



Lesson 3: From Milk to Butter

Grade Level: Kindergarten

Time: 60 minutes

Subjects: ELA, Science

Overview: This lesson is Lesson 3 of 5 in the *Milk Comes From a Cow?* unit of the *Growing Readers* micro-curriculum, based on the book series by Kansas author Dan Yunk. Building on the first read and learning experiences from Lessons 1 and 2, students deepen their understanding of dairy farming through a purposeful second read of the text, a hands-on butter-making investigation, and guided writing. As students retell key details, observe how cream changes into butter, and write about the experience in sequence, they strengthen reading comprehension, foundational literacy skills, scientific observation, and their understanding of how dairy products are transformed from farm to table while connecting this journey to the food pathways explored in *Celebrate Wheat*.

Skillset: Activating and connecting prior knowledge across units and readings; purposeful rereading for key details and connections; identifying text and book features; vocabulary development; phoneme isolation in CVC words using dairy vocabulary; syllable segmentation and blending; hands-on science investigation; sequencing events; and narrative drawing and writing.

Kansas Academic Standards

Kansas ELA Standards

RI.K.2 With prompting and support, identify the main topic and retell key details of a text.

RI.K.3 With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.

RI.K.4 With prompting and support, ask and answer questions about unknown words in a text.

RI.K.5 Identify the front cover, back cover, and title page of a book.

RF.K.2.b Isolate and pronounce the initial, medial vowel, and final phonemes (sounds) in three-phoneme (consonant-vowel-consonant or CVC) words. (This does not include CVCs ending in /l/, /r/, or /x/.) (Phonemic awareness)

RF.K.2.c Count, produce, blend, and segment syllables in spoken words.

W.K.3 Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened.

Science Standards

K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.

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 cows' milk.
- Observe and describe how heavy whipping cream changes as it is shaken over time.
- Connect the butter-making process to what they learned about dairy farming in *Milk Comes from a Cow*.

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 with prompting and support.
- Describe the connection between a dairy cow and the milk it produces, with prompting and support.
- Ask and answer questions about unfamiliar words in the text with prompting and support.
- Identify the front cover, back cover, and title page of the book.
- Isolate and pronounce the initial, medial vowel, and final phonemes in CVC dairy vocabulary words from the lesson.
- Count, produce, blend, and segment syllables in spoken dairy and farm vocabulary.
- Create a sequential narrative by combining drawing, dictating, and writing to describe the butter-making experience and express a personal reaction.

Materials Needed

- Book: *Milk Comes From a Cow?* by Dan Yunk
- 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
- Student narrative writing paper — three-box sequence sheet (one per student)
- Pencils and crayons

Lesson Procedures

1. Connecting to What We Know

- a. 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. Good readers read a book more than once — the second time, we listen for key details and connections we might have missed the first time."
- b. Ask students:

- “What do you remember about where milk comes from?”
 - “What is the name of the farmer in our book?”
 - “At our centers, we tasted three kinds of milk. Which one was the thickest?”
- c. 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 something that comes from milk every single day — butter! But first, let’s reread our book.”
2. Book Orientation Review. Hold up the physical copy of *Milk Comes From a Cow?*
- a. Explain to students: “Before we read, let’s do a quick review of our book’s features. We have looked at this book before, so this should feel familiar.”
- b. Ask students:
- “What is on the front cover? What information does it give us?”
 - “Where is the title page? What do we find there?”
 - “Who is the author of this book?”
 - “The title ends with a question mark. What question does the author want us to be able to answer by the end of the book?”
3. Purposeful Second Read-Aloud. Set a listening purpose: “This time as we read, I want you to listen for two things: the key details about how cows make milk, and the connections between the people and events in the story. Think about: who teaches Kailey, what she learns, and how one thing connects to the next.”
- a. Read *Milk Comes From a Cow?* aloud.
- b. Pause at key points to check understanding: Stopping Point Suggestions (2–3 total, brief stops to maintain flow):
- Stop #1 — Main Topic & Key Details: 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? What clues in the book help you figure that out?”
 - Stop #2 — Connections & Unknown Words: After the milking parlor is described.
Ask students:
 - “What is the connection between the cow eating hay, drinking water, and producing milk?”
 - “The book says milk is transported by trucks. What does transported mean? What clues help you?”
 - “How does what happens on the farm connect to what ends up in our refrigerator at home?”
 - Stop #3 — 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?”
 - “Why do you think Grandma smiled when Kailey asked that?”
 Keep stops short to maintain the flow of the story.

4. Retelling Key Details & Describing Connections. After the read-aloud, gather students together.
 - a. Ask students:
 - “What is the main topic of this book?”
 - “Can you tell me 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 as students share. 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. Extend with a cross-unit bridge: “In *Celebrate Wheat*, we followed wheat from a seed to pizza crust. In this book, we are following milk from a cow to our refrigerator. Both stories show us that food takes a journey before it gets to us. That is what farmers do — they help food make that journey.”
5. Phonemic Awareness — CVC Phoneme Isolation & Syllable Segmentation. Explain to students: “Before we make butter, we are going to do some word work using dairy words from our book and our lesson today. We are going to listen carefully to the sounds and syllables in these words.”
 - a. Explain to students Phoneme Isolation in CVC words: “A CVC word has three sounds: a consonant, a vowel, and a consonant. Today, we are going to use dairy words — words that connect to cows and the milk they make. Let’s find the sounds in each word.”

Practice with dairy vocabulary:

 - vat — “A vat is a large container used to hold milk on a dairy farm. Say vat. What is the first sound? /v/. What is the middle sound? /a/. What is the last sound? /t/.”
 - cud — “Cud is what a cow chews after eating — cows chew their cud to help digest food. Say cud. What is the first sound? /k/. What is the middle sound? /u/. What is the last sound? /d/.”
 - jug — “A jug is a container we use to hold milk at home. Say jug. What is the first sound? /j/. What is the middle sound? /u/. What is the last sound? /g/.”
 - pat — “A pat of butter is a small piece of butter. Say pat. What is the first sound? /p/. What is the middle sound? /a/. What is the last sound? /t/.”
 - b. Explain to students Syllable Segmentation: “Now let’s clap the syllables in our dairy words. Each clap is one syllable — one beat of sound.”

Practice with lesson vocabulary:

 - but-ter — 2 claps — “Say, butter. Clap with me: but — ter. How many syllables?”
 - Hol-stein — 2 claps — “Say, Holstein. Clap: Hol — stein. How many?”
 - pro-cess-ing — 3 claps — “Say, processing. Clap: pro — cess — ing. How many?”
 - milk — 1 clap — “Say, milk. One syllable!”
 - dai-ry — 2 claps — “Say, dairy. Clap: dai — ry. How many?”
 - farm-er — 2 claps — “Say, farmer. Clap: farm — er. How many?”

6. Butter Making Activity (Hands-On Science Investigation). Explain to students: “In yesterday’s centers, you learned that heavy whipping cream comes from cows’ milk. Today, we are going to use heavy whipping cream to make butter. Butter has been a food made from cream for hundreds of years. Let’s see what happens!”
- Distribute jars and pour approximately 1/4 cup of heavy whipping cream into each jar. Add a small pinch of salt if desired.
 - Explain to students: “We are going to shake our jars. While we shake, I want you to watch and feel what is happening. Pay attention to how the cream changes.”
 - Students shake their jars. This will take approximately 10–15 minutes. Rotate shaking if students tire — pairs can take turns.
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.
 - 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?”
 - Once the butter has formed, open the jars and spread it on crackers or bread for students to taste.
 - 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?”
 - “Whether you live in the country or in a city, you use dairy products every day. What dairy food do you eat or drink most?”
 - 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. If you live on a farm or ranch, you might have seen dairy cows up close or even helped feed animals. You know what it looks and sounds like to be near livestock — and today’s butter started with that same farm experience. If you live in town or the city, you might get your dairy products from the grocery store without thinking much about where they came from before today. But now you know that the butter on your toast and the milk in your cereal started on a Kansas dairy farm, traveled in a truck to a processing plant, and made their way to your table. Both experiences — living near a farm and buying at the store — are part of the same story, and Kansas dairy farmers are at its beginning. 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.”
7. Narrative Writing: Making Butter Sequence. Explain to students: “Now you are going to be a writer. You just made butter! You are going to draw and write about what happened in order. Writers tell about events in the order they happened, and they share how they felt or what they thought at the end.”
- Distribute the three-box sequence writing sheet.

- b. Model each box on chart paper:
 - Box 1 — First: “Draw and write or dictate what you did first.” (We poured the cream into the jar.)
 - Box 2 — Next: “Draw and write or dictate what happened next.” (We shook the jar, and the cream changed.)
 - Box 3 — Last/My Reaction: “Draw and write or dictate what happened last and how you felt.” (The cream became butter! I thought it was ____.)
 - Explain to students: “In your last box, tell me what you thought or how you felt about making butter. Did it surprise you? Did you like the taste? That is your reaction — writers always share how they feel about what happened.”
 - c. Students complete their three-box sequence sheet independently using a combination of drawing, dictating, and writing.
 - d. Teacher supports students with:
 - Proper letter formation and spacing between words
 - Sounding out and spelling words phonetically
 - Use of time-order words (first, next, last)
 - Encouraging adding details in drawings
 - Sentence capitalization and end punctuation where applicable
(Differentiation note: For students who need additional support, provide sentence starters in each box at teacher discretion (e.g., “First I ____.” “Next the cream ____.” “I thought it was ____.”) For students ready for a challenge, prompt them to write one sentence per box independently rather than dictating.)
8. Closing Discussion & Reflection. Gather students together with their completed sequence sheets.
- a. Ask students:
 - “What happened when we shook the cream? Tell me in order.”
 - “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?”
 - b. Invite two or three students to share their sequence sheets and read or describe their reaction sentence.
 - c. Reinforce the farm-to-table connection: “Dairy cows give us milk. Milk gives us cream. Cream gives us butter. It all starts on a Kansas dairy farm.”

Assessment: Student understanding is assessed through teacher observation during the reread and discussion, participation in phonemic awareness activities, engagement in the butter-making investigation, and completion of the three-box narrative sequence sheet. Teacher should note whether students can identify the main topic of *Milk Comes From a Cow*? and retell at least two key details, describe the connection between the cow and the dairy products in the book, isolate initial, medial, and final phonemes in CVC dairy words from the lesson, segment syllables in dairy vocabulary words, and produce a three-part narrative response with a first, next, and reaction. Students who make unprompted connections between the butter-making activity and the farm-to-table journey in *Celebrate Wheat* demonstrate meaningful cross-unit learning transfer and should be noted.

Supplemental Activities: Display completed three-box sequence sheets 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: “Which journey is longer? Which one did you do yourself?” This comparison reinforces RI.K.3 — describing connections between two related processes — and gives students a visual record of how one dairy product (cream) connects to another (butter). Take-home sheets give students a natural way to tell their families what they made and where it came from.

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First:

Next:

Last: