter come from? What did it start as?”
  - g. Once the butter has formed, open the jars and spread it on crackers or bread for students to taste.
  - h. Ask students:
    - “How does the butter taste?”

- “Have you ever seen a dairy farm or cows in a pasture? What do you remember about it?”
  - “If you live in the country or on a farm or ranch, have you ever seen a cow being milked or helped take care of animals? What was that like?”
  - “If you live in town or the city, where do you usually get your milk? Have you ever thought about where it came from before today?”
- i. Kansas Connection: Explain to students: “The heavy whipping cream we used today came from a dairy cow — the same kind of cow Farmer George showed Kailey in our book. Whether you live on a farm or ranch and know what it smells like to be near livestock, or you live in town and get your dairy products from the grocery store, the story is the same: it started on a Kansas dairy farm. The butter you just made is the same way butter has been made for generations — by shaking or churning cream until the fat separates. Kansas farmers make that possible.”
6. Bridge to Writing
- a. Explain to students: “You just made butter from cream. You watched it change, you felt it change, and you tasted the result. Now you are going to write about what happened — in order, with details, and with a closing thought. Narrative writers recount events in the order they happened and include details that help the reader picture what took place.”
  - b. Explain to students: “Before you write, think about the order of what happened. There are at least two events in our story today: what we did with the cream and what happened to it. Good writers use temporal words — words like ‘first,’ ‘next,’ ‘then,’ ‘after that,’ and ‘finally’ — to signal the order of events.”
  - c. Ask students to verbalize before writing:
    - “Tell a partner what happened first. Then tell them what happened next. Use a temporal word.”
    - “How did the story end? What happened last, and how did you feel about it?”
  - d. Allow 2 minutes for oral rehearsal—students who verbalize their narrative first write with more detail and confidence.
7. Narrative Writing: “From Cream to Butter.” Distribute lined writing paper.
- a. Explain to students: “Write a narrative — a true story — about making butter today. You must include at least two events in the order they happened, use at least one temporal word, include some details about what you saw or felt, and end with a closing thought — something that wraps up your story.”
  - b. Model on chart paper, thinking aloud:
    - “First, I poured the heavy whipping cream into the jar. Then, I shook the jar for a long time. The cream felt warm and thick in my hands. Finally, the cream turned into butter! I was surprised it worked so fast.”
    - “Let me point out the parts: two events — pouring and shaking. Temporal words — ‘First,’ ‘Then,’ ‘Finally.’ A detail — warm and thick. A closing — I was surprised.”
  - c. Students write their narratives independently on lined paper.  
As students write, circulate and support.
    - Prompt use of temporal words if missing: “What word tells us this happened first? Next?”

- Prompt for details: “What did the cream feel like? What did you see?”
- Prompt for closure: “How does your story end? What did you think or feel?”
- Support proper letter formation and spacing between words
- Support sentence capitalization and end punctuation

Differentiation note: For students who need additional support, provide sentence starters at teacher discretion (e.g., “First I \_\_\_\_\_. Then the cream \_\_\_\_\_. Finally \_\_\_\_\_. I thought \_\_\_\_\_.” For students ready for a challenge, prompt them to write three or more sequenced events and include a sentence comparing butter-making to wheat becoming flour.

8. Closing Discussion & Reflection: Gather students together with their completed writing.
  - a. Ask students:
    - “What happened when we shook the cream? Tell me in order using temporal words.”
    - “Where did the butter come from? What did it start as?”
    - “How does making butter connect to our book *Milk Comes From a Cow?*?”
    - “In *Celebrate Wheat*, wheat became flour and flour became pizza crust. What did cream become today? How is that journey similar?”
    - “How did making butter help you understand the book better?”
  - b. Invite two or three students to read their narratives aloud. After each one, ask the class:
    - “Did you hear at least two events? What were they?”
    - “What temporal words did the writer use?”
    - “What was the closing thought?”
  - c. Reinforce the connection: “Dairy cows give us milk. Milk gives us cream. Cream gives us butter. And Dan Yunk wrote a book to help us understand exactly where that comes from: a Kansas dairy farm. That is the power of a great informational text.”

**Assessment:** Student understanding is assessed through teacher observation during the reread, vocabulary discussion, text comparison, phonemic awareness activities, and the butter-making investigation, as well as through the completed narrative writing. Teacher should note whether students can identify the main topic and retell at least two key details independently, describe a connection between two individuals or events, use context clues to determine or clarify word meanings, identify at least one similarity and one difference between the two books, blend and isolate phonemes in single-syllable words including consonant blends, and write a narrative with two or more sequenced events, temporal words, details, and closure. Students who make unprompted connections between butter-making and the wheat-to-food journey demonstrate meaningful cross-unit learning transfer and should be noted.

**Supplemental Activities:** Display completed narrative writing pieces alongside the Map the Journey sequence sheets from Lesson 2. Guide students to compare the two sequences: the journey of milk from farm to home, and the journey from cream to butter. Ask students to identify a temporal word in their own writing and in a classmate’s writing. For a text comparison extension, post the RI.1.9 comparison chart from class and invite students to add one more similarity or difference they noticed during the butter-making activity.

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