

The Calcium is Right

Objectives:

- Students will be able to name three examples of calcium-rich foods and state one way their calcium recommendation is different from adults.
- Students will compare the calcium content in a variety of foods with their daily calcium needs.

Materials Needed:

- Bag of cotton balls or packing peanuts (500+)
- Clear resealable bags
- Non-perishable foods, clean empty food containers, or Dairy Council food models. (Food models, estimated cost \$40, may be ordered by calling 1-800-426-8271.)

Advanced Preparation:

1. Label a bag Calcium needs for 9-18 year olds. Add 130 cotton balls.
2. Label a bag Calcium needs for adults 19-50. Add 100 cotton balls.
3. For each food, one cotton ball is equal to 10 milligrams of calcium. Place in plastic bag and label to show for example. One cup of milk has 300 milligrams of calcium; count 30 cotton balls and label bag 300 milligrams. Do not label the bag with the food name, which is what students will do during the game.

Suggested foods to count out and label

Bag	Food	Portion Size	Mg. Calcium	# of Cotton Balls
A	Milk	1 cup	300	30
B	Yogurt	1 cup	400	40
C	Cheese Pizza	1 slice	220	20
D	Broccoli	1/2 cup	50	5
E	Orange	1 medium	50	5
F	Corn Tortilla	1 shell	40	4
G	Low-fat (1%) or skim or chocolate milk	1 cup	300	30
H	Low-fat cheese	1/2 oz	300	30
I	Low-fat or fat-free yogurt	1 cup	310	31
J	Low-fat or fat-free pudding or custard	1 cup	150	15
K	Nonfat or low-fat cottage cheese	1 cup	60	6
L	Macaroni and cheese	1/2 cup	180	18
M	Frozen Yogurt	1/2 cup	110	11

Continued on back

Lesson:

1. Begin lesson by showing students the bags of cotton balls. Tell them one bag represents the calcium requirements for adults and the other for children. See if they can guess which bag is for the adult and which one is for the child. Discuss the calcium requirements for students ages 9-18 of 1300 milligrams per day. Compare to the calcium requirement for adults 19-50 of 1000 milligrams per day. Ask students why they think there is a difference?
2. Explain that the calcium needs for 9-18 year olds is high because this is the time when bones are in their growth phase. Nearly half of all bone mass is formed and about 15% of adult height is added at this time. Nutrition experts recommend that 9-18 year olds consume 1300 milligrams of calcium a day. Four cups of milk or four containers of milk at school provide this amount of calcium. Other foods provide calcium, too. The 2005 U.S. Dietary Guidelines recommend three servings of milk or dairy products a day for children over eight years of age and adults.

“The Calcium is Right” game:

1. A matching game is created like the students might see on the television show *The Price is Right*. Call this game “The Calcium is Right.” Explain that one cottonball is equal to ten milligrams of calcium.
2. Ask a volunteer to match the food models/ packages with the bags of calcium. Show students which ones are correct and have another volunteer come to the front and rematch the remaining foods with the bags of calcium. Continue until all are matched correctly. Encourage the other students to help the volunteer just like the audience would do in *The Price is Right*.

Apply:

1. After the game, post the bag of cottonballs with the food models or packages for all to see the correct measurements.
2. **Follow-up Questions:** Which foods contained more calcium than you thought? Which foods contained less calcium than you thought?
3. **Power Panther says “Eat calcium rich food EVERY DAY!”**

Extend the Activity:

- **Social Studies:** Research how people in different countries identify milk, cheese and yogurt. Do they have different words for them? Share any interesting facts you find along the way. Make sure each student researches a different country. Share your findings with the class.