Take the Calcium Challenge!
“Power of 3” Planner

Power up your day with 3-Every-Day – that’s three servings of milk, cheese or yogurt for stronger bones and better bodies. This planner offers dairy-licious ways to pique your palate and pack a nutrient punch every day of the week. Try milk, cheese or yogurt in fat free and lowfat varieties to meet your taste and nutritional needs. For an easy way to recall serving sizes, remember 1 cup of milk, 1 cup of yogurt and 1-1 1/2 ounces of natural cheese. “Bone” Appetit!

Monday

**Breakfast**
- **Breakfast Smoothie:** blend 1 cup of milk or yogurt, fruit and ice cubes

**Lunch**
- **Pizza Roll Up:** roll flour tortilla with 1-2 slices of part-skim Mozzarella cheese and tomato sauce for dipping

**Snack**
- **Yo On-the-Go:** pick up a 10-ounce bottle of cherry-flavored, drinkable yogurt

Tuesday

**Lunch**
- **Chicks Mix:** combine 1 cup of plain yogurt and lowfat Ranch dressing mix for a dip with baked chicken tenders

**Snack**
- **Cheesy Popcorn:** toss 1/4 cup of tangy lowfat Colby cheese shreds with popcorn

**Dessert**
- **Orange Milkshake:** freeze 1 cup of lowfat orange flavored milk in popsicle container

Wednesday

**Breakfast**
- **Waffles That Wow:** top whole wheat waffles with 1 cup of strawberry yogurt and berries

**Dinner**
- **Cheesy Mac:** bake a single serving of macaroni and top with 2 tablespoons of grated, robust Parmesan

**Dessert**
- **Mousse Madness:** stir together 8 ounces of lowfat chocolate milk and 1 heaping tablespoon of whipped topping

Thursday

**Breakfast**
- **Milk Steamer:** warm up 1 cup of flavored milk sprinkled with cinnamon

**Snack**
- **Super Snack:** dunk fresh veggie sticks into 1 cup of yogurt mixed with taco seasoning

**Dinner**
- **Ham and Cheese Quesadilla:** layer 1/4 cup of shredded reduced fat Monterey Jack with slices of lean ham in tortillas

Friday

**Breakfast**
- **Egg-cellent Cheese Omelet:** melt 1-2 slices of Cheddar or Provolone cheese in egg white omelet

**Lunch**
- **Topped Tater:** spoon lowfat chili and 1 cup of plain yogurt atop baked potato

**Snack**
- ** Pretzel Wrap:** roll a fat free pretzel rod in 1-2 slices of reduced fat Swiss cheese
I, ___________________________________ hereby promise to maintain healthy exercise habits, increase my intake of calcium and to share with others what I have learned. I will make it a goal to make my bones strong and healthy to insure good health as I age.
Dear Group Leader:

The New England Dairy Promotion Board, sponsor of the Calcium Challenge patch, is so pleased that you have chosen to complete this patch with your group!

The Calcium Challenge patch was originally created for Girl Scouts by eighth grader Megan Novak of Troop 369 in Birmingham, Alabama. Megan designed the program as her entry for the 2004 Big Bones Bash Calcium Challenge Contest sponsored by Vermont’s Cabot Creamery for middle school students in the Birmingham area. The challenge for the students was to create a project that would effectively communicate the importance of calcium to their peers. Megan’s efforts won her first prize, $500, and a chance for her work to help improve the health of thousands of girls.

While this program was initially created for Girl Scouts, we encourage all Scout Troops, School, and Community Groups to participate! Because of the vital importance of calcium to youth, you may want to encourage your group to complete more than the minimum number of requirements to earn the patch. If your group enjoys the activities in this booklet, be sure to check out more Educational offerings and nutritional information on Cabot and the New England Dairy & Food Council websites.

If you need any assistance as you work on the patch please feel free to reach out to healthinfo@cabotcheese.coop. Once you’ve completed the program, please fill out the survey on our website to receive your free patches and treat pack! emcspiritt.polldaddy.com/s/cabots-calcium-patch-survey

The New England Dairy & Food Council and Cabot Creamery Co-operative hope you’ll enjoy learning about ways to keep bones strong for a healthy future.

Healthy Regards,

Sara Wing

Director, Wellness & Community Programs
Cabot Creamery Co-operative
Group Leader: The following is a list of activities to complete the Calcium Challenge Patch. Additional information can be found throughout the booklet. We hope you and your group enjoy learning about the importance of calcium in their daily diets!
Note: The first three activities are required for all age levels.

There are different numbers of minimum activities that must be completed for each age group:

Age 7-9: Complete first 3 activities as well as 2 or more others listed.
Age 9-11: Complete first 3 activities as well as 5 or more others listed.
Age 11-16: Complete first 3 activities as well as 7 or more others listed.

Group Leader Requirement: Have your group complete the survey provided on page 3 and follow instructions for receiving patch.

1. Try a weight bearing activity such as hopscotch, hiking, soccer, jump roping or volleyball. (See packet for information on weight bearing activities and weight bearing activities worksheet).

2. Keep a log of calcium and calcium fortified products you eat for one week. Decide as a group if your intake meets the recommended requirements.

3. Share information you have learned about the importance of calcium and calcium deficiencies to another group of at least six people. Include in your presentation some form of a visual aid.

4. Make a SWAP symbolic of what you have learned through this patch. Exchange the SWAP with the group you share your knowledge with.

5. Create an advertisement in the form of a skit for any products high in calcium. Perform the skit in front of parents, other scouts, or on a Scout’s own.

6. Have a food tasting party of calcium rich foods. Try at least one food you have never sampled before.
Complete a web quest on Osteoporosis and Rickets. Fill in the Web Quest Worksheet (on Pg. 19) as you go. The websites given should provide all of the answers, however feel free to use other websites. Share your results with others!

Using a published menu from your school or a restaurant, highlight the foods that offer calcium (not drinks). Write a letter to the school lunch providers or restaurant manager either praising them for the amounts of calcium sources within their menu or offering suggestions to offer more high calcium rich foods to their menu.

Complete the Crossword Puzzle and the Word Scramble on healthy bones.

Find out what “lactose intolerant” means and what adjustments a person who is lactose intolerant needs to make in their diet to insure they are getting the needed amount of calcium. Make a list of foods that people with this condition can consume safely.

Make a collage of calcium rich or calcium fortified foods from old magazines. Share the collage with your family and have your family select one of the foods to eat with a meal. Also complete the Calcium Rich Foods worksheet.

Cut a bone pattern from both a sponge and a milk carton. Notice the visible differences between them (the porous sponge and the smooth flexible milk carton). Discuss how the sponge represents a bone that formed with calcium deficiencies and now has osteoporosis. The bone can be compressed (to represent height shrinkage) and is more likely to be broken (show how easily it tears). Discuss other health issues that result from osteoporosis. Then compress the plastic milk carton bone which represents a calcium healthy bone. Note how it can withstand greater pressures and is less likely to be broken (try to tear). Discuss the prevention that can be taken against osteoporosis.

Examine, compare and contrast different kinds of food labels. Discuss differences between similar food labels.

Read the page on the symbolic features in the patch design. Create your own patch (in any media you wish) with symbolic features. Explain to your fellow group members why you picked the design you did and its symbolism.

Make an edible pictograph that shows the different calcium intake numbers (in milligrams) for different age groups given on “Why You Should Increase Your Calcium Intake” page. Use a product high in calcium, such as pieces of Cabot cheddar cheese, to depict the different levels and after a brief discussion of the graph, eat your graphs!!
• Weight bearing activities build up bone cells to make bones stronger.

• It is suggested that people participate in weight bearing activities, or activities where gravity works against their bones and muscles at least 3 times a week.

• www.bones.nih.gov/health-info/bone/bone-health/exercise/exercise-your-bone-health explains why some activities are better weight bearing activities than others: “The best exercise for your bones is the weight-bearing kind, which forces you to work against gravity. Some examples of weight-bearing exercises include weight training, walking, hiking, jogging, climbing stairs, tennis, and dancing. Examples of exercises that are not weight-bearing include swimming and bicycling. Although these activities help build and maintain strong muscles and have excellent cardiovascular benefits, they are not the best way to exercise your bones.”

• Swimming and bicycle riding are excellent for cardiovascular fitness, but are not the best choice of exercises to build bone.

• Participating in weight bearing activities also helps to improve heart health, improve muscle strength and tone and maintain balance and coordination.

• One way to incorporate bone-healthy exercise is to use the LIVE plan:

L Load or weight-bearing exercises make a difference to your bones.

I Intensity builds stronger bones.

V Vary the types of exercise and your routine to keep you interested.

E Enjoy your exercises. Make exercise fun so you will continue into the future!
Weight Bearing Exercise

Any activity that is done on your feet and works your bones and muscles against gravity

Make a list of weight bearing activities:

- Hiking
- Dancing
- Jump Roping
- Soccer
- 
- 
- 
- 
- 

Swimming and bicycle riding are NOT weight bearing activities!

Why is swimming NOT a weight bearing activity?

________________________
________________________
________________________
**Calcium Intake**

**Why You Should Increase Your Calcium Intake**

- In order to reach peak bone density, calcium and Vitamin D must be consumed to insure strong healthy bones.

- Calcium helps promote weight loss and lowers blood pressure.

- Calcium reduces risks of osteopenia, which can lead to osteoporosis.

- 9 out of 10 women and 3 out of 4 teenagers do not consume enough calcium.

- Adults begin to lose calcium, so a lot of calcium needs to be built up during teen years.

- It is impossible to make up for the calcium you didn’t consume as a child in your adult years when it is needed.

- People dieting can even maintain a high calcium intake while on a low carbohydrate, low sodium or low fat diet.

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**The Academy of Nutrition and Dietetics recommends the following calcium intake by age group:**

Create your own table like this (only edible!) Make a key and pick a certain size food (i.e. cheese) to represent a certain number of milligrams.

<table>
<thead>
<tr>
<th>KEY</th>
<th>1-3</th>
<th>4-8</th>
<th>9-18</th>
<th>19-50</th>
<th>51+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age: Calcium Intake:</td>
<td>700mg/ per day</td>
<td>1,000mg/ per day</td>
<td>1,300mg/ per day</td>
<td>1,000mg/ per day</td>
<td>1,200mg/ per day</td>
</tr>
</tbody>
</table>

One Cheese equals 200mg of Calcium
Calcium Intake Info

Important Calcium Information

🌟 Students need to aim to intake up to 1,300 milligrams or 130% daily value of calcium a day.

🌟 “Daily calcium intake must be split into sections, because a human’s body will not absorb more than 50% total daily value of calcium at a time.” – Dr. Lillian Israel, M.D., children’s physician at Brookwood Medical Center, in Birmingham, Alabama.

🌟 During each intake of calcium, the amounts of calcium should be paired up with Vitamin D, a nutrient vital for the absorption of calcium.

🌟 Calcium levels in fat free or low-fat versions of many types of food have the same amount of calcium as regular foods, but reduced fat and calories.

🌟 Foods that are calcium fortified (have added calcium) are fine to increase calcium intake, but should NOT be the main source.

🌟 Students ages 9-18 are the prime age for building peak bone density.

Suggestions to Increase Calcium Intake

🌟 Make a smoothie with Greek yogurt.

🌟 Melt cheese on a bagel, or eat bagels with cream cheese.

🌟 Add milk to hot cereals, such as oatmeal.

🌟 Eat vegetables that are high in calcium, like broccoli and kale.

🌟 Drink calcium-fortified orange juice for snack.

🌟 Add cheese to sandwiches, burgers, and pizzas.

🌟 Eat yogurt, either by itself, with granola, or in a smoothie.

🌟 Eat pudding.

🌟 Freeze drinkable yogurt, then eat.

🌟 Add almonds to traditional trail mix.

🌟 Grate cheese and sprinkle over popcorn or tortilla chips.

🌟 Buy milk or calcium-fortified juice at school to drink with lunch.

🌟 Top baked potatoes with grated low-fat cheese, sour cream, broccoli, or plain yogurt.

🌟 Try tofu in your next stir-fry or tacos.

Check out more calcium-rich snack ideas here:
cabotcheese.coop/recipes
## Calcium in Food

### High Calcium Foods

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Serving Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk, Yogurt &amp; Cheese Group</td>
<td></td>
</tr>
<tr>
<td>milk (skim, 1%, 2%, whole)</td>
<td>1 cup</td>
</tr>
<tr>
<td>chocolate</td>
<td>1 cup</td>
</tr>
<tr>
<td>milkshake</td>
<td>1 cup</td>
</tr>
<tr>
<td>yogurt</td>
<td>1 cup</td>
</tr>
<tr>
<td>pudding</td>
<td>1 cup</td>
</tr>
<tr>
<td>custard</td>
<td>1 cup</td>
</tr>
<tr>
<td>cheese, natural unprocessed</td>
<td>1.5 ounces</td>
</tr>
<tr>
<td>Meat, Poultry, Fish, Dry Beans, Eggs &amp; Nuts Group</td>
<td></td>
</tr>
<tr>
<td>sardines with bones</td>
<td>6 each</td>
</tr>
<tr>
<td>Fruit Group</td>
<td></td>
</tr>
<tr>
<td>orange juice with added calcium</td>
<td>1 cup</td>
</tr>
</tbody>
</table>

### Medium Calcium Foods

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Serving Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk, Yogurt &amp; Cheese Group</td>
<td></td>
</tr>
<tr>
<td>cottage cheese</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>cream soup</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>frozen yogurt</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>ice cream</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>processed cheese slices</td>
<td>1 ounce</td>
</tr>
<tr>
<td>Meat, Poultry, Fish, Dry Beans, Eggs &amp; Nuts Group</td>
<td></td>
</tr>
<tr>
<td>refried beans</td>
<td>1 cup</td>
</tr>
<tr>
<td>tofu with added calcium</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>almonds</td>
<td>1/4 cup</td>
</tr>
<tr>
<td>blue crab, cooked, unpicked</td>
<td>1 cup</td>
</tr>
<tr>
<td>canned salmon with bones</td>
<td>2 ounces</td>
</tr>
<tr>
<td>Fruit Group</td>
<td></td>
</tr>
<tr>
<td>dried figs</td>
<td>5 each</td>
</tr>
<tr>
<td>Vegetable Group</td>
<td></td>
</tr>
<tr>
<td>broccoli</td>
<td>1 cup</td>
</tr>
<tr>
<td>mustard greens</td>
<td>1 cup</td>
</tr>
<tr>
<td>kale</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>bok choy</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>turnip greens</td>
<td>1/2 cup</td>
</tr>
</tbody>
</table>

Remember, you get more calcium by eating HIGH calcium foods:
- 3 medium calcium servings = 1 high calcium serving.
- That means the amount of calcium in 3 cups of broccoli = the amount of calcium in 1 cup of milk.
# Amount of Calcium

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Serving Size</th>
<th>Calcium (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Milk, Yogurt &amp; Cheese Group</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plain yogurt, 2%</td>
<td>1 cup</td>
<td>415</td>
</tr>
<tr>
<td>Nonfat dry milk</td>
<td>1/3 cup</td>
<td>280</td>
</tr>
<tr>
<td>Skim milk</td>
<td>1 cup</td>
<td>302</td>
</tr>
<tr>
<td>Buttermilk</td>
<td>1 cup</td>
<td>285</td>
</tr>
<tr>
<td>Mozzarella cheese, part-skim</td>
<td>1 oz</td>
<td>207</td>
</tr>
<tr>
<td>Ricotta cheese, part-skim</td>
<td>1/4 cup</td>
<td>168</td>
</tr>
<tr>
<td>Cottage cheese, 2%</td>
<td>1 cup</td>
<td>155</td>
</tr>
<tr>
<td>Pudding (with skim milk)</td>
<td>1/2 cup</td>
<td>133</td>
</tr>
<tr>
<td>Parmesan cheese</td>
<td>1 tbsp</td>
<td>69</td>
</tr>
<tr>
<td>Cheddar cheese</td>
<td>1 oz</td>
<td>204</td>
</tr>
<tr>
<td><strong>Bean/Grain Products</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waffle/pancake (milk, egg added)</td>
<td>1</td>
<td>179</td>
</tr>
<tr>
<td>Tofu added calcium</td>
<td>3 oz</td>
<td>150</td>
</tr>
<tr>
<td>English muffin (enriched)</td>
<td>1</td>
<td>96</td>
</tr>
<tr>
<td>Soybeans</td>
<td>1/2 cup cooked</td>
<td>88</td>
</tr>
<tr>
<td>Corn muffin</td>
<td>1 medium</td>
<td>34</td>
</tr>
<tr>
<td>Pita bread (enriched)</td>
<td>1 pocket</td>
<td>52</td>
</tr>
<tr>
<td>Fortified whole grain cereal</td>
<td>3/4 cup</td>
<td>48</td>
</tr>
<tr>
<td>Corn tortilla</td>
<td>one 6 inch</td>
<td>53</td>
</tr>
<tr>
<td>Whole wheat dinner roll</td>
<td>1 small</td>
<td>49</td>
</tr>
<tr>
<td>Brown rice</td>
<td>1 cup</td>
<td>20</td>
</tr>
<tr>
<td><strong>Vegetables / Fruit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhubarb</td>
<td>1 cup</td>
<td>348</td>
</tr>
<tr>
<td>Mustard greens</td>
<td>1/2 cup</td>
<td>104</td>
</tr>
<tr>
<td>Kale</td>
<td>1 cup</td>
<td>179</td>
</tr>
<tr>
<td>White beans</td>
<td>1 cup</td>
<td>170</td>
</tr>
<tr>
<td>Beet greens</td>
<td>1 cup</td>
<td>165</td>
</tr>
<tr>
<td>Broccoli</td>
<td>1/2 cup</td>
<td>72</td>
</tr>
<tr>
<td>Okra</td>
<td>1/2 cup</td>
<td>40</td>
</tr>
<tr>
<td>Rutabagas</td>
<td>1 cup</td>
<td>72</td>
</tr>
<tr>
<td>Green beans</td>
<td>1 cup</td>
<td>58</td>
</tr>
<tr>
<td>Lima beans</td>
<td>1 cup</td>
<td>50</td>
</tr>
<tr>
<td>Orange</td>
<td>1 medium</td>
<td>52</td>
</tr>
<tr>
<td>Cabbage</td>
<td>1 cup</td>
<td>47</td>
</tr>
<tr>
<td><strong>Nuts</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Almonds</td>
<td>2 oz</td>
<td>150</td>
</tr>
<tr>
<td><strong>Seafood</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salmon without bones</td>
<td>3-4 oz</td>
<td>13</td>
</tr>
<tr>
<td>Salmon with bones</td>
<td>3-4 oz</td>
<td>225</td>
</tr>
<tr>
<td>Oyster</td>
<td>3 1/2 oz</td>
<td>100</td>
</tr>
<tr>
<td>Clams</td>
<td>1/2 cup</td>
<td>74</td>
</tr>
<tr>
<td>Shrimp</td>
<td>3 1/2 oz</td>
<td>98</td>
</tr>
<tr>
<td>Haddock</td>
<td>3 1/2 oz</td>
<td>42</td>
</tr>
</tbody>
</table>

Check out: www.nof.org/patients/treatment/calciumvitamin-d
Keep a log of calcium rich or calcium fortified products you eat each day. Make sure you are meeting the daily requirements. List the product, the amount per serving and the amount consumed. The total at the end of each day for students should be 1,300mg or 130%.

**MONDAY:**

Breakfast:

Lunch:

Dinner:

**TOTAL FOR DAY:**

**TUESDAY:**

Breakfast:

Lunch:

Dinner:

**TOTAL FOR DAY:**

**WEDNESDAY:**

Breakfast:

Lunch:

Dinner:

**TOTAL FOR DAY:**
<table>
<thead>
<tr>
<th>Day</th>
<th>Breakfast</th>
<th>Lunch</th>
<th>Dinner</th>
<th>TOTAL FOR DAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>THURSDAY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRIDAY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SATURDAY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUNDAY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Keep a log of calcium rich or calcium fortified products you eat each day. Make sure you are meeting the daily requirements. List the product, the amount per serving and the amount consumed. The total at the end of each day for students should be 1,300mg or 130%.

### MONDAY:

**Breakfast:**
- Small glass of orange juice - 20%
- Peanut butter toast (2 slices of white bread) - 4%
- Bowl of cold cereal with 1% milk - 30%

**Lunch:**
- Ham and cheese sandwich with mayo on white bread - 15%
- Potato chips - 0%
- 4 Thin Mint cookies - 0%
- Chocolate Milk (2%) - 25%
- Snack - yogurt - 41.5%

**Dinner:**
- Macaroni and Cheese - 25%
- Milk - 25%
- Green beans - 2%

**TOTAL FOR DAY:** 187.5%

### TUESDAY:

**Breakfast:**
- Oatmeal - 35%
- Orange juice - 20%

**Lunch:**
- Bagel with cream cheese - 8%
- Chocolate milk (2%) - 25%
- Fresh broccoli - 48%

**Dinner:**
- Lasagna - 46%
- Milk - 25%

**TOTAL FOR DAY:** 207%

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**Discussion for your group:**

- Did I meet the daily requirements on Monday? Tuesday?
- What changes can I make to increase my intake?
- Of the foods I am consuming, which are highest in calcium?
- How does my diet on the weekends compare to that of my diet at school? Which is healthier?
- Instead of potato chips or cookies for a snack, try replacing with a serving of veggies, fruit, or nuts. How does this change your total for the day?
For requirement

Calcium Rich Foods

Identify these Calcium rich substances (1-4) in the drawings below:

Foods rich in calcium:
It is essential that kids get enough calcium in their diet. Current studies show that 9 out of 10 women do not receive enough calcium. These calcium deficiencies lead to problems such as osteoporosis. Vitamin D is also important to be able to absorb calcium into your body. Lack of Vitamin D can cause a disease called Rickets. You can obtain Vitamin D by exposing your hands, face, and arms to sunlight for as little as 5-15 minutes a day, for about 2-3 times a week. Eggs and milk are also good sources of Vitamin D.

Draw your own picture of a calcium rich food
For requirement

Make a SWAP

If your group is not already familiar with making SWAPs:

it stands for Share With A Pal or Special Whatcha-ma-callits Affectionately Pinned Somewhere. Basically it is something special you can make and exchange with another youth you don’t know.

History of the SWAP

The SWAP was introduced into Boy/Girl Scouting/Guiding as a way to introduce one Scout to another. The swaps were traded and a conversation would result from explaining the swap. Many of these SWAPs started long friendships that lasted although the two swappers may have lived in different countries. A SWAP is usually, but not always, a small homemade item that represents the person, their community, their background, or a project they have worked on.

The idea of collecting as many SWAPs as you can without really getting to know the person makes the item traded (or swapped) a “collectible”. Most of the swapping done today seems to have this idea rather than the traditional SWAP made to build up a friendship.

For this activity, create a SWAP that has something to do with the Calcium Challenge and exchange it with another person after you share with them what you learned while earning this patch.

Most people like to have a SWAP for themselves, so if possible, make one for an exchange as well as one to keep for your collection.

www.makingfriends.com/swaps.htm

Some examples might be:

Using fun foam, cut out milk bottles or cheese shapes and use pens to write the words “Take the Calcium Challenge!” on it. Hot glue a pin backing on the backside.

Buy little wooden milk bottles from a craft store (i.e.: ones that would be used for buttons) and paint them. Glue on pin backings and exchange.

Here is an example of cheese made out of fun foam.
**Osteoporosis Information**

- Osteoporosis (Ah-ste-o-por-o-sis) causes bones to be more likely to fracture because they are more fragile than bones that were developed to peak bone density. Deterioration of bone tissue also characterizes this disease.

- According to the National Institute of Health’s Osteoporosis and Related Bone Disease Resource Center, “10 million individuals are estimated to already have the disease and almost 34 million more are estimated to have low bone mass, placing them at increased risk for osteoporosis.

- Of the 10 million Americans estimated to have osteoporosis, eight million are women and two million are men.

- 34 million Americans, or 55% of the people 50 years of age and older, have low bone mass, which puts them at increased risk of developing osteoporosis and related fractures.

- Significant risk has been reported in people of all ethnic backgrounds.

- While osteoporosis is often thought of as an older person’s disease, it can strike at any age.

- The most common bones to break or fracture if you are affected by osteoporosis are the hip, spine, and wrist.

- A hip fracture usually results in hospitalization and/or surgery. It can sometimes affect a person’s walking abilities and may even lead to permanent physical handicaps.

- A spinal fracture can lead to height loss, severe back pain and even deformities.

- Women are more likely to be affected by the disease, however both genders are at risk.

- Osteoporosis is a silent disease, which means that bone loss occurs without symptoms.

- Factors are things that increase the likelihood of developing osteoporosis.

**Rickets Information**

- Rickets is a bone disease that mainly affects children.

- It is due to a Vitamin D deficiency.

- It is fairly rare in the US but is most likely to occur during periods of rapid growth when the body demands high levels of calcium.

- You can increase Vitamin D by allowing your arms, legs, and face to come in contact with sunlight for 5-15 minutes about 3 times a week.

For more information on osteoporosis and rickets, please go to the websites on the following pages. This informational page provides basic information on the two conditions but is not intended to offer all the information needed to complete the web quest.
Osteoporosis

Web Quest

Name:

Sites Used:
www.nof.org
www.niams.nih.gov/Health_Info/Bone/Osteoporosis/default.asp

Any other sites used:

Osteoporosis Questions

1. How is osteoporosis diagnosed or detected?

2. What are at least 3 factors that put you at a greater likelihood to contract the disease?

3. How is osteoporosis caused?

4. How can osteoporosis be prevented? (Name 3)

5. What does the nickname, the “Silent Disease”, refer to?

6. Name at least 3 medicines that are prescribed to either treat or prevent osteoporosis.

7. Name at least 2 other related bone diseases.

8. What is “fall prevention” and name at least 2 tips that help eliminate environmental factors that lead to falls.
Web Quest

Name:

Sites Used:
nlm.nih.gov/medlineplus/ency/article/000344.htm
Any other sites used:

Rickets Questions

1. What is at least one alternative name for rickets?

2. What is rickets?

3. What age group is affected by this disease?

4. What are at least 2 symptoms of rickets?

5. How can rickets be detected or diagnosed?

6. How can rickets be treated?

7. How can rickets be prevented?
Write a Letter

Here is an example of a letter praising or making suggestions to a school cafeteria or restaurant. You can generally find the name and address for the school's district lunch coordinator online.

Organization
Return Address
City, State & Zip

To: Linda B. Godfrey, CNP Coordinator
P. O. Box 1910
Columbiana, AL 35051

February 26, 2008

Dear Ms. Godfrey,

Our group is earning a patch called “Take the Calcium Challenge.” First, we learned the importance of having enough calcium in our daily diets. Next, for one of our requirements, we are to look at our school menu and as a group, try to decide if the menu offers sufficient amounts of calcium-rich foods. (The requirement asks us to study the foods, not drinks). Our group has decided that… (at this point compliment the person for putting together a calcium rich menu, or suggest possible other foods that might be added to help obtain the numbers needed).

Sincerely,
Your group name
Lactose Intolerance

www.digestive.niddk.nih.gov/ddiseases/pubs/lactoseintolerance/#whatis defines LACTOSE INTOLERANCE as the inability to digest significant amounts of lactose, the predominant sugar of milk.

This means that your body can not break down the nutrients that are needed from milk. The lactose in milk can not be broken down into simpler sugars that the body can use because of this condition.

Lactose intolerance can be caused by specific digestive diseases and injuries. It can also be a condition that develops over time. Between 30 and 50 million Americans are lactose intolerant.

Symptoms of lactose intolerance include nausea, cramps, bloating, gas and diarrhea. The intensity of symptoms depends on the level of tolerance a person has. A person with lactose intolerance may be able to drink a cup of milk and not experience the symptoms while another person may be more severely intolerant and react to even a cup. Most people with this condition can control it with medications and many learn through trial and error which foods their bodies react to and which ones it does not.

For people with severe reactions there are enzymes to help break down dairy products. People with severe reactions might need to watch their consumption of foods with hidden lactose, which means prepared foods that lactose has been added to. Some words to look for on products to see if they contain lactose are milk by-products, dry milk solids, and nonfat dry milk powder. To see if cheese contains lactose, read the amount of sugar on the food label. Lactose is sugar. If a cheese has any sugar, then it will also have lactose. For example, cheddar cheese has no sugar thus it contains no lactose.

5 tips for keeping calcium-rich dairy foods in your diet when you’re lactose intolerant:
1. Drink milk with meals or a snack, instead of on an empty stomach.
2. Aged cheese like Cheddar naturally have little or no lactose.
3. Slowly introduce dairy back into the diet. Start with small portions and gradually work up to three servings a day.
4. Try lactose-reduced or lactose-free milk.
5. Eat cultured dairy foods like yogurt that contain friendly bacteria that help digest lactose.

Look at lists on other pages and write down dairy and non-dairy products that people with lactose intolerance can consume.
For requirement

Word Scramble

G X T N P T V T F G I L P E J F V
Q E I B I R R S Q I O S D E O J O
O M A K Q T T Q X R C T D E D D C
X C E C I E G M O A C E I H Z X B
M M W F K H Y O B E O O N C W W H
E S I C R E X E O B R P G M I L K
O E I Q U Z W F Q T B O S Q A H A
D R Y H T L A E H H I R J G M F G
A Y R M X V R T H G G O V I C X E
T N A R E L O T N I E S O T C A L
Q I U T L J L B D E T I G X A Z D
C A L C I U M N H W B S O V A J L
A I C R L Y M S S C R Q V H N A B
B O N E S T R U C T U R E T Y N N

BONESTRUCTURE
BROCCOLI
CABOT
CALCIUM
CHEESE
EXERCISE
FORTIFIED
WEIGHTBEARING

HEALTHY
HIKING
LACTOSEINTOLERANT
MILK
OSTEOPOROSIS
PUDDING
RICKETS
Across
2. Type of activity involving gravity that helps strengthen bones.
4. Substance necessary for building strong bones and preventing osteoporosis.
5. Calcium _____ foods means that calcium is added to the product.
6. A vitamin necessary for absorbing calcium.
7. Vitamin D deficiency in kids.
10. A general name for older kids; this age group is when the majority of a bone’s density is built.

Down
1. Disease that causes holes in bones, allowing bones to become weak and break.
3. Condition that causes many people to react to dairy products, reducing their intake of calcium.
8. Number of servings of dairy you need.
9. “Special whatchamacallit affectionately pinned somewhere.”
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8. Number of servings of dairy you need.
9. “Special whatchamacallit affectionately pinned somewhere.”
When examining a nutrition label, the first thing you should do is look at what is considered a serving. In order to add up the amount of calcium you have eaten in a product, you must verify that you have consumed, at minimum, the suggested serving size. Discuss the differences between different food labels, especially for similar food. Below are two food labels from different kinds of milk. For people on diets, it might be important to examine the amount of calories and total fat (Circled in Gray).

Besides calories and fat, check the calcium and Vitamin D content. (Circled in Black). If it is over 20% DV calcium, it is a food high in calcium.

To add together all your calcium totals, simply add the percentages or change the percentage to a decimal by adding a zero to the end of a number (ex. 45% = 450mg) for milligrams. This technique is unique to finding total calcium. The total calcium for a child should be at least 130% or 1,300mg.
Significance of the Patch

When the patch was designed, special symbols that represent activities and important parts of the patch were considered.

In order to design your own patch read the symbolism of this patch and come up with at least 4 symbolic things (other than what is in this patch) to put in yours. Explain to your fellow group members why you picked the design and colors, what parts are special to you, and how it is symbolic.

Representation of the Patch - Originally designed by Girl Scout Cadette Megan

- The outline of the patch is green to represent Girl Scout Green.
- The background is blue to represent that Megan was a Cadette when she designed the patch.
- The 3-Every-Day Logo is a reminder of how many servings of calcium-rich dairy foods you need each day.
- The milk carton and block of cheese represent two of the most important foods you can consume for calcium and Vitamin D.
- The jump rope and the soccer ball represent the weight bearing activities.
- If you look at the four objects (milk, jump rope, soccer ball, and cheese), they are spaced in a square. The milk and cheese are not side by side to represent that you should space out the amount of milligrams you consume in a sitting. However, they are spaced between the representations of the weight bearing activities because you should try to increase both, since you need both, not just one, to maintain your good health.
- The skeleton represents a body that has been developed and well nourished throughout its childhood and has been maintained as an adult. It is strong and healthy.
- The skeleton’s fingers are making the Girl Scout Promise. Again, this ties the patch to the Girl Scouts and signifies each girl’s promise to maintain healthy habits and increase calcium after completing this patch. The 3 fingers also represent the 3-Every-Day plan to intake at least 3 servings of calcium a day.
Bibliography / Helpful Sites

ods.od.nih.gov/factsheets/Calcium-HealthProfessional/
cabotcheese.coop/healthy-us
wholisticfitliving.com/prevent-osteoporosis-with-5-minutes-of-exercise
makingfriends.com/swaps.htm
bones.nih.gov/health-info/bone/bone-health/exercise/exercise-your-bone-health
nof.org/patients/treatment/calciumvitamin-d/
nhlbi.nih.gov/health/educational/wecan/eat-right/nutrition-facts.htm
digestive.niddk.nih.gov/ddiseases/pubs/lactoseintolerance/#whatis
cabotcheese.coop/lactose-free-cheese

These websites are good places to start the osteoporosis and rickets web quest!
nof.org
niams.nih.gov/Health_Info/Bone/Osteoporosis/default.asp
nlm.nih.gov/medlineplus/ency/article/000344.htm
At Cabot, we know the importance of teaching healthy habits. We’ve created materials to help kids learn about a variety of topics, such as sustainable food choices, and how milk becomes cheese.

We are proud to offer classrooms and community youth groups free programs focused on the value of co-operatives, and the importance of a healthy lifestyle.

Let the “World’s Best Cheddar” help you with your next fundraiser! Every purchase of Cabot cheese for your fundraising project supports two vital causes: your school and the dairy farm families who own Cabot.

Cabot has developed two plays that can be used to put on a production or be read in the classroom to help address issues facing preteens and teens.

Cabot has a variety of free downloadable resources, including a Yoga for Kids guide, tips on nutrition for student athletes, and an infographic for building a healthy lunch. Visit our site to find out more!

Find these and other great programs at www.cabotcheese.coop/youthful-matters
Learn Once, Earn Twice. Several of Cabot's patch programs include activity choices that help scouts and students fulfill steps to earn their patches, but also take steps towards a sustainable future - healthy lifestyle and community.

THE FUELING HEAD TO TOE PATCH teaches children the importance of a healthy lifestyle, one that includes regular physical activity and proper nutrition. The hands-on activities provide kids the practical tips and tools to stay fit and healthy, now and in the future.

THE B CORP PATCH teaches kids the importance of strong, healthy communities. The lessons help children understand how they can contribute to their community, and explains how B Corps contribute to the health of their community.

THE GRATITUDE PATCH focuses on the importance of expressing gratitude in both what one says and does through one's actions. The activities guide kids to focus and appreciate the good things and special people in their lives.

THE CO-OPS FOR COMMUNITY PATCH will introduce young people to the co-operative model and help them design their own business.

THE 3-EVERY-DAY CALCIUM CHALLENGE PATCH encourages individuals to learn about the importance of calcium in a healthy diet for stronger bones and body.

Several of the patches include activity choices that help scouts fulfill steps for earning girl scout Badges and Daisy Petals. The suggested badges are identified in the patch materials.

Cabot Creamery Co-operative is owned by 1,100 farm families throughout New England and New York. At Cabot, we know the importance of teaching healthy habits, which is why we have created materials and resources to support your efforts in your community, at home, and in your profession.

Learn More at Cabotcheese.coop/patches
Dairy foods provide calcium in a form that your body can use, which is key to a healthy diet. Dairy foods also provide nutrients, such as protein, phosphorus, and riboflavin.

Dairy Calcium

Calcium is a mineral that your body uses to build bones and teeth, regulate muscle contractions, help prevent osteoporosis, reduce levels of hypertension, and lower the risk of colon cancer.

Why Dairy Foods?

The Super Nutrient

How Much?

The Institute of Medicine recommends different dairy intake for each age group, as shown below.

<table>
<thead>
<tr>
<th>AGE</th>
<th>MG/DAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-8</td>
<td>1,000</td>
</tr>
<tr>
<td>9-18</td>
<td>1,300</td>
</tr>
<tr>
<td>19-50</td>
<td>1,000</td>
</tr>
<tr>
<td>51+</td>
<td>1,200</td>
</tr>
</tbody>
</table>

Did you know? Whole milk and skim milk have the same amount of calcium.

Where do I Get Natural Calcium?

- MILK
  
  8 oz. glass
  300mg calcium
  30%*

- YOGURT
  
  8 oz. cup
  250mg calcium
  25%*

- 2 oz. serving
  400mg calcium
  40%*

*of recommended dairy intake

For nearly half the children ages 3-5 aren’t getting enough calcium.

Did you know? 50% of your bones are being built in the teen years.

Did you know? 9 out of 10 women and girls do not get enough calcium.

cabotcheese.coop/patches