

DAIRY

Educator | VermontHarvestoftheMonth.org

History

People have been drinking animal milk for as long as we have had domesticated animals. The ancient Egyptians produced dairy products, but reserved it for royalty! In European nations, it wasn't until the 14th century that cow's milk became more popular than sheep's milk. Dairy cows were brought to North America by Europeans in the early 1600s, but it took hundreds of years, until 1884, for the glass milk bottle to be developed, and it wasn't until the 1930s that the milk carton was used!

Reading Corner

- » *Let's Visit a Dairy Farm*
by Sarah Doughty and Diana Bentley
- » *Ox Cart Man* by Donald Hall
- » *Two Cool Cows* by Toby Speed

Fun Facts

- All dairy products are derived from animal milk, and although most common, milk doesn't just come from cows! Vermont also has sheep and goat farms that produce milk and products for sale. But in other countries, people consume buffalo, camel, yak, horse, reindeer, and donkey milk.
- While milk can be consumed raw, in the US it is mostly sold pasteurized (heated to kill bacteria) before sale. This process was developed in 1864 by French scientist Louis Pasteur.

Benefits

- Dairy products contain many nutrients including calcium, potassium, vitamin D, and protein.
- It has been shown that consuming milk as a child and adolescent helps build strong bones and reduces the risk of bone fractures and osteoporosis later in life.

Harvest of the Month provides resources for the cafeteria, classroom, and community to promote the use of local, seasonal foods.

CLASSROOM CONNECTIONS

Science | Make Yogurt

Supplies Needed:

- ½ gallon Milk
- 3 ounces whole milk yogurt
- 2 large pots
- 2 quart jars with lids
- A thermometer
- Burner
- A whisk
- 2 Small cooler with ice
- Pre-sterilize your jars, lids, and whisk in boiling water for 10 minutes

Directions:

1. Pour 1/2 gallon milk into a stock pot and heat to 185 to 190 degrees. Have the kids monitor the temperature carefully
2. Place pot in cooler with ice, and cool milk to 120 degrees.
3. Heat another pot of water above 110 degrees. This will go in the other cooler.
4. Whisk in 3 ounces of yogurt starter in cooled milk. Pour the milk into jars and add lids.
5. Place jars in cooler full of heated water. Incubate for 4-6 hours, until the liquid milk in your jars has turned to yogurt when you tip them sideways.
6. Ensure the temp stays around 110 degrees and add more hot water if necessary. After incubation, put jars in the fridge where yogurt will continue to firm up.

Source: *New England Dairy Council*

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CLASSROOM CONNECTIONS

Science | Dress Up Like a Cow

Students learn about the different parts of a dairy cow.

Directions:

1. Ask the students to imagine or remember what a cow or calf looks like.
2. What makes a person a person? How do you know you are a person? If we wanted to turn into cows, what would we have to do? How does a cow look different than you?
3. Pick a volunteer from the class and have them stand by you, so everyone can see her. (Whisper in your volunteer's ear to ask permission to dress them up.) Explain to the class that they are going to help you turn their classmate into a cow. This is a fun activity that students will be excited about. Maintain a no touching/ harassing the cow volunteer rule to respect privacy.
4. Ask the students for suggestions on how to make your volunteer look more like a cow.
5. As they come up with ideas, dress up the student volunteer with the props that you have in your large bag.
 - a. Spots - (black felt spots) Holstein cows are a breed of dairy cow that have black spots on their hides. Loose skin helps to protect the cow from insect bites
 - b. Stomachs - (pink felt) cow has one stomach with four compartments to help with the digestion of food
 - c. Tongue - (Sandpaper cut to size of cow's tongue with string or binder clip) helps to pull in the grass and hay they eat
 - d. Hooves - (4 socks with paper hoof prints glued to the bottom) Hooves help to loosen up the soil so new grass can grow more easily. Each hoof is technically a covering of horn, protecting two toes – very similar to a nail or claw found on other animals.
 - e. Ears/Horns - (Headband with cardboard ears and horns) ears help to transfer heat. Some cows with larger ears can fan themselves in warm weather.
 - f. Tail - (Fly Swatter) used to swat flies away
 - g. Udder - (Baby bottle nipples & plastic jug) a large bag-shaped organ belonging to female cows that produce milk after she has had her first calf.
 - h. Eyes - Cows large eyes are on the side, to be aware of what is going on all around them including predators or danger. (Eyes need to be made, make with string and felt for eyes.)
6. Make sure to take pictures!

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Varieties

Milk is amazingly versatile and can be made into a variety of products that include cheese, yogurt, kefir, and, of course, enjoyed on its own as that tall glass of cold milk!