



Foods of the Month
Fun, Experiential Activities

Reduced Fat Dairy

Grades 3-5



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[#CommitToHealth](https://twitter.com/CommitToHealth)

RE **THINK** YOUR DRINK.

For **NUTRITION**, other beverages don't even come close.



	% Daily Value
Calcium	30
Vitamin D	25
Phosphorus	20
Riboflavin	20
Protein	16
Vitamin B-12	13
Potassium	11
Vitamin A	10
Niacin	10
Vitamin C	4

Sugar **12 g**

Calories 85

Serving Size = 8 ounces



	% Daily Value
Calcium	30
Vitamin D	25
Phosphorus	20
Riboflavin	20
Protein	16
Vitamin B-12	13
Potassium	11
Vitamin A	10
Niacin	10
Vitamin C	4

Sugar **24 g**

(Includes 2.8 tsp added sugar)

Calories 135

Serving Size = 8 ounces



	% Daily Value
Calcium	2
Vitamin D	0
Phosphorus	4
Riboflavin	6
Protein	2
Vitamin B-12	0
Potassium	12
Vitamin A	0
Niacin	2
Vitamin C	140

Sugar **21 g**

Calories 120

Serving Size = 8 ounces



	% Daily Value
Calcium	2
Vitamin D	0
Phosphorus	0
Riboflavin	2
Protein	0
Vitamin B-12	0
Potassium	2
Vitamin A	0
Niacin	0
Vitamin C	2

Sugar **28 g**

(Includes 6.7 tsp added sugar)

Calories 120

Serving Size = 8 ounces



	% Daily Value
Calcium	0
Vitamin D	0
Phosphorus	10
Riboflavin	0
Protein	0
Vitamin B-12	0
Potassium	2
Vitamin A	0
Niacin	0
Vitamin C	0

Sugar **32 g**

(Includes 7.6 tsp added sugar)

Calories 130

Serving Size = 12 ounces



	% Daily Value
Calcium	0
Vitamin D	0
Phosphorus	0
Riboflavin	0
Protein	0
Vitamin B-12	0
Potassium	0
Vitamin A	0
Niacin	0
Vitamin C	0

Sugar **0 g**

Calories 0

Serving Size = 8 ounces



	% Daily Value
Calcium	0
Vitamin D	0
Phosphorus	0
Riboflavin	0
Protein	0
Vitamin B-12	80
Potassium	2
Vitamin A	0
Niacin	30
Vitamin C	2

Sugar **22 g**

(Includes 5.3 tsp added sugar)

Calories 120

Serving Size = 12 ounces



	% Daily Value
Calcium	0
Vitamin D	0
Phosphorus	4
Riboflavin	0
Protein	0
Vitamin B-12	0
Potassium	0
Vitamin A	0
Niacin	0
Vitamin C	0

Sugar **33 g**

(Includes 7.9 tsp added sugar)

Calories 140

Serving Size = 12 ounces



	% Daily Value
Calcium	0
Vitamin D	0
Phosphorus	4
Riboflavin	0
Protein	0
Vitamin B-12	0
Potassium	0
Vitamin A	0
Niacin	0
Vitamin C	0

Sugar **0 g**

Calories 0

Serving Size = 12 ounces

COOTIE CATCHER

You are what you drink.

← Cut with scissors, fold and play!

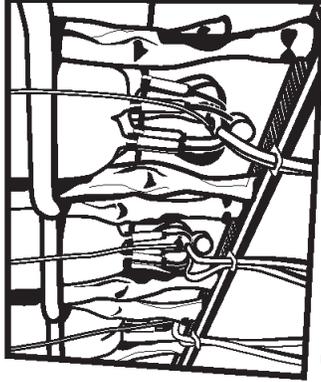
	<p>1</p> <p>One cow makes about 130 glasses of milk per day.</p>	<p>2</p> <p>Something cool and delicious is waiting for you in the lunchroom.</p>	
<p>8</p>	<p>Someone out there likes your smile.</p>	<p>Did you know milk is actually 90% water? The rest is vitamins, proteins and carbs.</p>	<p>3</p>
<p>Write your own:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p>to music.</p>	<p>You're going to live a long, healthy life.</p>	<p>4</p>
	<p>6</p> <p>Cows produce more milk when they listen to surprise very soon.</p>	<p>5</p> <p>You will receive a surprise very soon.</p>	

Choose SMART. Choose NATURAL. Choose MILK.

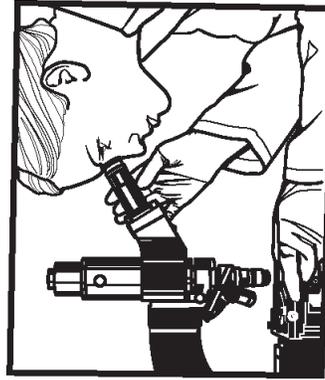
Milk from Cow to You!



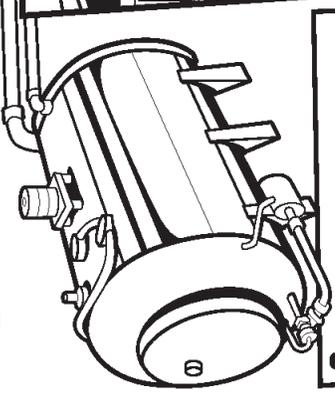
1. Milk comes from healthy, well-fed cows that are raised on dairy farms.



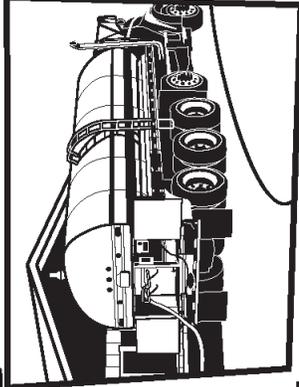
2. Before milking, a cow's udder is washed. Then she is milked by machine. This happens at least twice each day.



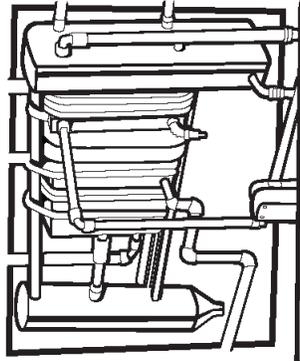
5. At the dairy plant, the milk is kept cold and tested many times for quality.



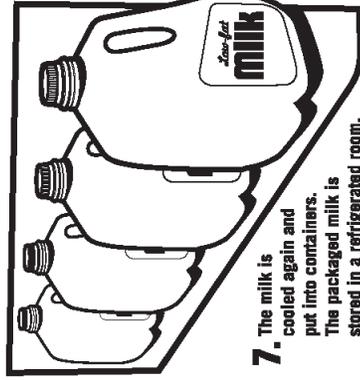
3. The fresh milk from the cow is pumped through pipes into a refrigerated tank in the farmer's milk house. There it is cooled and kept fresh and safe.



4. Each day a special insulated tanker truck comes to the farm to pick up the cold milk and deliver it to the dairy plant.



6. Then the milk is heated, or pasteurized. This is another important step to ensure that milk is safe and wholesome.



7. The milk is cooled again and put into containers. The packaged milk is stored in a refrigerated room.



8. Then the milk is loaded onto refrigerated trucks and delivered to schools, restaurants and supermarkets. Fresh, cold, nutritious milk – from the cow to you!

Magic Milk Science Experiment

Gather together:

- Plate
- ½-1 cup milk
- 1 drop of dishwashing liquid
- Food coloring
- Plate
- Toothpicks (optional)



Begin by pouring milk onto a plate. You will need to ensure you have enough milk to cover the base of the plate. Add a few drops of food coloring to the milk (see picture). This will give you a great opportunity to **talk about colors** and point out if any of them **mix together, they form new colors**.

Let the magic happen!!

Carefully add one drop of dishwashing liquid to the middle of the milk. Quickly a chemical reaction will occur, which will cause the colors to begin to spread away from the dishwashing liquid drop and begin mixing and churning the colors.



It's absolutely amazing and you can observe it continually moving and swirling for a decent amount of time! Slowly it mixes together and pushes the colors further away from the dishwashing liquid as they sink to the base of the plate.

Use a toothpick to encourage the swirling motion and see how the colors mix and new designs are created.

What is the science behind it, simply put?

Milk is made up of mostly water but it does contain vitamins, minerals, proteins and small droplets of fat. The fat and proteins are super sensitive to changes in the milk, and so when the dishwashing liquid is added, a chemical reaction occurs. The soap and fat work hard to join together, which causes the movement. When food coloring is added we are able to witness this chemical reaction occurring.

Going further

You might like to experiment further by adding an extra drop of soap to see if there is more movement. If you see more movement you've discovered that there was still more fat that hadn't combined with the soap. You might like to continue the process. Try it with non-fat, low-fat and whole milk.



Adapted from: <http://laughingkidslearn.com/magic-milk-science-experiment/>

THEY'RE CALLED **ESSENTIAL**
FOR A REASON.



- 1 Calcium
- 2 Vitamin D
- 3 Phosphorus
- 4 Riboflavin
- 5 Protein
- 6 Vitamin B-12
- 7 Potassium
- 8 Vitamin A
- 9 Niacin

Calcium 300 mg, 30% DV

Helps build and maintain strong bones and teeth. It helps reduce the risk of stress fractures and osteoporosis later in life. Plays a role in promoting normal blood pressure.

Vitamin D 100 IU, 25% DV

Helps absorb calcium for healthy bones.

Phosphorus 245 mg, 20% DV

Works with calcium and vitamin D to help keep bones strong.

Riboflavin 0.46 mg, 20% DV

Helps convert food into energy. Plays a vital role in the development of the central nervous system.

Protein 8 g, 16% DV

Helps build and maintain lean muscle. Contains all the essential amino acids (the building blocks for protein).

Vitamin B-12 1.2 mcg, 13% DV

Helps build red blood cells and helps maintain the central nervous system.

Potassium 370 mg, 11% DV

Helps regulate the balance of fluids in the body and plays a role in maintaining a normal blood pressure.

Vitamin A 490 IU, 10% DV

Important for good vision, healthy skin, and a healthy immune system.

Niacin 2 mg, 10% DV*

Helps the body's enzymes function normally by converting nutrients into energy.

Milk's nine essential nutrients can help kids and teens grow healthy and strong.

% Daily Values are based on a 2,000 calorie diet.
*As niacin equivalents

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NRPA National Recreation and Park Association

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got milk?

MilkPEP
Milk Processor Education Program

Low-Fat Dairy Spoon Experiment

Children/Adults/Seniors 2013

- **Who is this for?**
 - All children, adults and seniors.
- **Why is this a good idea?**
 - Drinking low fat dairy products are important for bone health.
- **Items Needed:**
 - 4 different milks:
 - Whole Milk
 - 2 Percent Milk
 - 1 Percent Milk
 - Fat Free Milk
 - 4 Plastic cups
 - 4 Spoons
- **Objective:**
 - To show participants the effects of saturated fats found in each milk and to note the difference. Learn about how saturated fats can affect your body.
- **Instructions:**
 - Prepare all four milk samples in a different cup. Place spoons in each cup and let them sit for two minutes. Then pull out the whole milk spoon and show participants how the fat sticks to the spoons and this is what it does in your bodies. Repeat steps with 2 percent, 1 percent and fat free milk. Note the difference on how both 1 percent and fat free milk does not stick the spoon.
- **Nutrition Lesson Plan:**
 - **Kids:** Fat-free and low-fat (1%) milk, yogurt, and cheese are all dairy foods. These foods have calcium which helps make both your bones and teeth stronger! Some good ideas to make are grilled cheese, adding fruit into your yogurt, making a smoothie and cheese and crackers.
 - **Adults:** Switch to fat-free or low-fat (1%) dairy foods to help maintain healthy blood pressure, manage weight, and maintain better bones. Try fat-free or low-fat (1%) dairy foods for all of the vitamins and minerals without all the fat.
 - **Seniors:** Your health has always been important to you and you are focused on it now more than ever. It's time to choose foods wisely and take care of yourself. Be a healthy you, switch to fat-free or low-fat (1%) dairy foods.



Champions for Change

Arizona Nutrition Network

www.eatwellbewell.org



Think About Your Drink

Choosing lowfat or fat free milk instead of sugary soft drinks is not only a more nutritious option, it may help you look and feel your best. Studies show that teenagers who drink milk instead of sugary drinks tend to be leaner and have better quality diets richer in essential nutrients. Remember to limit sugary soft drinks, which are on average, the number one source of calories and added sugars in a teen's diet. Instead, grab a nutrient-packed lowfat or fat free milk.

→ Part A: Just the Facts

You might think you know all the facts about what you drink – but do you? Take the true/false quiz below to see what you know. Visit the *Body By Milk* website (bodybymilk.com) to find the answers to any questions you're not sure about.

- On average, beverages supply nearly a quarter (22%) of calories to the diet. T F
- The average teenage girl consumes three times the amount of sugary beverages (soft drinks, fruit drinks, and sports drinks) as she does milk. T F
- Fifteen percent of an adult's height is added during the teen years. T F
- Chocolate milk provides the same nine essential nutrients as white milk. T F
- A specially-formulated sports drink is the best choice after exercise. T F
- Lowfat milk may offer an advantage compared to water or traditional sports drinks when it comes to staying hydrated after exercise. T F
- Most teens already get the milk they need. T F
- Only young kids need to drink milk. T F
- You need three servings of juice every day. T F
- Milk is packed with nine essential nutrients – including calcium, vitamin D, and protein. T F

→ Part B: Label Logic

You see them on every food or drink you buy, but do you know how to read a nutrition facts panel? Here's a quick guide to get the real facts on nutrition!

Sample Label for 1% Lowfat Milk

Nutrition Facts	
Serving Size 1 cup (8 oz) Servings Per Container About 8	
Amount Per Serving	
Calories 100 Calories from Fat 20	
% Daily Value*	
Total Fat 2.5g	4%
Saturated Fat 1.5g	8%
Trans Fat 0g	0%
Cholesterol 15mg	4%
Sodium 105mg	4%
Potassium 370mg	11%
Total Carbohydrate 13g	4%
Dietary Fiber 0g	0%
Sugars 13g	
Protein 8g	
Vitamin A	10%
Vitamin C	0%
Calcium	30%
Iron	0%
Vitamin D	25%
Riboflavin	20%
Niacin**	10%
Vitamin B-12	13%
Phosphorus	20%
Magnesium	7%

*Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

Start Here

Limit These Nutrients

Important Nutrients

These nutrients are not required on a label so they may not always be listed.

Quick Guide to % DV

5% or less is low
20% or more is high

→ Part C: Dare to Compare

Now check out the facts for yourself by comparing lowfat white milk with some of your other favorite beverages. Then, answer the following questions?

- Which drink has the most protein?
- Which drink provides the most vitamin C?
- Which drink provides the fewest nutrients?
- Which drink provides vitamin D?
- Which drink has the most sugars?

1% Lowfat Milk

Nutrition Facts	
Serving Size 1 cup (8 oz) Servings Per Container About 8	
Amount Per Serving	
Calories 100 Calories from Fat 20	
% Daily Value*	
Total Fat 2.5g	4%
Saturated Fat 1.5g	8%
Trans Fat 0g	0%
Cholesterol 15mg	4%
Sodium 105mg	4%
Potassium 370mg	11%
Total Carbohydrate 13g	4%
Dietary Fiber 0g	0%
Sugars 13g	
Protein 8g	
Vitamin A	10%
Vitamin C	0%
Calcium	30%
Iron	0%
Vitamin D	25%
Riboflavin	20%
Niacin**	10%
Vitamin B-12	13%
Phosphorus	20%
Magnesium	7%

100% Orange Juice

Nutrition Facts	
Serving Size 1 box (8 oz) Servings Per Container 1	
Amount Per Serving	
Calories 120 Calories from Fat 0	
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	0%
Cholesterol 0mg	0%
Sodium 0mg	0%
Potassium 440mg	13%
Total Carbohydrate 29g	10%
Dietary Fiber 1g	2%
Sugars 21g	
Protein 2g	
Vitamin A	2%
Vitamin C	140%
Calcium	2%
Iron	2%
Vitamin D	0%
Riboflavin	6%
Niacin**	4%
Vitamin B-12	0%
Phosphorus	4%
Magnesium	6%

Diet Cola

Nutrition Facts	
Serving Size 1 can (12 oz) Servings Per Container 1	
Amount Per Serving	
Calories 0 Calories from Fat 0	
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	0%
Cholesterol 0mg	0%
Sodium 30mg	1%
Potassium 30mg	1%
Total Carbohydrate 0g	0%
Dietary Fiber 0g	0%
Sugars 0g	
Protein 0g	
Vitamin A	0%
Vitamin C	0%
Calcium	0%
Iron	0%
Vitamin D	0%
Riboflavin	0%
Niacin**	0%
Vitamin B-12	0%
Phosphorus	4%
Magnesium	0%

Sports Drink

Nutrition Facts	
Serving Size 1 bottle (20 oz) Servings Per Container 1	
Amount Per Serving	
Calories 160 Calories from Fat 0	
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	0%
Cholesterol 0mg	0%
Sodium 240mg	10%
Potassium 90mg	2%
Total Carbohydrate 39g	1%
Dietary Fiber 0g	0%
Sugars 32g	
Protein 0g	
Vitamin A	0%
Vitamin C	4%
Calcium	0%
Iron	2%
Vitamin D	0%
Riboflavin	0%
Niacin**	6%
Vitamin B-12	0%
Phosphorus	6%
Magnesium	0%

Note: These nutrition facts labels are for educational purposes and not actual labels.
**Provided through niacin equivalents. Data from USDA National Nutrient Database for Standard Reference, Release 22.

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Foods of the Month
Fun, Experiential Activities

Nuts

Grades 3-5



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Nutty Science—A Lesson in Buoyancy

Gather together:

- A combination of unsalted nuts and seeds
- Two glasses
- Warm water
- Table salt
- Spoon or knife to mix in the salt



Have your children or students arrange the nuts and seeds by size. Then, fill two glasses with warm water. Add salt to one glass and stir to dissolve as much as you can (suggestion: 1/8 cup of salt to one cup of water). Have your children predict what will happen when they drop the nuts and seeds into the two types of water. Next, have the children drop one each of the same kind of nut or seed into each glass and discover if the nut or seed sinks or floats in the salted vs. plain water. They can keep a simple chart or tally to see if their predictions are correct.

Adapted from: <http://capriplus3.com/2014/11/nutty-science-lesson-in-buoyancy.html>

Learning about the Science of Nut Production!

Check out some fun activities you can do to explore some of the science of nut production. Some of these you can observe, some of these you may have to look up!

How many different kinds of nuts can you find in the playground or in the neighborhood?

Count the number of nuts, nutshells, acorn caps, husks, etc. from one tree to try to find out how many nuts it makes this year.

Count the number of squirrels active near a nut tree.

How far do they go to store food? How often? How many meters, kilometers, feet or miles do they travel carrying food in a day?

What kinds of squirrels are collecting the nuts, red or gray? Do both species store their winter food the same way? What happens if another animal finds their winter food supply? Are they likely to lose all of it?

Are there insects or other animals (besides squirrels) that eat nuts?

When do the seeds sprout, right away or in the spring? (This depends on the kind of tree.)

If you have a White Oak tree nearby, you will find that the acorns sprout soon after they reach the ground. Collect some of the acorns and grow them in pots of soil in the classroom. Figure out the percentage that sprout, chart their growth, figure out the percentage which survive, etc.

Find out about old-fashioned children's games such as conkers which used horse-chestnuts.

Do nut trees have fruit every year? Are there good years and bad years? Are all nut trees the same in this?

Some nuts can be eaten by people, others (like the horse-chestnut) are poisonous to people. Find out what kinds of trees have edible nuts in your area.

Adapted from: http://schoolsites.schoolworld.com/schools/ESP/student_life.cfm?subpage=295246

Walnut Trivia for Kids

1. How many inshell walnuts laid end-to-end would it take to go around the equator once?

*HINTS: The average inshell walnut is 1.5 inches across.
 The equator is 24,901 miles long.
 One mile is 63,360 inches long.*

2. How are walnuts harvested or removed from trees?
3. How many walnuts should you eat every day to promote good health?
4. Which country exports the most walnuts?



Walnut Trivia for Kids

ANSWERS

1. It would take over 1 billion inshell walnuts laid end-to-end to go around the equator one time. The exact number is 1,051,818,240 walnuts.
2. The nuts are removed from the trees by a mechanical shaker. After they have been shaken to the ground, walnuts are blown into a row to allow mechanical harvesters to pick them up for cleaning and hulling. (The "hull" is the outer green covering that protects the shell. The walnut meat is protected by the shell.)
3. Nutrition experts recommend eating a handful of walnuts every day to promote good health. Eating walnuts helps protect your heart and may help your brain, too.
4. The United States dominates world trade in walnuts. Over 70 percent of walnuts traded in the global marketplace are produced in the United States, in California. While many countries produce walnuts, most of these countries sell the walnuts to consumers within their own country. Consumers outside the U.S. have grown to love the fresh, sweet taste of California walnuts; this drives demand for the product and ensures good prices for California walnut growers.

Family of “Walnut” Shell Turtles



Gather together:

- 1 walnut for every 2 turtles (Because cracking the nuts doesn't always work perfectly, have extra on hand)
- Some card stock (any color)
- White construction paper
- Markers
- Glue
- Scissors
- Googly eyes

1. Start by cracking open your walnuts and cleaning out the nuts.
2. Place the shell on the card stock and draw a body, making 4 legs, a head and tail. Cut out and use this as a stencil.
3. Trace the stencil on the construction paper.
4. Color the turtle bodies any colors you want.
5. When they are all colored, cut out bodies.
6. Glue the shells onto the bodies, and glue on eyes.



Adapted from: <http://www.notimeforflashcards.com/2009/11/walnut-shell-turtles.html>