



Dairy Group

K-1 Lesson Plan

- Goal:** Students will recognize the importance of
- a diet rich in calcium to support bone and dental health
 - consuming low-fat calcium sources

Objectives:

- Students will state that dairy group foods are important for building strong bones and teeth.
- Students will be able to recognize low-fat or fat-free dairy products as the healthiest choices in the milk group.
- Students will be able to name at least three foods in the milk group.

Materials Needed

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| <input type="checkbox"/> MyPlate Poster | <input type="checkbox"/> "How to make skim milk" pictures |
| <input type="checkbox"/> Chicken bones or laminated bones | <input type="checkbox"/> Fat tubes and sugar tubes for flavored milk |
| <input type="checkbox"/> Pictures of or food models of dairy group foods | <input type="checkbox"/> Flour bags |
| <input type="checkbox"/> "What do your bones do for you?" poster or little skeleton | <input type="checkbox"/> "Where Does Milk Come From" pictures |
| <input type="checkbox"/> "What we need to do to build strong bones & teeth" pictures | <input type="checkbox"/> Any book you plan to read to the class |
| <input type="checkbox"/> "Calcium" label | <input type="checkbox"/> Parent handout |
| <input type="checkbox"/> Pictures of store milk jugs | <input type="checkbox"/> Student handout |
| <input type="checkbox"/> Pictures of "How to Build Strong Bones" | <input type="checkbox"/> Taste test |

Lesson	
Talking Points	Materials/Activities/Notes
Review <ul style="list-style-type: none"> Who remembers what we talked about last time I was here? Let's review our Healthy Habits. Who can remember one of them? <ol style="list-style-type: none"> Healthy Habit #1: Eat a variety of foods from the five healthy food groups Healthy Habit #2: Be active everyday—60 minutes Healthy Habit #3: Wash your hands and food 	
Mind Grabber <ul style="list-style-type: none"> Does anyone know how many bones are in the human body? (206) Let's think about how we want our bones to look. How do you want your bones to look? Chicken Bones: I brought two chicken bones today for you all to look at. Take a look at them both. One is a normal chicken bone and the other one, I 	

Show students two chicken bones – one normal and one soaked in soda to

soaked in soda. How are these two bones different? The one that was soaked in soda is really soft and the other one is really hard. Which one do you think would hold up your body the best?

- The normal chicken bone is the strong bone because it has plenty of calcium in it; the soft bone is missing most of its calcium because the soda took the calcium out of the bone.
- Calcium is the mineral that makes our bones strong and hard. Do you think that it is important for us to eat foods that have calcium in them, so that we can have strong bones?

OR

- **Laminated Big Bones:** I brought in two bones for you all to check out – one that has a few holes in it and one that doesn't.

remove most of the calcium, therefore soft. Hold the bone up to your hip and ask the students which bone would hold them up better if they were going to jump.

Show students the laminated big bones – one with holes and one without holes. Follow the same narrative as for the chicken bones.

Discussion

- Today we are going to talk about the dairy group because the foods in the dairy group have a lot of calcium in them. The dairy group is the blue group on MyPlate.
- Can anybody name some foods in the dairy group?
- Milk and foods made with milk give our bodies an important mineral called calcium. Calcium helps make and keep our bones and teeth strong.
- Why is it important for us to have a strong bones and teeth? What do we need bones for?
 1. Support: We need bones to support our bodies. Do you think we would be able to stand or sit up if we didn't have any bones?
 2. Protection: We also need bones to protect other parts of our bodies. We have a skull which protects our brains and our rib cage helps protect many of our organs such as our hearts.
 3. Movement: And finally, we also need bones to help us move. Do you think we would be able to run if we didn't have any bones? We would just be blobs on the ground!
- In this lesson, we will learn how to make our bones strong and keep them that way. There are two important ways we can do this:
 1. We need to get plenty of calcium from what we eat and drink.
 2. We need to get plenty of exercise by moving the big parts of our bodies.
- Remember the hard and soft bones from the beginning of the lesson? Did you know that our bones aren't always hard and strong. A baby's bones are soft. Feel the tip of your nose or your ears. Notice how they are kind of soft and moveable. This is similar to what a baby's bones are like at birth.
 - When babies are born, they only have a little bit of calcium in their bones (so their bones are soft). As you grow bigger, your bones have more and more calcium so that they get stronger and stronger.
 - What do all babies drink when they are born (milk)? What is in the milk that makes their bones get strong (calcium)?
- Calcium also helps keep another part of our body hard and strong—our teeth!
- Foods from the dairy group have the most calcium and are usually our main

Using pictures or food models, show students examples of foods in the dairy group.

Use the "What Do Your Bones Do For You" poster or a little skeleton to discuss the importance of bones.

Show the "What we need to do to build strong bones & teeth" pictures. 1. Picture of child drinking milk. 2. Picture of children being active.

Use the flour bags for the baby and the adult to demonstrate how much calcium they will need to build strong bones as they grow.

Write "calcium" on the board or use the "calcium" label.

food source for getting calcium into our bodies and into our bones and teeth.

- Where does the milk that is in the dairy group come from? It comes from cows! Let's take a look at how your milk gets from the cow to the grocery store so that you can buy it and drink it.

The Healthier Choices in the Dairy Group

- There are many types of milk: Whole milk, 2% milk, 1% milk, skim milk...Which type of milk do you drink at home? You may say white milk, but take a look at these pictures and you will see that there are MANY different white milks.
 - Some of these milks are better for you than others. What is the difference between these milks? They are all white milks, but they have different names and different colored labels & lids. What makes them different?

	Food Lion	Target	Kroger
Skim milk	Purple/Pink	Pink label (white cap)	Light blue
1% lowfat milk	Light Blue	Yellow (light blue cap)	Green
2% reduced fat milk	Dark Blue	Dark Blue	Dark Blue
Whole milk	Red	Red	Red

- The difference between these milks is the amount of fat in the milk. All milks have the same amount of calcium in them, but they have different amounts of fat. Low-fat and skim milk are the best choices. Look for these words when you and your family are buying milk. You want the good calcium to make your bones and teeth strong, but you don't want the fat that hurts your heart. Milk with the least amount of fat is called skim milk and is the healthiest for you.
- We need some fat in our diets but too much fat isn't good for our bodies. Let's take a look at how the different milks are made, so that we can understand the different amounts of fat found in milk.
- Imagine a cow on a small farm. The farmer milks the cow and lets the milk sit in a bucket in the refrigerator. The milk is full of bits of fat called butterfat. These bits of fat float to the top of the milk because they are lighter than the rest of the milk. When put in the refrigerator the fat gets really hard (kind of like butter). This layer is called cream, and the farmer can use a tool called a skimmer to skim the cream off of the top. The milk that is left in the bucket after the cream has been skimmed off is called skim milk and has no fat left in it. It is the healthiest kind of milk because the fat that is not healthy has been taken out. Other kinds of milk, like the 1% white milk in the cafeteria, have just a little bit of the fat left in, although most is taken out. The 1% white milk is a healthy choice too.

Read "Where Milk Comes From" or a similar book.

Show students the pictures of the different milk jugs from different stores.

List the different types of milk on the board and/or put the pictures of the different jugs on the board and ask the students to describe how they are alike and how they are different.

Write 1%, low-fat, skim milk, and fat-free milk on the board.

To help students understand the fat levels in milk, give a description of what happened to the milk after it comes from the cow (even act out the milking and subsequent steps with younger kids).

Show students "How to Make Skim Milk" pictures.

Use fat tubes to show how much fat is in each type of milk. Whole milk is highest in fat and skim is lowest; 1% plain, chocolate and strawberry milk are low in fat. Hold up whole milk and skim milk and ask the students which is better for your heart. Do this with different milks. Then compare whole milk and soda. Explain that even though whole milk has fat in it; it is still better for you than a soda because the milk has calcium and the soda only has sugar and no nutritive value. If available, show the chicken bone soaked in soda, which acts to decalcify the bone.

- Which milk in the cafeteria is the skim milk? This is a great choice, but the other white milk is 1% milk, which means that it has a just a little bit of fat in it. This is a healthy choice too!
- Let's talk about chocolate and strawberry milk. How is chocolate and strawberry milk made? The chocolate and strawberry milk at school is non-fat milk, so that means that they used the skim milk to make it.
 - Let's start with strawberry milk. How do you think it was made? Did you know that strawberry milk doesn't have ANY strawberries in it? So how do we make it taste like strawberry? A lot of sugar and some red strawberry flavoring are added to white milk to make it have a strawberry flavor.
 - What about chocolate milk? Do we have a chocolate cow? No! Chocolate milk is made by adding chocolate syrup (which has lots of sugar in it) to white milk.
 - Do you think that the strawberry milk and chocolate milk are good choices for your body? Both strawberry milk and chocolate milk have the same amount of calcium as white milk, which is really good. BUT, they also have a lot of added sugar. Let's see how much sugar is in one carton of strawberry and chocolate milk.
 - This is how much sugar we add to white milk to make it taste like strawberry and chocolate milk. That's a lot of sugar! Why is too much sugar bad for us? Too much sugar can lead to cavities and if you eat too much it can lead to weight gain. Drinking chocolate and strawberry milk is okay for our bodies every once in a while, but not every day or many times a day. That means that **skim** or **1% white** milk is the best choice for our bodies.
- Other dairy group foods such as yogurt and cheese should also be low-fat or fat-free to keep our hearts healthy while building strong bones and teeth.

Lactose Intolerance (Optional)

- Do you know anyone who cannot drink milk?
- Some people can't digest milk correctly and it makes them get an upset stomach – this is called "lactose intolerance". There are special milks called lactose-free milk. Some of these milks are made from cow's milk and some are made from plant sources such as rice, almonds or soybeans.
- There are also some things people with lactose intolerance can do to tolerate dairy products better:
 - Eating and drinking smaller amounts of dairy foods at a time
 - Drinking milk with meals or snacks
 - Eating hard cheeses and yogurt instead of other dairy foods.

Food Safety Moment

- REFRIGERATION
 - Remember when we talked about where foods can be stored? Today, I want to talk about the milk group foods, like milk, ice cream, yogurt, and cheese.
 - Should these foods be refrigerated or can we leave them on the counter? In the refrigerator.

Display milk cartons for 1% milk, chocolate milk, strawberry milk, and skim milk.

Show students sugar tubes with the amount of sugar for each or measure out the amount of sugar in each milk.

Show pictures of other types of milk.

- What if we left our milk or cheese out? What's the best way to know it has gone bad? Smell it, taste it, etc.

Wrap-Up

- Now that you know all about the dairy group, let's do a quick review. How do we keep our bones and teeth strong? We need to get plenty of calcium from what we eat and drink and we need to get plenty of exercise by moving the big parts of our bodies.
- What type of milk is best for our bodies? Skim milk or non-fat white milk---1% or low-fat milk is a good choice.

Challenge

- Now that you know all about the dairy group foods and how we need them to build strong bones and teeth, I have a challenge for you. I challenge you to drink or eat 3 low-fat foods from the dairy group every day. That could be as easy as some low-fat yogurt at breakfast, a carton of milk at lunch and a glass of milk at dinner. Or, low-fat milk on your cereal (spoon up and drink what is left behind after the cereal is gone), a slice of cheese at lunch, and a glass of milk with dinner. I am going to ask you about what foods you have been eating to get calcium for your bones and teeth the next time I come in.

Taste Test Ideas

- **Milk comparison test:** give the students a sample cup of skim milk and a cup with whole or 2% milk. "Label" the cups beforehand so you can tell the difference. Do not let the students know which types of milk they are drinking. After they taste both, see if they could tell a difference.
- **Pudding:** Make instant pudding with skim milk. Let the students take turns shaking - each student can shake 5 times.
- **Plant-based milks:** Soymilk (vanilla or chocolate flavored), rice milk, almond milk, etc.
- **Cheese:** String cheese or 2% milk cheese cubes with whole grain crackers.
- **Yogurt:** Low-fat yogurt with fruit and/or granola.
- **Bone Dip:** 1oz. dip mix, 2/3 cup reduced fat sour cream, 1 1/3 cup low-fat yogurt. Mix and chill. Serve with baby carrots and broccoli spears.
- **Yogurt Dip:** Fresh fruit chunks and vanilla yogurt for dipping.
- **Cheese Kabobs:** thread a cherry tomato or slice of bell pepper onto a toothpick with a cube of cheese; alternately use grapes or chunks of apple with the cheese
- **Yogurt Dressings with veggies to dip:**
 - **Honey Mustard Yogurt Dressing:** 1 cup plain yogurt, 3 tablespoons deli-style mustard, 2 teaspoons honey
 - **Cilantro Lime Yogurt Dressing:** 1 cup plain yogurt, 1 tablespoon minced cilantro, 1 tablespoon minced scallion, 2 tablespoon fresh lime juice, salt to taste
- **Red Pepper and Feta Dip:** In a food processor, puree 1 roasted red pepper, ½ pound feta cheese, ¼ teaspoon red pepper flakes, ¼ teaspoon paprika, ½ teaspoon lemon juice, and 2 tablespoons olive oil. Serve with whole wheat crackers or pita bread, or cucumber or celery sticks.
- **Tzatziki:** Mix together 1 cucumber (diced), 1 cup Greek yogurt, 1 small clove garlic (minced), ¼ cup chopped fresh mint and a pinch of salt. Serve with whole wheat pita or crackers, or veggies.
- **Parmesan Yogurt Dip:** Mix together 2 cups plain Greek yogurt, 1 small garlic clove (minced), the juice and zest of 1 lemon, ½ cup grated parmesan cheese, salt and pepper. Serve with carrot, cucumber or bell pepper slices.

- **Pineapple Frozen Yogurt:** Puree 1 ½ frozen bananas, 2 cups frozen pineapple chunks, ½ cup plain yogurt, 1 teaspoon lime zest.

Additional Activities

1. **Milking a cow:** have students stand and act out the process of milking the cow and skimming cream off of the milk.
2. **MOOve Your Body!:** Do you remember that moving our bodies and being active also helps build strong bones? Now we are going to do an activity about the Dairy group that helps our bones get stronger. Everybody stand up!
 - Reach for the ceiling if you like chocolate milk
 - Run in place if you like to drink milk with lunch at school
 - Pretend to swim in place if you like cereal with milk on it
 - Bend to the side if you like cheese on crackers
 - Squat down if you like string cheese for a snack
 - Twist your body if you like cheese on pizza
 - Hop in place if you like strawberry yogurt
3. **Milk Songs:** Have students do hand motions to the songs.
 - **Drink Your Milk** (Tune: Here We Go Around the Mulberry Bush)
Milk will build strong bones and teeth,
Strong bones and teeth, strong bones and teeth,
Milk will build strong bones and teeth,
We drink it everyday
 - **Drink, Drink, Drink Your Milk** (Tune: Row, Row, Row Your Boat)
Drink, drink, drink you milk
Night and morning too.
Building, Building bones and teeth,
Milk is good for you.
 - **Food for Farm to Table** (Tune: The Farmer in the Dell)
The farmer milks the cow, the farmer milks the cow, hi, ho the
dairy oh, the farmer milks the cow
The trucker drives the milk, the trucker drives the milk, hi, ho, the
dairy oh, the trucker drives the truck

Student Handouts

- Build Strong Bones: Get Your Calcium!
- Color Your Skeleton
- Milk Group Matching
- Dairy Group Word Search Puzzle
- Dairy Group Counting
- Dairy Group Spelling
- Where does milk come from? – Sequencing
- Healthy Snacks with Dairy Group Foods

Parent Handouts

- Got Your Dairy Today? 10 Tips
- Eat Smart—Try Low-fat or Fat-free Dairy
- Super Star Nutrition for Kids
- Parents-Be Your Child’s Partner in Healthy Bones
- Today in Nutrition Class - Dairy

Lesson Roadmap

- Review
- Mindgrabber
 - Chicken bones or laminated bones
- Discussion
 - Dairy group foods an important source of calcium; learn the foods
 - Calcium is needed for strong bones and teeth
 - What our bones and teeth do for us
 - How to build strong bones and teeth
 - Healthy choices in the Dairy group
 - Low-fat milk
 - How we get the fat out of the milk
 - Milk comes from a cow
 - Flavored milk has added sugar
- Activity
 - Song with motions
 - Read a book from the book list
- Wrap-up
- Challenge
- Taste-test

Books

- [Dem Bones](#)
- [A Kid's Book About Healthy Bones](#)
- [The Bones and Skeleton Book](#)
- [Milk From Cow to Carton](#) by Alik
- [Dairy](#) (a Rookie Read-About Health book)
- [From Grass to Milk](#) by Stacy Taus-Bolstad
- [Milk](#) by Dorothy Turner
- [From Milk to Cheese](#) by Shannon Zemlicka
- [The Amazing Milk Book](#) by Catherine Ross & Susan Wallace
- [Milk Comes From a Cow?](#) By Dan Yunk



Public Health

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