Popcorn Nutrition

Subjects

- Mathematics
  -- Applied Math
  -- Arithmetic
  -- Statistics
- Health
  -- Nutrition

Grade

- 3-5
- 6-8

Brief Description

Read a snack nutrition chart and answer questions.

Objectives

Students will

- compare nutrition levels of snack foods.
- correctly calculate differences in nutritional value.

Keywords

nutrition, snack, snack foods, popcorn, ice cream, fat, carbohydrates, cholesterol, calories, serving, math, statistics, calculate, protein, sugar, sweet

Materials Needed [shopmaterials]

- a copy of the How Nutritious Are Your Snacks? chart (or access to the chart online)
- How Nutritious Are Your Snacks? work sheet, one copy per student

Lesson Plan
Share with students the nutrition information on the packages of some common foods. Talk about the information displayed on the nutrition information panels.

Introduce students to the *How Nutritious Are Your Snacks?* chart. You might

- project the chart from the Internet onto a screen;
- copy the chart onto a transparency and use an overhead projector to project the chart; or
- provide a photocopy of the chart for each student.

Discuss the chart.

Provide each student with a copy of the *How Nutritious Are Your Snacks?* work sheet. Give students time to complete the work sheet on their own or in pairs. After students complete the work sheet, go over it with them to make sure they know how to read the chart and understand the meaning of the chart’s nutritional information.

**Assessment**

Students should provide at least eight correct answers: 1. 343 calories; 2. fruit roll-up; 3. potato chips; 4. wafer and milk chocolate candy bar; 5. vanilla ice cream cone; 6. vanilla ice cream cone; 7. potato chips; 8. 71 grams; 9. 1 gram; 10. 107 grams.

**Lesson Plan Source**

Education World

**Submitted By**

Gary Hopkins

**National Standards**

**MATHEMATICS: Number and Operations**

**GRADES 3 - 5**

*NM-NUM.3-5.1* Understand Numbers, Ways of Representing Numbers, Relationships Among Numbers, and Number Systems

*NM-NUM.3-5.3* Compute Fluently and Make Reasonable Estimates

**GRADES 6 - 8**

*NM-NUM.6-8.1* Understand Numbers, Ways of Representing Numbers, Relationships Among Numbers, and Number Systems

*NM-NUM.6-8.3* Compute Fluently and Make Reasonable Estimates
MATHEMATICS: Measurement
GRADES 3 - 5
NM-MEA.3-5.1 Understand Measurable Attributes of Objects and the Units, Systems, and Processes of Measurement

GRADES 6 - 8
NM-MEA.6-8.1 Understand Measurable Attributes of Objects and the Units, Systems, and Processes of Measurement

MATHEMATICS: Data Analysis and Probability
GRADES 3 - 5
NM-DATA.3-5.2 Select and Use Appropriate Statistical Methods to Analyze Data
NM-DATA.3-5.3 Develop and Evaluate Inferences and Predictions That Are Based on Data
NM-DATA.3-5.4 Understand and Apply Basic Concepts of Probability

GRADES 6 - 8
NM-DATA.6-8.2 Select and Use Appropriate Statistical Methods to Analyze Data
NM-DATA.6-8.3 Develop and Evaluate Inferences and Predictions That Are Based on Data

MATHEMATICS: Connections
GRADES Pre-K - 12
NM-CONN.PK-12.3 Recognize and Apply Mathematics in Contexts Outside of Mathematics

PHYSICAL EDUCATION AND HEALTH: Health
GRADES K - 4
NPH-H.K-4.1 Health Promotion and Disease Prevention
NPH-H.K-4.2 Health Information, Products, and Services
NPH-H.K-4.3 Reducing Health Risks

GRADES 5 - 8
NPH-H.5-8.1 Health Promotion and Disease Prevention
NPH-H.5-8.2 Health Information, Products and Services
NPH-H.5-8.3 Reducing Health Risks

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How Nutritious Are Your Snacks?

Use the *How Nutritious Are Your Snacks?* chart to help you answer the following questions.

1. How many calories are there in 15 pretzel twists? __________

2. Which snack on the chart has the smallest amount of fat in a serving? _______________

3. Which has more calories -- a bag of potato chips or a bag of corn chips? _______________

4. Which snack on the chart has the most sugar in it? _______________

5. Which snack is highest in cholesterol? _______________

6. Which snack has more fat -- 2 cups of popcorn cooked in oil or a vanilla ice cream cone? _______________

For the rest of the questions, compare 2 cups of popcorn to a small (8 ounce) bag of potato chips:

7. Which of the two snacks has more calories? _______________

8. How many more grams of fat does a serving of the chips have? _______________

9. How many more grams of sugar does popcorn have? _______________

10. How many more grams of carbohydrates do potato chips have? _______________
How Nutritious Are Your Snacks?

This chart shows nutritional information for some popular snack foods.

<table>
<thead>
<tr>
<th>Snack Food</th>
<th>Calories</th>
<th>Protein (grams)</th>
<th>Carbohydrates (grams)</th>
<th>Fiber (grams)</th>
<th>Fat (grams)</th>
<th>Sugar (grams)</th>
<th>Cholesterol (milligrams)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Popcorn plain, oil-popped (2 cups)</td>
<td>110</td>
<td>2</td>
<td>13</td>
<td>2</td>
<td>8</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Pretzels plain, salted (15 twists)</td>
<td>343</td>
<td>8</td>
<td>71</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Potato chips plain, salted 1 bag (8 oz.)</td>
<td>1217</td>
<td>16</td>
<td>120</td>
<td>10</td>
<td>79</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ice cream vanilla, soft-serve, wafer cone (4 oz.)</td>
<td>208</td>
<td>4</td>
<td>22</td>
<td>1</td>
<td>11</td>
<td>18</td>
<td>78</td>
</tr>
<tr>
<td>Crackers saltines (6 crackers)</td>
<td>78</td>
<td>1</td>
<td>13</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Candy bar wafer/milk choc. (1 bar)</td>
<td>217</td>
<td>3</td>
<td>27</td>
<td>1</td>
<td>11</td>
<td>22</td>
<td>4</td>
</tr>
<tr>
<td>Corn chips plain, 1 bag (7 oz.)</td>
<td>1067</td>
<td>13</td>
<td>113</td>
<td>10</td>
<td>66</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Fruit rolls (1 small roll-up)</td>
<td>52</td>
<td>0</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: USDA Nutrient Data Laboratory, http://www.nal.usda.gov/fnic/cgi-bin/nut_search.pl All numbers are rounded.