



**Foods of the Month**  
**Fun, Experiential Activities**

# **Reduced Fat Dairy**

## **Grades K-2**



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United States Department of Agriculture

Dairy

Mary  
Dairy



Sight words:  
has, make, she, can, likes, and

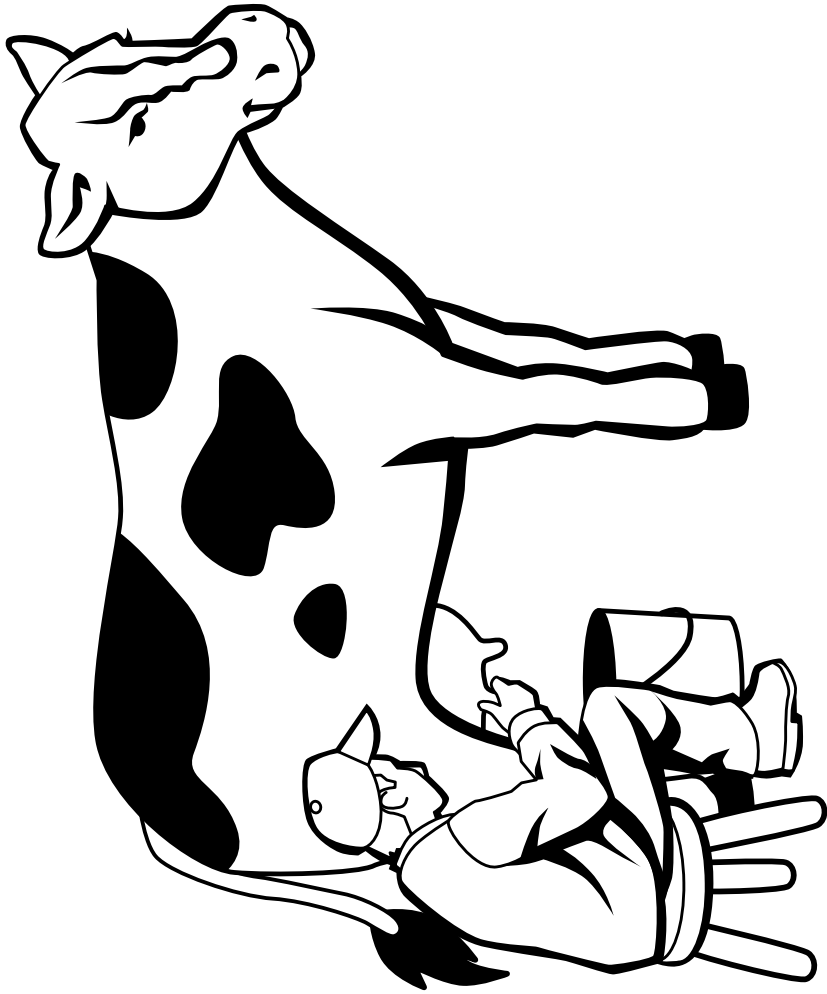


This book belongs to:

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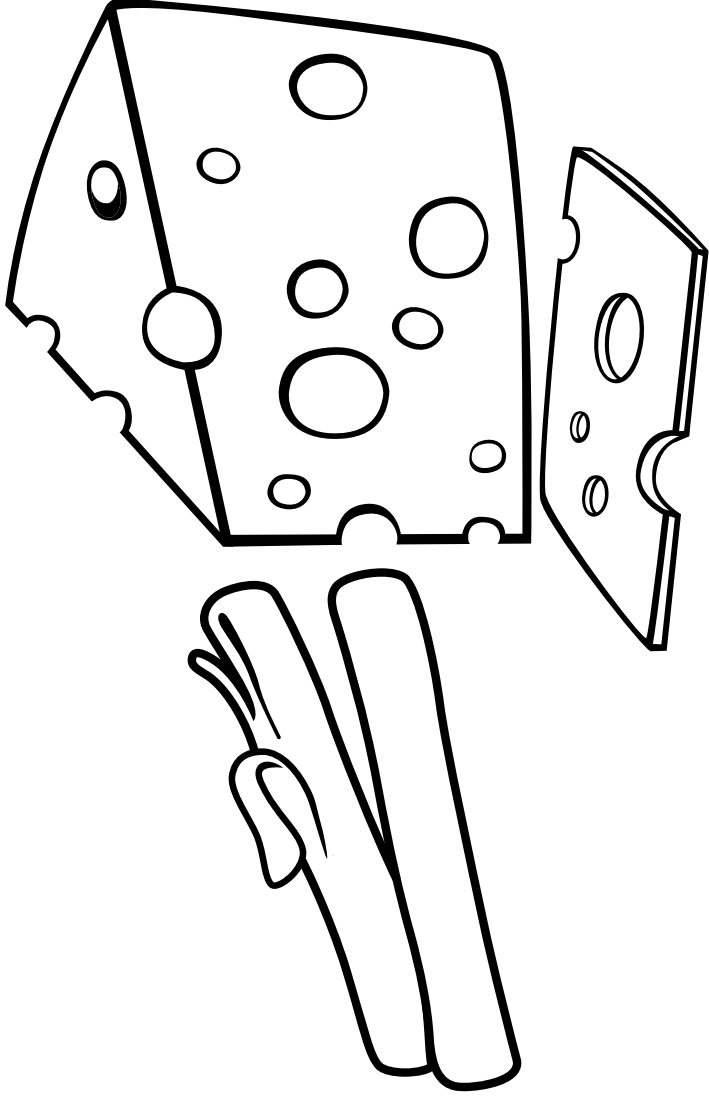
Dot has cows.



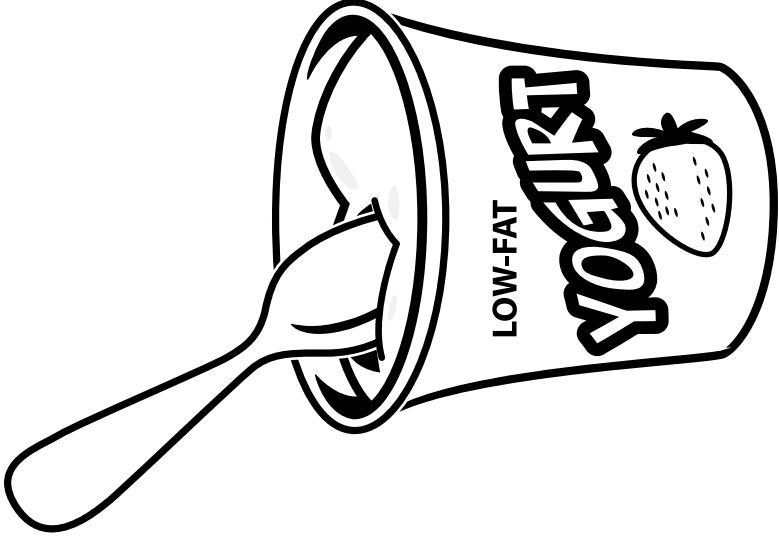
Cows make milk.



Dot has milk.



She can make cheese.



She can make yogurt.





Dot likes milk and cheese.



She likes yogurt.



Dot likes cows. Moo!





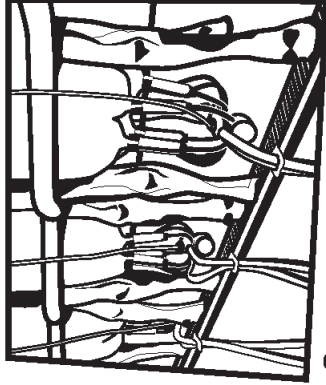
Discover other nutrition education materials developed under the U.S. Department of Agriculture's Team Nutrition initiative at: <http://teamnutrition.usda.gov>.



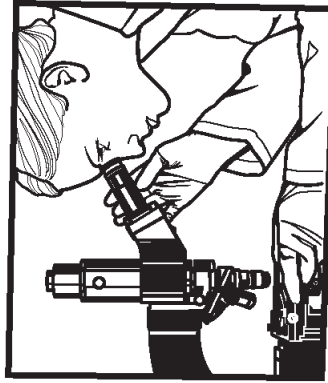
# Milk from Cow to You!



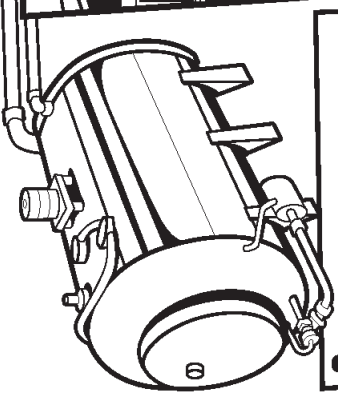
**1.** Milk comes from healthy, well-fed cows that are raised on dairy farms.



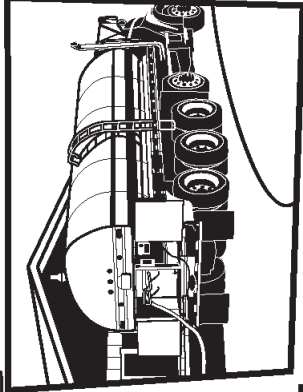
**2.** Before milking, a cow's udder is washed. Then she is milked by machine. This happens at least twice each day.



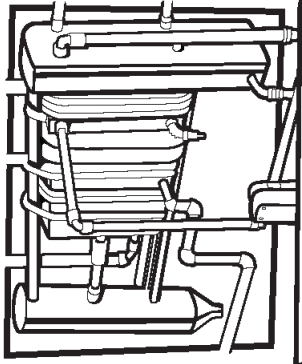
**5.** At the dairy plant, the milk is kept cold and tested many times for quality.



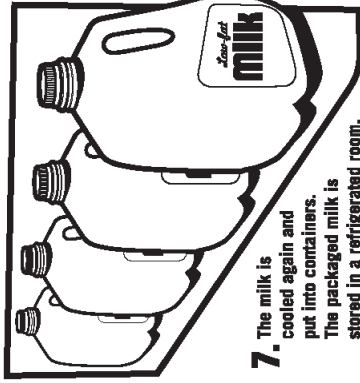
**3.** The fresh milk from the cow is pumped through pipes into a refrigerated tank in the farmer's milk house. There it is cooled and kept fresh and safe.



**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/>

# 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](http://www.eatwellbewell.org)







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# Nuts

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**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>



## Foods of the Month Fun, Experiential Activities

### Fun Squirrel Song!

Sing this fun song to the tune of “I’m a Little Teapot.”

I’m a little squirrel, fuzzy and gray.  
When fall comes, I gather nuts all day.  
So that when the winter comes, you see,  
I’ll have food for my family and me.

Adapted from: <http://twigglemagazine.com/November-activities/fall-movement-activity.html>



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