

# Lesson 7: Dairy

## SCARLET CAMPERS

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### **Lesson Overview:**

In this lesson, campers will learn about the different forms of dairy and the nutritional value of dairy. First, the class will receive a short talk on forms of dairy, including plant-based milks, and their nutritional value. Next, campers will participate in a group activity to make ice-cream from milk. Finally, campers will complete a coloring activity with any remaining time.

### **Behavior Change Objective:**

As a result of this lesson, campers will choose to put diverse forms of dairy on their plates based on their individual needs and preferences.

### **Learning Objectives:**

After participating in this lesson, campers will be able to:

- Identify at least 3 forms of dairy
- Verbalize their favorite forms of dairy
- Identify at least 3 nutrients in dairy
- Demonstrate at least 1 method of preparing dairy

### **Key Words:**

milk, dairy, plant-based milks, whole milk, homemade ice-cream, nutrition

### **Before you Begin:**

- Gather necessary supplies, listed below
- Place toppings at student tables
- Set up speakers to play music that the class can all hear



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## (continued)

### **Ingredients:**

*(Per 2 students)*

- 1 cup cold whole milk
- 1 ½ tsp vanilla extract
- 1 T sugar
- Ice
- ¼ cup salt
- Ziploc bags 1 small, 1 large

### **Materials:**

- Sealable plastic bags, small and large
- Measuring spoons (teaspoon and tablespoon)
- Measuring cups (¼ and 1 cup)
- Bowls/spoons
- (optional)- toppings for ice cream- fruit, sprinkles, chocolate etc.
- Cow printouts
- Crayons / markers

### **Lesson Procedure and Script:**

These are the talking points but make it your own! Most of all, have fun!

#### **1. Introduce yourself and lesson topic of dairy:**

“Hi everybody! This week’s lesson is all about dairy. We are going to learn about different types of dairy foods and dairy substitutes and why we need these foods in our diet. As our activity we are going to make our ice cream and make a cow craft.”

#### **2. Review class attention grabber:**

“Does everyone remember what I do when I need to get your attention?”- *Demonstrate 2 slow claps, then 3 fast claps, wait for students to clap back.*

“Good job! You guys are pros at that now!”



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## (continued)

### **Lesson Procedure and Script (continued):**

#### **3. Review previous lessons – Plant a Seed/Food Combinations/Fruit Skewers/Composting/Protein/Whole Grains:**

“Before we get started with our lesson I want to know, did anyone eat something with grains last week? I’ll bet most of us did, grains are everywhere.

Who had something with rice? What was it? How about something with corn? What was it? Who tried something with wheat? Most of us probably, if you had bread, or cereal, or pasta, or cake, you probably had wheat! How about oatmeal? Did anyone try any unusual grains like millet, or barley, or buckwheat, or couscous? How about popcorn? That’s a lot of different grains!”

#### **4. Introduce the lesson topic of dairy:**

“Today we’re going to be talking about dairy. Does anyone know what dairy is? That’s right, dairy products are the foods that we make from milk. Now, all mammals make milk to feed their babies, but we usually only drink the milk from a few different animals. What animals do you think produce the milk we drink? Right! Cow, sheep, and goat milk are what we usually see in the store. But many people also use the milk from buffalo, camels, yaks, even horses!”

- “Just like when we learned about protein, there are animal sources and plant sources for dairy. Even though plant-based sources are not technically in the dairy food group, but they have a lot of the same nutrients, and you can use them in similar ways. Has anyone tried a plant-based milk? Can anyone name one? Right, there are a ton of plant-based milks out there. You can make milk from almonds, soy, oats, coconut, cashew, hemp, flax, rice, hazelnuts, even peas!”



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## (continued)

### Lesson Procedure and Script (continued):

#### **5. Make ice cream:**

“Has anyone ever made ice cream before?”

How did you make ice cream? Right, first milk, sugar and flavors are blended together. Then the mixture is pasteurized, which means it is heated to destroy any bacteria. And then it is frozen to make ice cream! There are a lot of different ways to freeze and make ice cream- in a machine, in a churn, in a ball, or even in a bag! Today we are going to work in groups to make ice cream in a bag.”

“To make ice cream in a bag, we’re going to put some whole milk into a smaller bag. Milk is where a lot of nutrients like calcium, vitamin D, and protein are found. Then we are going to add sugar to make it sweet and some vanilla for flavor. We will seal the small bags, then put them in a larger bag with salt and ice. Why do you think we put salt on the ice? Right, salt lowers the freezing point of water. Ice cream has a lower freezing point than water, so it must be a bit colder than normal ice to turn into ice cream.”

Okay, now we’re going to seal our bag with ice and salt. We’re going to take turns shaking the bags for about six minutes total. These are going to get chilly, so make sure to pass it off if your fingers get too cold! One last thing before we get shaking- please be careful not to let the bags open- we do not want salt in our ice cream! We will let you know when it’s time to switch, start shaking!”

*Set timer for six minutes, have campers take turns shaking the bag for about 15/20 seconds before passing it off to another camper. Continue in this manner until the six minutes are up or when ice cream becomes frozen and creamy.*



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## (continued)

### Lesson Procedure and Script (continued):

#### **6. Serve ice cream and have campers taste it:**

“That was pretty cool, wasn’t it? Get it- cool! Now we are going to split up our bags of ice cream with our partners and give them a try! First, we will carefully open the big bag. Then, we will rinse off the smaller bag (this could be at the sink or in bowls of water at the table). Great! Now we will carefully wipe all of the salt from the opening of our small bag- we do not want salty ice cream! Last, we will open the small bag and split the ice cream between two bowls. Bon Appetit!”

Help kids serve ice cream and put on toppings if desired.  
“Do you like the ice cream you made. What descriptive words would you use to describe how it tastes?”

“Thanks for sharing. Now let's clean by throwing away our plates, washing our hands, and color a cow!”

#### **7. Hand out cow coloring page and instruct students to color:**

Handout out coloring pages and crayons.

“Now we are going to have some time to get creative and color a cow. Remember cows give us milk to drink and use to make recipes like ice cream. Most cows are black and white or brown but you can make your cow any color that you want. I am excited to see your colorful cows!”



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(continued)

## Whipped Cream Taste Test/Cow Craft: Hands On Activity

1. **Adults**- Pass out large and small plastic bags to each pair of kids. Help each team measure out 1 cup of whole milk, 1.5 tsp vanilla extract, and 1 T sugar.
2. **Kids**- Pour milk, vanilla, and sugar into small Ziploc bag
3. **Adults**- Distribute ice and salt to each group
4. **Kids**- Pour ice and salt into large bag
5. **Adults**- Help to seal bags, press air out of small bag
6. **Kids**- Take turns shaking the bags until ice cream forms (6 minutes)
7. **Adults**- Help to finish shaking and rinse salt from bags
8. **Kids**- Help to wipe salt from bags
9. **Adults**- Help to split ice cream evenly between teams, (optional- help distribute toppings)
10. **Kids**- Taste test, talk about what we like and don't like, use descriptive words to describe the ice cream's flavor
11. **Kids**- Take dishes to sink, wash hands
12. **Adults**- Pass out cow printables
13. **Kids**- Color cow pictures



# Lesson 7: Dairy

## Recipe

### Ice Cream in a Bag

#### Ingredients for each bag:

- 1 cup cold whole milk
- 1 ½ tsp vanilla extract
- 1 T sugar
- Ice
- ¼ cup salt
- Ziploc bags 1 small, 1 large



#### Instructions:

1. Pour 1 cup of whole milk into the small Ziploc bag.
2. Add 1 ½ tsp of vanilla extract and 1 Tablespoon of sugar.
3. Seal the bag firmly and get out any excess air.
4. In the larger Ziploc bag, fill it about ½ way with ice. Add ¼ c salt.
5. Then add your small bag and fill with extra ice on top. Seal the large bag.
6. Shake for 6 minutes. If working alone, gloves are recommended due to cold.
7. Take the small bag out of the large bag and rinse the outside of the small bag with cold water. Make sure to rinse out the top part of the bag also (above the seal).
8. Once done rinsing, carefully open the small bag to not get any remaining salt from the outside of the bag, inside the bag.
9. The ice cream will be a little icy looking to start. Use a spoon to mix it around and soften it up a bit. Scoop out and enjoy.



## Ice Cream in a Bag

### Ingredients for each bag:

- 1 cup cold whole milk
- 1 ½ tsp vanilla extract
- 1 T sugar
- Ice
- ¼ cup salt
- Ziploc bags 1 small, 1 large



### Instructions:

1. Pour 1 cup of whole milk into the small Ziploc bag.
2. Add 1 ½ tsp of vanilla extract and 1 Tablespoon of sugar.
3. Seal the bag firmly and get out any excess air.
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