Iowa's Dairy Story
History and Artifacts Lesson

Objectives:

1. Expose students to artifacts used by farms in the past and present.
2. Explain how milk gets from the farm to the creamery.
3. Understand why it is important to identify animals on a dairy farm.
4. Understand how milk gets made into different dairy products by the use of different tools.

Iowa Core Curriculum Met:

Science Standard

- Content Standard 1: Students can understand and apply skill used in scientific inquiry.
- Content Standard 2: Students can understand concepts and relationships in life science

Literacy Standard

- Content Standard 1: Students can comprehend what they read in a variety of literacy and informational texts.

Supplies Needed:

Use the Iowa's Dairy Story History Lesson Kahoot! game.

Duration: 20-25 minutes

Teaching the Lesson:

Split class into small groups. Each group will need an electronic device (laptop, cellphone, tablet) to join the Kahoot! Game as a team. Show the students each of the pictures and allow them to guess which dairy artifact is which. After each question, review the answer with the students. Information about each of the artifacts can be found below.

Artifacts:

1. **A CONTAINER TO TRANSPORT CREAM & MILK -- Milk Can or Cream Can**
    a. Most communities in the past had a creamery or milk plant. Most often the farmer had to transport the milk or cream to the creamery.
    b. How is milk transported today?

i. milk from the cow goes directly into a pipeline, to the bulk tank, to the milk truck, to the processing plant, etc.

2. USED TO STIR THE CAN -- Can Stirrer

a. Raw milk is not homogenized and the cream comes to the top
b. Who can explain what homogenized means?
    i. The milk is forces through small wholes to break up the fat globules. This evenly distributes the fat throughout the milk. Non homogenized milk has larger fat particles in it so the fat will rise to the top of the milk. The person at the creamery needed to stir the milk in the can before the processing was started to mix the fat back into the milk.

3. USED TO STRAIN TO CLEAN THE MILK -- Milk Strainer

a. When cows were milked by hand (explain), the milk was exposed to whatever was near the cow. Often straw or other foreign objects fell into the bucket.
b. Milk was poured into the strainer to filter out anything that fell in the milk.

4. REPLACED MILKING COWS BY HAND -- Milking Machine

a. The Surge milking machine was placed on the floor under the cow.
b. Then, the inflations attached to the cow (explain how cows have four teats).
c. Imagine this, you have 25 cows, you have to milk them twice a day. You could only milk one cow into these buckets then you would have to carry the buckets to the milk room and dump the milk into the tank.

5. KEEPS COWS IN THEIR PLACE -- Stanchion

a. The chain on the top and bottom were attached to keep it from moving around. The cow would put their head through the center of it and then the farmer would have to go up to each stanchion and shut them.
b. Do you think stanchions are still used today.
    i. Yes they are actually used still today. But they have come out with new stanchions they call head locks where the cows can lock themselves in. This can help the farmer with easier management of the head
    ii. What is the difference between a stanchion barn and a free stall barn.
        1. The biggest difference is that you can milk cows in stanchions. The cows that are in freestall barn are free roaming and must be milked in some type of parlor.

6. DOWN THE ESOPHAGUS -- Balling Gun

a. This item that is still used today to assist farmers in administering medication to cattle. They vary in size depending on the animal size. Calf balling guns are

much small. A cow pill can be anywhere from the size of a cow magnet to two or even three times the size of a cow magnet.

b. You need to remember cows need help taking their medicine they can't swallow pills like us, so this is the tool that farmers use to help them take pills when they are sick.

7. A HARDWARE CATCHER IN THE RETICULUM OF A COW'S STOMACH -- Hardware Magnet

a. Cows are not "dainty" eaters. They take big bites of feedstuffs and swallow it fairly rapidly. Pieces of wire, nails and metal (called hardware) collect on the magnet protecting the cow's digestive system. A magnet that was used in a cow is in the display case and shows the kinds of hardware that was collected.

b. The balling gun is used to give the cow a magnet, so she is protected from hardware disease.

8. DIP THE ICY TREAT -- Ice Cream Scoop

a. There have been many different kinds of ice cream scoops that have been used over the years. Some have intricate mechanisms and others feature simplicity.

b. Some of the scoops in this picture date back to the 19th century.

c. Many of the scoops of today have the same design but one of the newest types of scoops has a chemical called antifreeze on the inside, it helps to make the ice cream come off the scoop easier.

9. A BRASS BOVINE NECKLACE -- Neck Chain

a. Used for identification of individual cows.

b. Ask about problems with this type of identification -- easy to get lost, caught on something, they can fall off also.

10. CLIPPED IN AN EAR FOR VISUAL IDENTIFICATION -- Ear Tag

a. How many of you have your ears pierced? Do you remember how much if hurt? Do you ears still hurt from getting them pierced?

b. Tagging cows is basically the same as getting your ears pierced. We take a tool called a tagger and place it around the ear. Then clamp the tool together to place the tag in the ear much like they clamp the earring in your ear. After a few weeks it will heal.

c. A cow's ear tag includes helpful information. Each cow has their own number. The name above that is the cow's name and the top name is the sire's name. If you were a cow, what would your ear tag read?

11. A SOUND ON A FOGGY MORNING TELLS WHERE COWS ARE GRAZING -- Cow Bell

a. Not many farmers use these any more but what do you think they helped the farmer do?
b. They were used to help the farmer find his cows when they were out to pasture. The lead cow would wear a cow bell and they could listen for the bell and be able to tell where his cows were in the pasture.

12. ANIMAL CONTROL IN THE SHOWRING -- Show Halter

a. This halter helps you to control your animal in the show ring. It also helps you to show off you animal a little easier.

13. IN DAYS OF YORE DELIVERED AT THE DOOR -- Milk Bottles

a. Dairies used to deliver milk and dairy products to homes. The bottles were recycled.
b. Milk was delivered to the door each week by the milk man. He would drop off the amount you order last week, pick up your order for next week and pick up your empty bottles to be refilled.

14. A HOME BUTTER-MAKERS HELPER -- Butter Churn

a. This is a wooden churn, but there are other types of churns (crock, glass, etc.) It would take a person quite a few hours to make butter with one of these churns.
b. The churn pictured works by turning the handle.

15. FARMER'S "DIARY" TO TRACK EACH COW – Record Book

a. Before computers, this was how a farmer would track each time cow gave birth, often seasonally. It could act as record of family tree. Vet or farmer would draw cow's markings on diagram to identify the cow.
b. How do farmers keep records today? Many use computers to track information electronically.

16. DECORATIVE TOOL FOR DAIRY FOOD ITEM – Butter Press

a. When guests were coming over, pressing or stamping butter with a unique shape was a way to dress up the table for special occasions.