



Lesson 4: From Farm to Frozen Treat

Grade Level: Kindergarten

Time: 60 minutes

Subjects: ELA, Science

Overview: This lesson is Lesson 4 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 students' understanding of dairy products, they investigate how milk becomes ice cream through a short video, a hands-on ice cream-making investigation, and guided writing. As students observe changes in ingredients, make and enjoy their own ice cream, and write about the experience, they strengthen foundational literacy skills, scientific observation, and their understanding that foods are transformed from agricultural products into the foods we enjoy every day, reinforcing the farm-to-table connections introduced in *Celebrate Wheat*.

Skillset: Activating and connecting prior knowledge across the unit, gathering information from a video source, hands-on science investigation, observing and describing a process, letter-sound correspondence for predictable consonants, phonetic spelling, understanding that spoken words are represented by specific letter sequences, word spacing and one-to-one correspondence, letter formation with line awareness, sentence capitalization, and informative drawing and writing.

Kansas Academic Standards

Kansas ELA Standards

RF.K.3.a Demonstrate basic knowledge of phoneme-grapheme correspondences of predictable consonants.

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.

W.K.2 Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

W.K.10.a Correctly form uppercase and lowercase letters with line awareness.

W.K.11.a Capitalize the first word in a sentence and the pronoun I.

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.

Science Standards

K-PS1-1 Use senses to describe properties of different objects and materials.

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.

T3.K-2.b Recognize that agriculture provides our most basic necessities: food, fiber, energy, and shelter.

Objectives

Science Objectives

Students will be able to:

- Observe and describe how cream changes from liquid to solid when exposed to freezing temperatures.
- Explain that ice cream is a dairy product made from cream that comes from a cow.
- Describe how the ice cream they made began with milk from a dairy cow.

English Language Arts Objectives

Students will be able to:

- Gather information from a video source to build an understanding of how ice cream is made.
- Demonstrate basic knowledge of phoneme-grapheme correspondences for predictable consonants when writing dairy vocabulary words.
- Demonstrate understanding that spoken words are represented by specific sequences of letters in print.
- Demonstrate understanding that words in print are separated by spaces and point to words with one-to-one correspondence.
- Write or dictate an informative response that names the topic and supplies at least one piece of information.
- Correctly form uppercase and lowercase letters with line awareness.
- Capitalize the first word in a sentence and the pronoun I.
- Write a letter or letters for the most consonant and short vowel sounds encountered in writing.
- Spell simple words phonetically, drawing on letter-sound knowledge.

Materials Needed

Whole Class:

- Smartboard or display screen
- Highlights Kids: How Ice Cream is Made:
<https://www.youtube.com/watch?v=hO-7cz7gyAY>

Ice Cream in a Bag:

- Heavy whipping cream or whole milk (1/2 cup per student)
- Sugar (1 tablespoon per student)
- Vanilla extract (1/4 teaspoon per student)
- Small zip-lock bags (1 per student)
- Large zip-lock bags (1 per student)
- Ice (enough to fill large bags halfway)
- Rock salt or table salt (6 tablespoons per large bag)

- Plastic gloves or small towels (to hold cold bags while shaking)
- Spoons and small cups for tasting
- Paper towels or napkins
- Hand wipes

Writing:

- From Cow to Cone writing sheet — companion document (one per student)
- Pencils and crayons
- Chart paper and markers
- Individual whiteboards and markers (optional, for shared writing practice)

Note: Check for milk allergies before this lesson. Students with a milk allergy should observe and participate in the shaking activity using a pre-sealed bag that contains no dairy ingredients. Have an alternative snack ready.

Lesson Procedures

1. Connecting to What We Know
 - a. Explain to students: “In this unit, we have learned that milk comes from dairy cows on a farm. Remember, dairy cows need food, water, and good care before they can produce milk. We used the cream from milk to make butter. We tasted whole milk, skim milk, and heavy whipping cream. All of those things came from one place — a dairy cow. Today we are going to make one more dairy product that you have probably had many times: ice cream!”
 - b. Ask students:
 - “Where does milk come from?”
 - “What dairy foods have we made or tasted in this unit?”
 - “Do you think ice cream comes from a cow? How?”
2. Whole Class — Video: How Ice Cream is Made: Gather all students together for the whole-class video before making ice cream.
 - a. Explain to students: “Before we make our ice cream, we are going to watch a short video about how ice cream is made. As you watch, listen for any dairy words you recognize from our book and our unit. Think about where the cream comes from and what happens to it to make ice cream?”
 - b. Play this YouTube video. Highlights Kids: How is Ice Cream Made? | Ever Wonder? | Highlights Kids <https://www.youtube.com/watch?v=hO-7cz7gyAY>.
 - c. After the video, ask students:
 - “What did you notice about where ice cream starts?”
 - “What dairy words did you hear or see in the video?”
 - “How is the ice cream in the video like the butter we made? How is it different?”
 - “What do you think will happen when we shake the cream with ice and salt today?”
3. Ice Cream in a Bag: Hands-On Science Investigation
 - a. Explain to students: “Now we are going to make our own ice cream, just like the video showed us. We are going to use cream, sugar, and vanilla. The cream is the dairy product produced by dairy cows. Pay close attention to what you see, feel, and smell as the cream changes. You are going to write about this experience right after we finish, so notice everything you can!”

Check the allergy list before beginning. Students with milk allergies should have an alternative activity ready.

- b. Model each step before students begin:
 - Pour 1/2 cup of heavy whipping cream into the small zip-lock bag.
 - Add 1 tablespoon of sugar and 1/4 teaspoon of vanilla.
 - Seal the small bag tightly, pressing out as much air as possible.
 - Place the small bag inside the large bag.
 - Fill the large bag halfway with ice.
 - Add 6 tablespoons of rock salt over the ice.
 - Seal the large bag tightly.
 - Shake and squeeze the bag for 8–10 minutes. Use gloves or a towel — the bag will get very cold!
 - c. Prompt oral language while students shake:
 - “How does the bag feel? Is it getting colder?”
 - “What do you see happening to the cream inside the small bag?”
 - “What words would you use to describe what is happening?”
 - d. Once ice cream has formed, open the small bag carefully and scoop into cups for tasting.
Ask students:
 - “What happened to the cream?”
 - “Where did the cream come from?”
 - “So where did our ice cream come from — all the way back to the beginning?”
 - e. Kansas Connection: Explain to students: “The cream in your ice cream started with a dairy cow on a Kansas farm. Whether you live near those fields and pastures or you have only ever seen a cow in a book or on a screen, that Kansas farmer helped make your ice cream possible. From the dairy cow on the farm to the milk in the truck, to the cream in your bag, to the ice cream in your cup — that is the journey of milk. And the entire journey can happen right here in Kansas.”
4. Bridge to Writing: Connecting the Experience to the Page
- a. Gather students together after tasting. Explain to students: “You just did something really special. You turned cream into ice cream with your own hands. You watched a video about how it is made, shook the bag, felt it change, and tasted it. You know exactly what ice cream is and where it comes from — because you just lived it.”
 - b. Explain to students: “Writers write about what they know and what they experience. Right now, ice cream is something you know better than almost anyone because you just made it yourself. When we write about something we have done, our writing is real and interesting because we were there. That is what informative writing is — sharing what you know so someone else can learn from you.”
 - c. Explain to students: “Today, you are going to be an informative writer. Your job is to teach someone — maybe a parent, a sibling, or a friend — what ice cream is and where it comes from. You know the answer because you just made it. So let’s get that knowledge down on paper.”
 - d. Ask students:
 - “If you had to tell a friend what ice cream is made from, what would you say?”

- “Where does the cream come from? Where does the cow live?”
- “What happened when you shook the bag? Can you say that in one sentence?”

This step is intentional. Asking students to verbalize before writing helps them organize their thinking and gives emerging writers a sentence to hold in mind as they begin. Take 2–3 minutes here — it makes the writing step stronger.

5. Shared Writing: Modeling the Writing Process. Gather students on the carpet where they can all see the chart paper clearly.

- Explain to students: “You just made ice cream, and you know exactly where it comes from. Now we are going to write about it together first — I will show you how a writer thinks, and then you will write your own.”
- Explain to students: “Informative writers share what they know with a reader. Your reader might be a parent, a sibling, or a friend who has never made ice cream before. Your job is to teach them: what did you make, and where did it come from?”
- Introduce the sentence frames on chart paper before writing anything:
 - “I made _____.”
 - “It comes from a _____.”
 - “The cream came from a _____ on a _____.”
- Explain to students: “These are our sentence frames. A sentence frame shows you how a sentence is built. It already has the words to help you get started — your job is to fill in the blank. Let’s read them together, and I will show you how I use them.”
- Begin the modeled writing. Think aloud at every step:
Explain to students: “I am going to use the first sentence frame. I say my sentence in my head first: I made ice cream. Now I am going to write it. Watch every move I make.”
- Model writing “I made ice cream.” step by step, naming each action aloud:
 - “My first word is ‘I.’ The word ‘I’ is always a capital letter — that is a rule for the pronoun ‘I’. Watch me write it: big stick going down, Hat on top. Shoes on the bottom. Capital ‘I.’”
 - “Now I need a space before my next word. I use my finger as a space-keeper — I put it right after the ‘I’ to save a spot. Words need spaces between them so a reader knows where one word ends and the next begins.”
 - “My next word is ‘made.’ I say it slowly in my head: /m/... /ay/... /d/. The first sound is /m/ — I write m. The next sound is /ay/ — I write a. The last sound is /d/ — I write d. I also need a silent e at the end. The silent e doesn’t make a sound, but it helps the ‘a’ say its name /ay/ instead of ä. Made: m-a-d-e. Writing the sounds I hear is what strong beginning writers do.”
 - “Finger space. Now: ‘ice.’ I say it slowly: /i/... /s/. I write i-c-e. I also need a silent e at the end. The silent e doesn’t make a sound, but it helps the ‘i’ say its name /i/ instead of ĭ.”
 - “Finger space. Now: ‘cream.’ I say it slowly: /k ... /r/... /ee/... /m/. The lone e sound in cream is spelled with ea. write c-r-e-a-m.”
 - “Now I need to end my sentence. Every sentence ends with a punctuation mark. I will use a period.”

- “Let me check my letter formation — are my letters sitting on the line? Tall letters should reach up to the top. Small letters stay in the middle space.”
 - g. Point to the completed sentence and explain to students: “Now watch what I do after I finish writing. I go back and point to each word as I read it. I check to make sure each word I say matches exactly one word on the page. Let’s do it together: point with me. ‘I -made- ice-cream.’ ”
 - h. Model the second sentence frame: It comes from a cow.
Explain to students: “Now I use my second sentence frame. Watch — I say it first: It comes from a cow. The first word is ‘It’ — it is the first word of a new sentence, so it gets a capital ‘I’. Then I write each word with a finger space between, saying the sounds as I go.”
 - i. Model writing while naming consonant sounds explicitly:
 - “It — capital I, then t. The t makes the /t/ sound.”
 - “comes — c makes /k/, o, m makes /m/, e, s makes /s/.”
 - “from — f makes /f/, r, o, m makes /m/.”
 - “cow — c makes /k/, ow.”
 - “Period at the end.”
 - j. Read both sentences back with one-to-one pointing. Explain to students: “Look at what we have on the page. Every word I said is right here in print. The sounds became letters, the letters became words, and the words are separated by spaces. That is exactly what writers do — they turn their voice into print.”
 - k. Ask students to try a sentence aloud using a frame, then have them write it.
 - “Turn to a partner. Tell them your sentence using one of the frames on the chart. Say the whole thing out loud before you write it.” Allow 1–2 minutes for oral rehearsal. Students who say their sentence aloud are far more likely to write it with confidence.
6. Informative Writing: From Cow to Cone: Distribute the From Cow to Cone writing sheet.
- a. Explain to students: “Now it is your turn. The sentence frames are right here on the chart. Use them to help you. Draw your ice cream in the drawing box first. Then write at least one sentence. Say your sentence out loud in your head before you write it, just like we practiced.”
 - b. Point to the chart paper sentence frames and say: “You may choose any frame that fits what you want to say. You can also write your own sentence if you know what you want to say. The frames are here to help you, not to limit you.”
 - c. As students write, circulate, and support:
 - Support proper letter formation and spacing between words
 - Help students sound out and spell words phonetically
 - Prompt use of sentence frames for students who are stuck
 - Support sentence capitalization and end punctuation
 - Prompt students to point to each word as they reread
 - Prompt the second sentence for students who finish early: “Can you tell me one more thing about ice cream or where it comes from?”

(Differentiation note: Students who are not yet writing independently should dictate their sentence to the teacher, who writes it aloud while naming each letter. For students ready for a challenge, prompt a third sentence connecting ice cream to the dairy farm: “The cream came from milk produced by a dairy cow on a Kansas Farm.”)

7. Closing Discussion & Reflection: Gather students together with their completed writing sheets.
- a. Ask students:
 - “What did we make today? Where did the cream come from?”
 - “In *Celebrate Wheat*, wheat became pizza crust. In this unit, what did milk become?”
 - “What is the connection between a dairy cow and a bowl of ice cream?”
 - b. Invite students to share their writing. Ask: “What did you name as your topic? What information did you give?”
 - c. Point to a word in a shared sentence. Ask: “Can someone point to each word as I read? Put your finger under each one.”
 - d. Reinforce the farm-to-table connection: “Dairy cows give us milk. Milk gives us cream. Cream gives us butter. Cream gives us ice cream. It all starts on a Kansas dairy farm.”

Assessment: Student understanding is assessed through teacher observation during the video discussion, ice cream activity, explicit writing instruction, and independent writing. Teacher should note whether students can produce the correct sound for predictable consonants when naming or writing dairy words, demonstrate understanding that spoken words are represented by specific letter sequences, use finger-spaces and point to words with one-to-one correspondence, write or dictate an informative response naming the topic and supplying at least one piece of information, form letters with line awareness, capitalize the first word and the pronoun I, write letters for consonant and short vowel sounds, and apply phonetic spelling strategies independently. The From Cow to Cone writing sheet serves as the primary written artifact for this lesson.

Supplemental Activities: Display the From Cow to Cone writing sheets alongside the butter sequence sheets and Map the Journey sequence sheets from previous lessons as a growing visual record of the unit’s farm-to-table learning. Guide students to look across all three displays and ask: “What did milk become in Lesson 2? What did cream become in Lesson 3? What did cream become in Lesson 4? All three things started the same way — with a dairy cow.” Add the target words cow, milk, cream, farm, and cold to the classroom word wall. Students can use these for reference during independent reading and writing throughout the week.

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Student Name: _____

Farm to Frozen Treat

I made

It comes from a

The cream came from a

on a