

How Much Sugar Are You Drinking?

3-5

M . 4 . 2

Objectives

Students will be able to:

- Identify sugar sweetened beverages.
- Determine the amount of sugar in drinks and compare sugar content of different drinks by reading the nutrition facts label.
- Explain the risks of drinking too many sugar sweetened beverages.

Standards Met

- **3.NBT.** Use place value understanding and properties of operations to perform multi-digit arithmetic.
- **MP.1.** Make sense of problems and persevere in solving them.
- **MD.2.** Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).⁶ Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units.

Overview of Sugar Sweetened Beverages

Did you know? Most adults eat or drink about **18 teaspoons** of added sugar a day.

Added sugars are sugars and syrups that are added to foods and drinks when they are processed or prepared. These are different from natural occurring sugars such as the ones in fruits and milk. The more added sugars we eat and/or drink, the more calories we consume, and the more likely we are to gain weight.

Healthy People 2020 Goals are to “reduce consumption of added sugars” as they increase calories in our diet and may promote obesity and other health problems. Sugar sweetened beverages are one of the highest sources of added sugars in the diet and contribute the most “empty calories.” Empty calories are foods and drinks that are high in calories but low in nutrients.

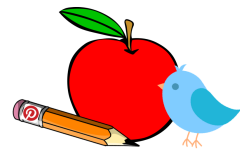
Some drinks that have added sugars include soft drinks, processed juices, sports drinks, chocolate milk, milkshakes, sweet teas, etc.

Reading ingredient labels is the best way to identify added sugars. Names for added sugars on food labels include:

Brown sugar • corn syrup • dextrose • fructose • invert sugar • lactose • malt syrup • maltose • nectars • sucrose

It is important to teach young students to recognize sugar sweetened drinks, help them understand the risks that these drinks pose to students’ health, and encourage them to choose healthier drinks such as water, milk and 100% natural fruit juices.

For more information on sugar sweetened beverages, go to:
www.mentorprojectfiu.com



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Make The Connection

Materials

- Worksheet: How Much Sugar Are You Drinking? for Grades 3-5
- Supplemental Material: Nutrition Facts Label
- A food package or drink container with the Nutrition Facts Label

Using the worksheet titled **“How Much Sugar Are You Drinking?” for Grades 3-5**, help your students compare the amount of sugar in different beverages.

Bring a food package or drink container to class and show your students where in the package or container they can find the nutrition facts label. Explain to students how the nutrition facts label is found in most packaged foods and drinks and how it lists the nutrient information of foods and drinks. This information includes the serving size, the servings per container, calories, total fat, total carbohydrate, sugar, etc.

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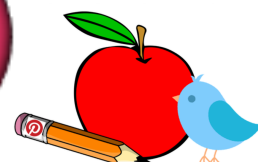
Draw a sample nutrition facts label on the board.

Emphasize on the serving size, serving per container, calories per serving and sugars per serving. Explain to your students that the first thing they need to read is the serving size of each food and drink. All the information in the nutrition facts label is based on the serving size. For example: there are 230 calories in a 2/3-cup serving size of cereal.

Second, explain that most packages contain more than one serving per package. This is when the section of “Servings Per Container” comes to play. For example: there are eight 2/3-cup servings in a box of cereal. Therefore, if you want to figure out the amount of calories in the entire box of cereal, you need to multiply the calories per serving (230 calories) by the number of servings per container (8). By doing this, one can figure out there are a total of 1,840 calories in the box of cereal. Same principle goes for the sugar content. By multiplying the amount of sugar per serving (1 gram) by the number of servings per container (8), one can obtain the total amount of sugar in the box of cereal (8 grams).

After you explain the nutrition fact label, do an overview of the **“How Much Sugar Are You Drinking?” worksheet for Grades 3-5**. Review and provide examples of addition and subtraction of fractions and mixed problems. For more information about the nutrition facts label, go to the “Nutrition Facts Label” reference sheet. Explain the activity and clarify any questions the students may have.

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Supplemental Material

For the Teacher: Nutrition Facts Label

Nutrition Facts Label of a 2-liter Coca-Cola Bottle

1. Find the serving size:
12 fluid ounces (12 fl oz).

**2. Find the servings per
container:** 6.

3. Find the amount of calories per serving size:
140 calories.

4. Find the amount of calories per 2-liter bottle of Coca-Cola:
 $140 \text{ calories/serving} \times 6 \text{ servings/bottle} = 840 \text{ calories per 2-liter bottle.}$

5. Find the amount of sugar per serving size:
39 grams (g) of sugar.

6. Find the amount of sugar in each 2-liter bottle:
 $39 \text{ g sugar/serving} \times 6 \text{ servings/bottle} = 234 \text{ g sugar/bottle.}$

7. Find the number of teaspoons of sugar in each 2-liter bottle:
Note: there are 4 g of sugar per teaspoon
 $312 \text{ g sugar} / 4 \text{ g sugar} = 78 \text{ teaspoons of sugar/bottle}$

| Nutrition Facts | |
|--|-----|
| Serving Size: 12 fl oz (360 mL) | |
| Servings Per Container 6 | |
| Amount Per Serving | |
| Calories 140 | |
| % Daily Value* | |
| Total Fat 0g | 0% |
| Sodium 45mg | 2% |
| Total Carbohydrates 39g | 13% |
| Sugars 39g | |
| Protein 0g | |
| Not a significant source of calories from fat, saturated fat, trans fat, cholesterol, dietary fiber, vitamin A, vitamin C, calcium and iron. | |
| *Percent Daily Values are based on a 2,000 calorie diet. | |

Name: _____ Date: _____

How Much Sugar Are You Drinking?

3-5

20-ounce Bottle of Coke



Nutrition Facts

| | |
|---------------------------|-------------------|
| Serving Size | 1 cup (8 fl oz) |
| Serving Per Container | 2.5 |
| Calories | 100 (per serving) |
| Total Fat | 0g |
| Sodium | 35mg |
| Total Carbohydrate | 27g |
| Sugars | 27g |
| Protein | 0g |

- 1) How many grams of sugar will I consume if I drink a 20-ounce bottle of Coca Cola? Show your work. Note: Remember the number of Servings Per Container.
- 2) How many teaspoons of sugar will I consume if I drink a 20-ounce bottle of Coca Cola? Show your work. Note: There are 4 grams of sugar in a teaspoon.
- 3) How many grams of sugar will I consume if I drink $\frac{1}{2}$ a cup of Coca Cola? How many teaspoons of sugar will I consume ? Show your work.
- 4) How many $\frac{1}{2}$ cup servings are there in $2\frac{1}{2}$ cups of Coca Cola? Show your reasoning.
- 5) How many $\frac{1}{4}$ cup servings are there in $2\frac{1}{2}$ cups of Coca Cola? Show your reasoning.



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Small Milk Carton (1 cup)



Nutrition Facts

| | |
|---------------------------|-------------------|
| Serving Size | 1 cup (8 fl oz) |
| Serving Per Container | 1 |
| Calories | 150 (per serving) |
| Total Fat | 9g |
| Sodium | 120mg |
| Total Carbohydrate | 11g |
| Sugars | 11g |
| Protein | 8g |

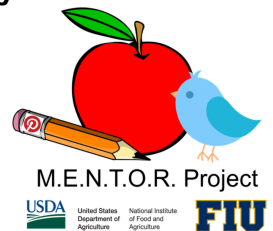
1) How many grams of sugar will I consume if I drink a small carton of milk?
Show your work. Note: Remember the number of Servings Per Container.

2) How many teaspoons of sugar will I consume if I drink a small carton of milk?
Show your work. Note: There are 4 grams of sugar in a teaspoon.

3) How many grams of sugar will I consume if I drink $\frac{1}{2}$ a cup of milk? How many teaspoons of sugar will I consume? Show your work.

4) How many $\frac{1}{2}$ cup servings are there in $3\frac{1}{2}$ cups of milk? Show your work.

5) How many $\frac{1}{4}$ cup servings are there in $3\frac{1}{2}$ cups of milk? Show your work.



How Much Sugar Are You Drinking?

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Answer Key

20-ounce Bottle of Coke



Nutrition Facts

| | |
|-----------------------|-------------------|
| Serving Size | 1 cup (8 fl oz) |
| Serving Per Container | 2.5 |
| Calories | 100 (per serving) |
| Total Fat | 0g |
| Sodium | 35mg |
| Total Carbohydrate | 27g |
| Sugars | 27g |
| Protein | 0g |

1) How many grams of sugar will I consume if I drink a 20-ounce bottle of Coca Cola? Show your work. Note: Remember the number of Servings Per Container.

$$2.5 \times 27 \text{ g} = 67.50 \text{ g of sugar}$$

2) How many teaspoons of sugar will I consume if I drink a 20-ounce bottle of Coca Cola? Show your work. Note: There are for 4 grams of sugar in a teaspoon.

$$67.5 \text{ g} \div 4 \text{ g per teaspoon} = 16.88 \text{ teaspoons of sugar}$$

3) How many grams of sugar will I consume if I drink 1/2 a cup of Coca Cola? How many teaspoons of sugar will I consume ? Show your work.

$$27 \text{ g of sugar} \div 2 = 13.50 \text{ g of sugar in } \frac{1}{2} \text{ cup}$$

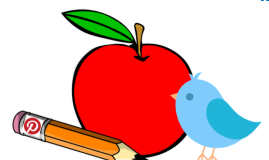
$$13.5 \text{ g} \div 4 \text{ g per teaspoon} = 3.37 \text{ teaspoons of sugar in } \frac{1}{2} \text{ cup}$$

4) How many 1/2 cup servings are there in 2 1/2 cups of Coca Cola? Show your reasoning.

There are 5 1/2-cup servings in 2 1/2 cups of Coca Cola

5) How many 1/4 cup servings are there in 2 1/2 cups of Coca Cola? Show your reasoning.

There are 10 1/2-cup servings in 2 1/2 cups of Coca Cola



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Small Milk Carton (1 cup)



Nutrition Facts

| | |
|---------------------------|-------------------|
| Serving Size | 1 cup (8 fl oz) |
| Serving Per Container | 1 |
| Calories | 150 (per serving) |
| Total Fat | 9g |
| Sodium | 120mg |
| Total Carbohydrate | 11g |
| Sugars | 11g |
| Protein | 8g |

1) How many grams of sugar will I consume if I drink a small carton of milk?
Show your work. Note: Remember the number of Servings Per Container.

$$1 \times 11 \text{ g} = 11 \text{ g of sugar}$$

2) How many teaspoons of sugar will I consume if I drink a small carton of milk?
Show your work. Note: There are for 4 grams of sugar in a teaspoon.

$$11 \text{ g} \div 4 \text{ g per teaspoon} = 2.75 \text{ teaspoons of sugar}$$

3) How many grams of sugar will I consume if I drink $\frac{1}{2}$ a cup of milk? How many teaspoons of sugar will I consume? Show your work.

$$11 \text{ g} \div 2 = 5.50 \text{ g of sugar}$$

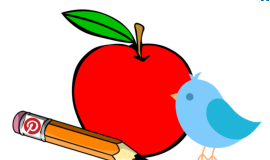
$$5.5 \text{ g} \div 4 \text{ g per teaspoon} = 1.37 \text{ teaspoons of sugar}$$

4) How many $\frac{1}{2}$ cup servings are there in $3 \frac{1}{2}$ cups of milk? Show your work.

$$\text{There are } 7 \frac{1}{2}\text{-cup servings of milk in } 3 \frac{1}{2} \text{ cups of milk}$$

5) How many $\frac{1}{4}$ cup servings are there in $3 \frac{1}{2}$ cups of milk? Show your work.

$$\text{There are } 14 \frac{1}{4}\text{-cup servings in } 3 \frac{1}{2} \text{ cups of milk}$$



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