



Photo © Cathy Yeulet. Licensed for use.

## Healthy Snacks

### The Science of Food: Activity 11

Nancy Moreno, PhD.  
Barbara Tharp, MS.

Center for  
Educational Outreach  
Baylor College of Medicine



BioEd Online

### **Healthy Snacks** (activity and post-assessment)

The objectives of this lesson are aligned with the National Science Education Standards, specifically those related to Science as Inquiry and Physical Science. In “Healthy Snacks,” students will use food labels to rank foods from most to least healthful, and then justify their rankings. Students also will suggest ways to prevent their snacks from spoiling.

This culminating activity is designed to assess students’ knowledge of concepts presented throughout the unit, especially those related to personal nutrition.

### **Student Worksheets**

Student pages in the teacher’s guide are provided in English and in Spanish.

### **Reference**

Moreno N., and B. Tharp. (2011). *The Science of Food: Teacher’s Guide*. Fourth edition. Baylor College of Medicine. ISBN: 978-1-888997-76-7. Development of this student activity was supported, in part, by grant numbers R25 ES06932 and R2510698 from the National Institute of Environmental Health Sciences of the National Institutes of Health to Baylor College of Medicine.

### **Image Reference:**

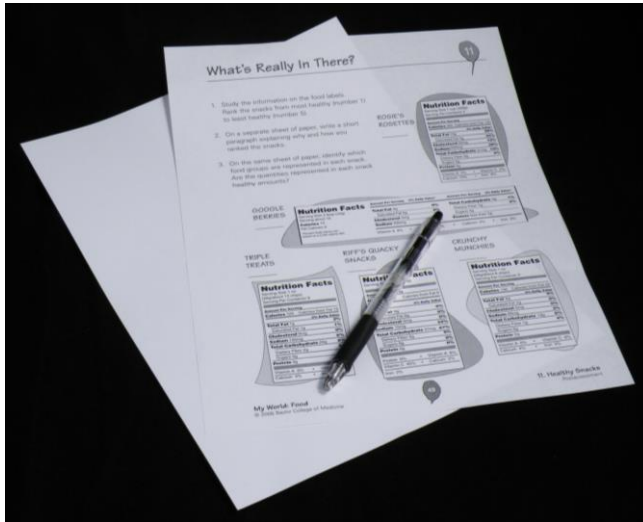
Photo © Cathy Yeulet. Licensed for use.

### **Key Words**

food, post-assessment, nutrition, calorie,

Healthy Snacks © Baylor College of Medicine.

# Materials



BioEd Online

## Materials

Have students work in teams of 2-4.

### Per Group of Students

- Paper and pen
- Copy of "What's Really in There?" page

## Reference

Moreno N., and B. Tharp. (2011). *The Science of Food: Teacher's Guide*. Fourth edition. Baylor College of Medicine. ISBN: 978-1-888997-76-7. Development of this student activity was supported, in part, by grant numbers R25 ES06932 and R2510698 from the National Institute of Environmental Health Sciences of the National Institutes of Health to Baylor College of Medicine.

## Image Reference

Photo by Christopher Burnett © Baylor College of Medicine.

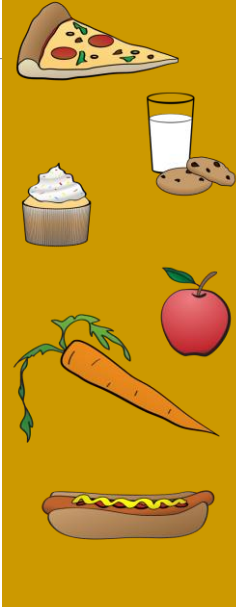
## Key Words

materials needed, materials list

Healthy Snacks © Baylor College of Medicine.

## What Are Healthy Snacks?

- Which snack pictured here is the MOST healthy?
- Does it have high fat levels?
- Does it contain a lot of salt or sugar?
- Which is the LEAST healthy?
- Why are some snacks healthy and others are not?



BioEd Online

### What Are Healthy Snacks?

Begin this activity by asking students to name some healthy snacks. Draw and label some snacks on a class board or chart, then ask, *Which snack pictured is the MOST healthy? Does it have high fat or sugar levels? Does it contain a lot of salt? Which snack is the LEAST healthy? Why are some snacks healthy and others are not?*

### Reference

Moreno N., and B. Tharp. (2011). *The Science of Food: Teacher's Guide*. Fourth edition. Baylor College of Medicine. ISBN: 978-1-888997-76-7. Development of this student activity was supported, in part, by grant numbers R25 ES06932 and R2510698 from the National Institute of Environmental Health Sciences of the National Institutes of Health to Baylor College of Medicine.

### Image Reference

Illustrations by Christopher Burnett © Baylor College of Medicine.

### Key Words

food, nutrition, snacks, fat, sugar, salt, healthy snacks,

Healthy Snacks © Baylor College of Medicine.

## Let's Get Started

- Use the “What’s Really in There?” worksheet for this activity.
- Discuss the contents of the food associated with each label.
- Compare the amounts of fat, sugar, and carbohydrates on each food label.
- Rank the snacks in order, from most healthy to least healthy.
- Write a paragraph explaining how you ranked the snacks.

Nutrition Facts	
Serving Size 1 jar (140g)	
Amount Per Serving	
<b>Calories</b> 110	Calories from Fat 0
<b>% Daily Value</b>	
<b>Total Fat</b> 0g	<b>0%</b>
Saturated Fat 0g	<b>0%</b>
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 10mg	<b>24%</b>
<b>Total Carbohydrate</b> 27mg	<b>67%</b>
Dietary Fiber 4g	<b>9%</b>
Sugars 0g	<b>0%</b>
<b>Protein</b> 0g	<b>0%</b>
Protein 0%	Vitamin A 6%
Vitamin C 45%	Calcium 2%
Iron 2%	



BioEd Online

### Let's Get Started

•In this activity, students will use food labels to rank foods from most to least healthful, and then justify their rankings. Students also will suggest ways to prevent their snacks from spoiling.

•Distribute a copy of the “What’s Really in There?” sheet to each student. Explain that in this activity, students will use their new knowledge about choosing healthy foods and food preparation.

•Have groups discuss the contents of the food described in each label, paying particular attention the amount of fats, carbohydrates, sugars, salt, etc., in each item. After discussion, have each group rank the snacks, from most healthy to least healthy. Then, on a separate sheet of paper, have each individual student write a short paragraph about the evidence the team used to make its rankings.

### Reference

Moreno N., and B. Tharp. (2011). *The Science of Food: Teacher’s Guide*. Fourth edition. Baylor College of Medicine. ISBN: 978-1-888997-76-7. Development of this student activity was supported, in part, by grant numbers R25 ES06932 and R2510698 from the National Institute of Environmental Health Sciences of the National Institutes of Health to Baylor College of Medicine.

### Key Words

lesson, experiment, food, food label, nutrition facts, calories, total fat, saturated fat,

trans fat, cholesterol, sodium, carbohydrate, fiber, sugar, protein, vitamin, minerals,

Healthy Snacks © Baylor College of Medicine.

## Let's Talk About It

---

- Based on the nutritional food labels, which snack appeared to be the MOST healthy?
- Which snack appeared to be the LEAST healthy?
- Which food groups are represented in each snack?
- Are the quantities of the nutrients present in healthy amounts?



BioEd Online

### Let's Talk About It

The activity “Healthy Snacks” teaches students that food labels provide important information about the nutritional value of foods. It also teaches students how to read food labels.

*Ask, Based on the nutritional information printed on the food labels, which snack appeared to be the MOST healthy? Which snack appeared to be the LEAST healthy? Then ask, Which food groups are represented in each snack? Are the quantities of the nutrients present in healthy amounts?*

### Reference

Moreno N., and B. Tharp. (2011). *The Science of Food: Teacher's Guide*. Fourth edition. Baylor College of Medicine. ISBN: 978-1-888997-76-7. Development of this student activity was supported, in part, by grant numbers R25 ES06932 and R2510698 from the National Institute of Environmental Health Sciences of the National Institutes of Health to Baylor College of Medicine.

### Key Words

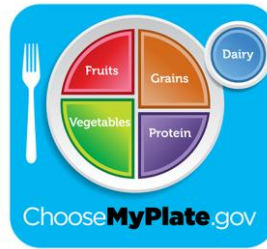
lesson, experiment, food, food label, nutrition facts, calories, total fat, saturated fat, trans fat, cholesterol, sodium, carbohydrate, fiber, sugar, protein, vitamin, minerals,

Healthy Snacks © Baylor College of Medicine.



## The Science Behind Healthy Food Choices

- It is important to eat healthy.
- Food labels contain information about:
  - Calories
  - Fat
  - Carbohydrates
  - Sodium
  - Fiber
  - Minerals and vitamins
- Follow recommendations from MyPlate to get energy and your necessary nutrients



BioEd Online

### The Science Behind Healthy Food Choices

This culminating activity is designed to assess students' knowledge of concepts presented throughout unit, especially those related to personal nutrition. Discuss the importance of healthy eating habits. Remind students that nutritional food labels are printed on food containers to inform consumers how much fat, calories, sugars, and other items are in the food. Knowing how to read food labels will help students to make good decisions about what to eat and what foods to avoid.

Carbohydrates, fats and proteins are our main sources of energy. Our bodies also need protein to build and maintain muscles, and to carry out many functions inside cells. Small amounts of vitamins and minerals also are necessary. The best way to get necessary nutrients without consuming too many calories is to follow the recommendations of a food pyramid or MyPlate.gov.

### Reference

Moreno N., and B. Tharp. (2011). *The Science of Food: Teacher's Guide*. Fourth edition. Baylor College of Medicine. ISBN: 978-1-888997-76-7. Development of this student activity was supported, in part, by grant numbers R25 ES06932 and R2510698 from the National Institute of Environmental Health Sciences of the National Institutes of Health to Baylor College of Medicine.

### Image Reference

1. ChooseMyPlate.gov illustration courtesy of USDA: ChooseMyPlate.gov. Public domain. USDA. <http://myplate.gov/>
2. Food pyramid Illustration adapted From MyPyramid: Steps to a Healthier You. <http://en.wikipedia.org/wiki/File:MyPyramidFood.svg>

**Key Words**

lesson, experiment, food, food label, nutrition facts, calories, total fat, saturated fat, trans fat, cholesterol, sodium, carbohydrate, fiber, sugar, protein, vitamin, minerals,

Healthy Snacks © Baylor College of Medicine.

## Extensions

---

- What is a healthy snack for a person who must eat:
  - Less salt?
  - Less sugar or fats?
  - More fiber?
- How many calories does an average adult male need to eat per day?
- What about an adult female?
- When is a person considered to be obese?



BioEd Online

### Extensions

Have students evaluate the quality of different snacks for people with special needs. For example, ask students to name a healthy snack for someone who must eat less salt, sugar or fats. Or, have students suggest an appropriate snack for a person who needs to include more fiber in his or her diet.

Calories measure the amount of energy a food can provide. Most people need about 2,000 to 2,500 calories each day to meet their energy needs. To maintain a healthy weight, we must eat the appropriate amount of food to supply our body with the energy and nutrients we need for daily activities, growth, and maintenance.

When a person eats more calories than he or she uses through movement and exercise, the body stores the excess energy as fat. Excess body weight can contribute to many serious health problems, such as type 2 diabetes, heart disease and stroke.

### Reference

Moreno N., and B. Tharp. (2011). *The Science of Food: Teacher's Guide*. Fourth edition. Baylor College of Medicine. ISBN: 978-1-888997-76-7. Development of this student activity was supported, in part, by grant numbers R25 ES06932 and R2510698 from the National Institute of Environmental Health Sciences of the National Institutes of Health to Baylor College of Medicine.

**Key Words**

lesson, experiment, food, food label, nutrition facts, calories, total fat, saturated fat, trans fat, cholesterol, sodium, carbohydrate, fiber, sugar, protein, vitamin, minerals,

Healthy Snacks © Baylor College of Medicine.