Calcium in Foods

Calcium Activity

Objective:
Investigate good sources of calcium, such as calcium-rich beverages.

Age:
10 years and older.

Length:
Approximately 20 to 25 minutes.

Supplies and Materials:
1. Food labels, rubber food models, cardboard food models, or actual foods. See chart for items. Note: If you have a food label with a different amount of calcium than is on the instruction card, change the card to read the same.

2. Clear plastic re-sealable bags (gallon, quart, and sandwich sizes).

3. One bag of miniature marshmallows. You may choose to use white packing peanuts as an alternative. These eliminate the confusion of marshmallows containing calcium. If you use packing peanuts instead, change the directions and take home slips accordingly.

4. Markers that write on plastic.

5. Plastic bag with 130 marshmallows (or packing peanuts) labeled as follows: “Calcium needed each day - 1,300 milligrams.”

6. Calcium in Foods Instruction Cards, cut apart – one card per group.

Special Considerations:
Reading and Math Assistance: Assign a few adults or older teens to rotate among the groups to help them determine number of marshmallows to place in their bags.

Activity Directions:
1. Share that calcium is important for bone health and that kids 9 to 18 years of age need 1,300 milligrams of calcium or more daily.

2. Hold up bag with 130 mini-marshmallows (or packing peanuts). Emphasize that marshmallows do not contain calcium; they visually represent calcium for this activity. If
each marshmallow represents 10 milligrams of calcium, the bag represents 1,300 milligrams of calcium.

3. Divide the group into teams of two or three people. Ask each team to make bags showing the calcium content in some common food items. Instruction cards provide the following information:

* each marshmallow (or packing peanut) represents 10 milligrams of calcium

* place the appropriate number of marshmallows (or packing peanuts) in sandwich-sized bags to represent milligrams of calcium in the food (divide milligrams by 10 or remove one zero from the milligrams of calcium listed on the card)

* label the bag with the number of marshmallows (or packing peanuts) and milligrams of calcium (the bags are not labeled with the food item so you may need to refer to this list for the remainder of the activity)

<table>
<thead>
<tr>
<th>Food item</th>
<th>Serving Size</th>
<th>Milligrams of Calcium*</th>
</tr>
</thead>
<tbody>
<tr>
<td>yogurt</td>
<td>8 ounces or 1 cup</td>
<td>300 mg</td>
</tr>
<tr>
<td>milk, 1% or lowfat</td>
<td>8 ounces or 1 cup</td>
<td>300 mg</td>
</tr>
<tr>
<td>hard cheeses such as Cheddar, Colby or Swiss</td>
<td>1 ounce cube or slice</td>
<td>190 mg</td>
</tr>
<tr>
<td>canned sardines with bones</td>
<td>1 ounce</td>
<td>110 mg</td>
</tr>
<tr>
<td>vanilla ice cream</td>
<td>½ cup</td>
<td>95 mg</td>
</tr>
<tr>
<td>milk chocolate candy bar</td>
<td>1 ½ ounces</td>
<td>85 mg</td>
</tr>
<tr>
<td>cottage cheese</td>
<td>½ cup</td>
<td>70 mg</td>
</tr>
<tr>
<td>macaroni and cheese</td>
<td>½ cup</td>
<td>60 mg</td>
</tr>
<tr>
<td>baked beans</td>
<td>1/3 cup</td>
<td>50 mg</td>
</tr>
<tr>
<td>orange</td>
<td>1 medium</td>
<td>50 mg</td>
</tr>
<tr>
<td>bread</td>
<td>1 ounce slice</td>
<td>30 mg</td>
</tr>
<tr>
<td>cola-type soft drink</td>
<td>12 ounces</td>
<td>10 mg</td>
</tr>
</tbody>
</table>

* These amounts are rounded and represent averages from the USDA Nutrient Database. When available, you can use the food label. If milligrams are not listed, you can determine calcium from the label by adding a zero to the Percent Daily Value. A food that provides 8 percent of the Daily Value for calcium would have 80 milligrams of calcium. This trick works only for calcium since the Daily Value is based on 1000 milligrams.

4. Once complete, place all the food items in one location so everyone can see them. Ask each group to show their bag and tell the number of marshmallows and milligrams of calcium. Let other participants guess what food item this represents.
5. Briefly review by asking participants to list the most calcium-rich foods. When discussing yogurt, ask participants to share some of their favorite flavors. When discussing cheese, ask participants to share some of their favorite kinds.

**Variation:** Prepare the marshmallow/packing peanut bags ahead of time and set up a matching game.

**Take Home Tidbit**
Take home slip says the following:

“Ask me about calcium-rich foods and how we used marshmallows at the WIN Kids Fun Day.”

**Source:** Wardlaw, Mary Kay. *BONES.* WIN Kids Lesson. Wellness IN the Rockies, University of Wyoming. 2011.