



FOOD FIESTA

Super Snacks!

Leader Notes

Target Audience

- Third-grade students
- Designed for use in the classroom or non-formal group settings

Minimum Time Needed

- 15 minutes (for 10-15 students)

Skill Integration

- Math: graphing, developing a continuum, word problems, sequencing
- Critical thinking
- Decision making
- Conceptual thinking, including more than/less than
- Reading for understanding
- Science: nutrition
- Health/fitness

Physical Arrangements

- One table
- Poster stand or easel

Assistance

- One adult or teen volunteer

Materials

- Calorie poster
- Snack Graph poster
- Grams poster
- Food Label poster

Objectives

Participants will

- Identify three nutrient sources of calories
- Learn to identify fat grams on snack food labels
- Acquire the knowledge necessary to choose lower-fat snacks based on food labels
- Illustrate their understanding of food labels by graphing fat grams from assorted snacks

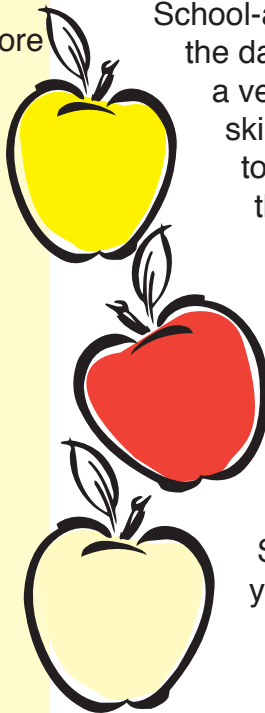
Background

Snacking has become a way of life for Americans, both youth and adults! Nearly all children eat at least one snack daily, with many children eating two, three or even more.

School-age youth have many “social” events during the day; activities that revolve around food are a very important way for youth to learn social skills. Providing frequent opportunities for youth to eat with other children and adults helps them meet their nutritional needs while also providing an opportunity for socialization.

When youth are active every day, they require more calories. If they are involved in athletics on a daily basis or their activity level is moderately high, they may need more calories than adults.

Snacking can play a critical role in the diet of youth. What we must remember is





- Box of paper clips
- Post-it notes (two colors)
- Basket of assorted snack foods (chips, pretzels, corn chips, etc.)

Critical Thinking

1. Visit this Web site:

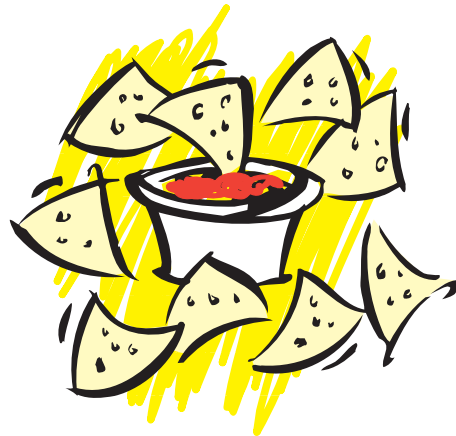
<http://www.ianr.unl.edu/pubs/foods/g1033.htm> and take the “Snack Quiz.” After completing the quiz, discuss your answers with your classmates and teacher.

2. Find a healthy snack recipe you like and make the snack at home. If it is really great, make samples to share with your classmates, and show them how to make the snack!

3. Go to the grocery store and identify five snacks that you like that have five fat grams or less per serving. Make a list of the snacks and the fat grams they contain per serving, and present your findings to your class or learning group.

3. Create a bar graph using the information on the five snacks above that shows a comparison of the number of fat grams.

4. If one serving of snack chips contains 10 fat grams, if you eat the whole bag, which is five servings, how many fat grams do you eat? How many calories are in the five servings?



that all snacks are NOT EQUAL! Because it is likely that snacks will provide a substantial amount of a child’s daily food intake, they should be as nutritious as possible. Nutritious snacks will help youth get the vitamins and minerals they need.

Often snacks ultimately replace traditional meals, leading to an excess intake of empty calories and nutrient deficiencies. In a 1993 study, on a typical school day, 40 percent of the children surveyed did not eat any vegetables; 20 percent did not eat any fruit; and 36 percent ate four different types of snack foods. The most commonly consumed snacks were cookies (38 percent), ice cream (33 percent), soft drinks (31 percent), chips (26 percent) and candy (18 percent). Although fine when served occasionally, many of these foods have high amounts of fat, sugar and sodium. Choosing them repeatedly as snacks can lead to poor nutritional balance.

Snacking has a bad reputation in today’s world. The importance of eating regular meals has been stressed so much that frequent snacking may be seen automatically as a “bad thing.” To alleviate this concept, it is important never to identify foods as “bad” foods and “good” foods. Instead, learn to talk about “everyday foods” and “occasional foods.” Although nutritious foods are certainly best for a child’s snacks, totally eliminating any one food will create a great desire for that very food! Denying a child a birthday cake, Halloween candy or holiday cookies may make the child only want those foods more often. The same is true

5. If you eat the whole bag of chips (see No. 4), what kind of snacks do you need to eat the rest of the day to make sure you do not get too many calories or fat grams?

6. What happens if you eat more calories than your body uses?

Additional Resources

The following sources offer additional information on using math to teach nutrition concepts and resources on snacking tips and fat content of snacks and other foods.

Internet

Successlink. Lesson plans/ideas for educators.

<http://successlink.org>

Lessonplanz: A site for teachers.

<http://lessonplanz.com>

Math Stories: Web site devoted to developing math and problem-solving skills.

<http://www.mathstories.com>

Kidshealth. Web site devoted to children's health issues, including nutrition and healthy recipes.

<http://www.kidshealth.org/kid/>

NebGuide. Snack information Web site developed by the Nebraska Cooperative Extension Service.

<http://www.ianr.unl.edu/pubs/foods/g1033.htm>

of fat-laden foods like french fries and chips. We must also remember these "occasional" foods do provide extra calories, which some youth may need.

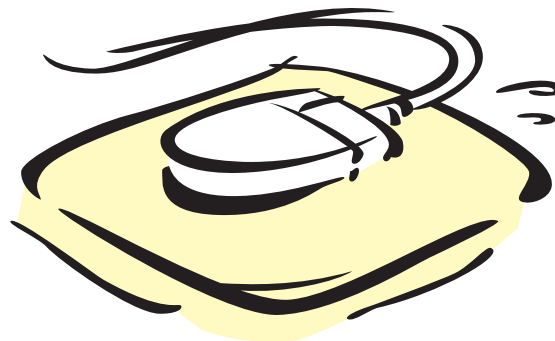
As long as basic nutrition requirements are met, extra calories will not usually hurt an active child. On the other hand, if the child is inactive and sedentary with a tendency to be overweight, those extra calories will only compound the problem. However, including "occasional" foods as snacks every now and then helps youth understand the concept of moderation, and that is something everyone needs to learn and practice throughout life!

Snacks and Obesity

Elementary age children gain weight faster than height. Their body proportions begin to change as they get ready for their final growth spurt during adolescence. They need more nutrients and calories during these big-growth phases.

However, eating between meals can lead to excessive weight gain, because so many of the foods children choose as snacks are high in fat and sugar. Childhood obesity has been identified as a major health problem across our country. It is the direct result of the combination of inactive lifestyles and increased consumption of high fat and high calorie foods.

Here are some basic guidelines to help youth develop healthful snacking habits they can use for a lifetime.





National Network for Child Care.
Cooperative Extension System.
http://www.nncc.org/Nutrition/sac43_snacks.sac.html

Books

How to Teach Nutrition to Kids.
M.L. Evers. 24 Carrot Press, 1995.

Discovering Food Science. C. Byrd-Bredbrenner. Ext

Teaching Snacks: Teaching Basic Concepts and Skills Through Cooking. Gayle Binninger. Warren Pub. House, January, 1994.

Too Many Tamales. Gary Soto. GP Putnam & Sons, 1993.

Never Take a Pig to Lunch (And Other Poems about the Fun of Eating). Nadine Bernard Westcott, Editor. Orchard Books, 1994.

What the Research Says . . .

Many U.S. children as young as nine years old are beginning to acquire risk factors that may lead to heart disease later in life, according to a study reported in the *Journal of the American Medical Association* in March, 1999. High cholesterol levels were especially widespread

1. Plan snacks as a part of the daily food plan. Understand that snacking is a part of the daily routine, and plan accordingly!

2. Serve snacks and meals that satisfy a child's need for extra nutrients and for different types of foods — ones that are crunchy, soft, chewy, smooth, hot, cold, sweet, sour, bland and spicy.

3. Never offer food as a reward for good behavior, nor withhold food for bad behavior. This can develop into an inaccurate perception of the role of food in the child's life.

4. Limit intake of sweet, "empty-calorie" beverages.

If a child shows a tendency for being overweight, encourage more physical activity and less TV and computers. Do not cut back drastically on total food intake. Growing children need those nutrients for growth and development!

Activity

This activity uses an interactive process to engage students in developing an understanding of nutrition basics concerning fat grams and healthy snacks. The lesson plan takes an integrated approach to learning by teaching basic nutrition education through graphing techniques and critical thinking skills.

Procedure

1. Engage students in an interactive discussion focusing on fat grams and snacks using the following key points:

- **Snacks are something we all enjoy.**
Snacking can become a problem when we:
- Choose high-fat and high-calorie snacks instead of "nutrition-rich" foods.

among Mexican-American and African-American youth. This study is one of many that identify unhealthful diets and lack of exercise as serious problems for today's kids. That is why choosing snacks wisely is so important!

While kids may not be getting all the nutrients they need, many are getting too many calories for their level of exercise. This results in weight gain. Snacking on foods high in fat and sugar is one reason child obesity has doubled since 1980.



- Forget to check the nutritional value of our snacks.
- Substitute “empty-calorie” snacks for more healthful meals.

• **Are snacks always a “high-calorie” food?**
(Encourage group discussion). *Answer: It depends on the snack!*

- **Just what is a calorie?**
 - A calorie is a unit of heat.
 - It is the fuel for our bodies that we get from food.
 - It works like a fire. Your body burns the calories in food to keep it running.
 - If we eat foods that provide more fuel (calories) than we use, the extra calories are stored in our bodies as fat.

- **Calories come from three nutrients.**
 - Carbohydrates have four calories per gram.
 - Protein has four calories per gram.
 - Fat has nine calories per gram.

• **A gram weighs about as much as a paperclip.**
(Provide each student with a paperclip to hold and “weigh.”)

2. One way to choose snacks wisely is to look at the label to determine how many fat grams are in our favorite snacks.

ASK: “Can someone help me find the place on this food label where fat grams are listed?” (Show poster of a food label. Ask a student to come help you find the fat grams on the poster.)

ASK: “If I wanted to choose a healthy snack for my body, how could I use the food label to compare the amount of fat in a food?” (Encourage group discussion).

| Nutrition Facts | |
|--|---------------------------|
| Serving Size 1 package (49g) | |
| Servings Per Container 1 | |
| Amount Per Serving | |
| Calories 240 | Calories from Fat 120 |
| % Daily Value* | |
| Total Fat 13g | 20% |
| Saturated Fat 2g | 9% |
| Cholesterol 0mg | 0% |
| Sodium 510mg | 21% |
| Total Carbohydrate 26g | 9% |
| Dietary Fiber 21g | 4% |
| Sugars 2g | |
| Protein 4g | |
| Vitamin A 0% | Vitamin C 0% |
| Calcium 0% | Iron 4% |
| *Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs: | |
| | Calories: 2,000 2,500 |
| Total Fat | Less than 65g 80g |
| Sat Fat | Less than 20g 25g |
| Cholesterol | Less than 300mg 300mg |
| Sodium | Less than 2,400mg 2,400mg |
| Total Carbohydrate | 300g 375g |
| Dietary Fiber | 25g 30g |





3. Let's see if we can use the label to compare fat grams. Who will volunteer to come up and choose a snack?

(From a basket of snacks, allow students to choose one each and put their finger on the label on the number of fat grams. **Note:** You may need to help students find the difference between the percentage of fat and the number of fat grams.)

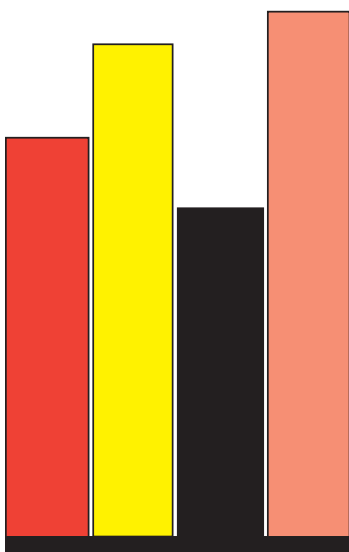


4. Ask students to form a line around the room in the order of highest fat gram to lowest fat gram (based on total fat grams as identified on each snack label). This forms a "continuum" that you may want to point out.

When the line is created, ask each student to share the snack he or she is holding, and the number of fat grams per serving in that snack. (Thank the students for sharing, then ask them to sit down.)

5. Another way you could test the fat content of the snacks is to use a bar graph to see which snack has the lowest number of fat grams.

Use the bar graph chart (refer to example on this page). Ask for two volunteers to bar graph the number of fat grams in pretzels and cheese puffs. Using the sticky notes, guide the students in graphing the results so the entire group can view the results.



ASK: "Which snack is the healthier choice? Why?"

If you know the number of fat grams in a snack, can you figure out how many calories are in the snack? Sure you can! If there are nine calories for each gram of fat, how would we figure the number of calories? (Multiply the number of fat grams times nine)

Number of fat grams per serving x 9 = number of calories from fat per snack serving

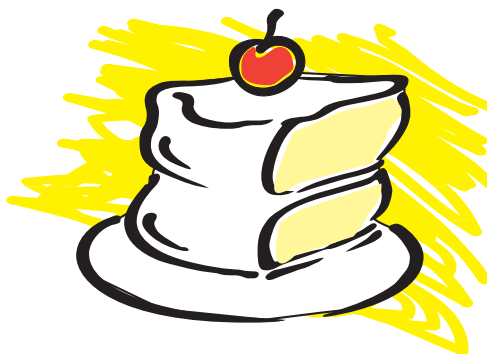
Will the answer we just discovered tell you the total number of calories in that snack?

NO! Carbohydrates and proteins have calories, too!

Activity Summary and Discussion Follow-up

At the Super Snacks Station today, we learned about the following:

- Calories are fuel for our body.
- Calories come from carbohydrates, proteins and fats.
- Fat grams have the highest number of calories (9).
- Fat grams can be found listed on the food label.
- Bar graphs can be used to chart the difference in the number of fat grams in our favorite snack foods.

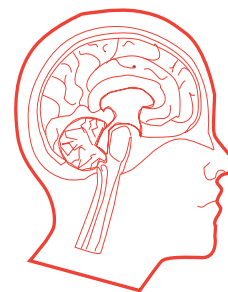


Where do extra calories (fuel) go if we eat more than we use?

Do we get calories from foods other than snack foods?

Are there any snacks we should never eat?

How many fat grams do we get if we eat two servings of cheese puffs?



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Calories are like fuel for your body.

Calories come from 3 different nutrients:

- Carbohydrates
- Proteins
- Fats



Nutrients Are Not the Same!

Carbohydrates have **4** calories per gram.

Proteins have **4** calories per gram.

Fats have **9** calories per gram.

A gram weighs about as much as a

