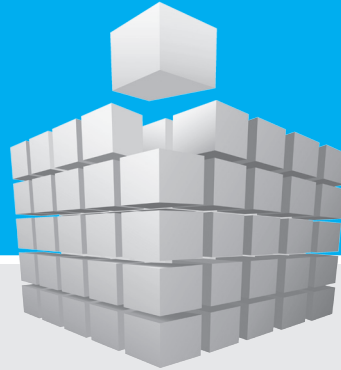


# Count the Cubes!

Action Schools! BC

## Sugary Drinks Extension Activity



Drinks are a common snack choice. Learning to understand nutrition labels to figure out the amount of sugar contained in various drinks will help students to make healthier drink choices.



4 - 7

Sugary Drinks

### USED BY

- Grade 4 activity *Sugar Shocker*

## PREPARATION

- Review the *Sugary Drinks* section of the *Healthy Eating Overview* and the *Educator Backgrounder* (included with this activity).
- 200 sugar cubes or plastic cubes (math manipulatives work well) divided into 9 re-sealable sandwich bags.
- Optional: use teaspoons of sugar, 4 g or 1 tsp = 1 sugar cube.
- Collect empty drink containers (see following page for a list of drinks) and/or use the Sip Smart! BC™ *Drink Cut-outs*.
- Collect clear plastic cups.
- Make a transparency or project the *How To Use a Nutrition Facts Table to Understand the Sugar Content of Drinks* resource, attached.

# IMPLEMENTATION

## CUBES OF SUGAR

- Divide the class into groups based on how many drinks you plan to use.
  - Assign one drink, a bag of plastic cubes or sugar cubes, and a plastic cup to each group.
  - Have students guess the number of sugar cubes in their designated drink and fill the plastic cup with that number of cubes.
  - Have each group hold up their drink container (or their Sip Smart! BC™ *Drink Cut-out*) and report their guess to the class.
- Explain that 5 ml or 1 tsp = 1 cube sugar = 4 g sugar.
  - Ask students to do the math for the sugar provided on the Nutrition Facts Table and determine if their answer was correct.
- (e.g., 12 g sugar = 3 sugar cubes)
- Ask students if they had to change their answer for their drink.
- See the following page for answers to sugar content of popular drinks.
- Explain to students that sugary drinks and too much 100% juice “bumps-out” other healthy beverages like water and milk, and contributes to a higher caffeine intake and a higher risk of dental cavities. When children fill up on sugary drinks, they consume fewer nutritious foods and beverages, and risk deficiencies in essential nutrients.













## BUMP OUT SUGARY DRINKS CHALLENGE

- Announce the challenge. Students are encouraged not to drink any sugary drinks and to limit themselves to 100% juice – no more than 125 ml (1/2 cup) per day (in or out of school) for 1 school week.
- Students keep a daily record of their sugary drinks and 100% juice intake for 5 school days. Students earn 1 point for each day that they do not drink sugary drinks and limit their 100% juice intake to 125 ml (1/2 cup) per day. Take a class poll after 5 days to determine how many students bumped out sugary drinks during the school week.

*Adapted from: Sip Smart! BC™*

## Amount of Sugar in Popular Drinks

This chart provides a visual description of the amount of sugar found in many popular drinks. Water, milk and 100% fruit juices have been added to the chart as a reference.

DRINK	# OF CUBES OR TEASPOONS OF SUGAR	
Water (250 ml)	0	
Plain Milk (250 ml)	3	 naturally occurring lactose
Chocolate soy beverage (250 ml)	5	
100% Orange Juice (200 ml)	5	 naturally occurring fructose
Chocolate milk (250 ml)	6	
Iced tea (355 ml)	10	
Citrus-C (fruit flavoured drink) (355 ml)	10	
Sports drink (700 ml)	10	
Energy drink (500 ml)	14	
Cola (591 ml)	17	
Iced mocha (500 ml)	20	
Sweetened bubble tea (500 ml)	21	
Lime Blast Slushie (1000 ml)	24	

Adapted from: Sip Smart! BC™

## RECOMMENDED RESOURCES















- Sip Smart! BC™ (<http://bcpeds.ca/Programs/sipsmart.aspx?MenuID=3347>)
  - Sip Smart! BC™ What Size Is Your Drink poster
  - Sip Smart! BC™ Drink Cut-outs
- BC Ministry of Education – *Guidelines for Food and Beverage Sales in BC Schools (F)* (<http://healthyschoolsbc.ca/program/395/guidelines-for-food-and-beverage-sales-in-bc-schools>)

## EDUCATOR BACKGROUNDER

Most people should have no more than 13 teaspoons of added sugar each day. Added sugars are sugars and syrups that are added to drinks or foods during processing or preparation.

# Amount of Sugar in Popular Drinks

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Adapted from: Sip Smart! BC™

## Remember:

- Sugary drinks are beverages that have sugar or sugary syrups added to them.
- Sugary drinks provide little or no nutritional value and take the place of healthier choices like water or milk.
- 1 teaspoon (tsp) of sugar = 4 grams of sugar = 1 sugar cube.

# How to Use a Nutrition Facts Table to Understand the Sugar Content of Drinks

For students in Grades 4 and up, it is appropriate to begin to learn how to read a Nutrition Facts Table. When assessing a drink product, follow these three steps:

**1**

Look at the serving size listed in the Nutrition Facts Table and compare it to how much you actually consume. The serving size is not based on Canada's Food Guide Servings.

**2**

Look under the carbohydrate section for the sugars. The number of grams listed will be the amount of sugar in the serving size listed above.

**3**

Take the number of grams of sugar and divide by four to determine the number of teaspoons (tsp) or sugar cubes in that serving.

## SAMPLE OF A 100% APPLE JUICE WITH ADDED VITAMIN C

<b>Nutrition Facts</b> <b>Valeur nutritive</b>		
→ Serving Size 250 ml / Portion 250 ml		
Amount Teneur		% Daily Value % valeur quotidienne
Calories / Calories	120	
Fat / Lipides	0.3 g	1%
Saturated / saturés + Trans / trans	0 g	0%
Cholesterol / Cholestérol	0 mg	
Sodium / Sodium	10 mg	1%
Carbohydrate / Glucides	29 g	10%
Fibre / Fibres	0 g	0%
→ Sugars / Sucres	28 g	
Protein / Protéines	0.2 g	
Vitamin A / Vitamine A		0%
Vitamin C / Vitamine C		170%
Calcium / Calcium		2%
Iron / Fer		6%

check the food labels often  
because product ingredients  
may change.

Reference: Interactive Nutrition Label and Quiz, Using the Nutrition Facts Table: % Daily Value, 2010  
([hc-sc.gc.ca/fn-an/label-etiquet/nutrition/cons/fact-fiche-eng.php](http://hc-sc.gc.ca/fn-an/label-etiquet/nutrition/cons/fact-fiche-eng.php))

# SUGARY DRINKS OVERVIEW

This section of the *Healthy Eating Overview* will explain what is meant by ‘sugary drinks’, provide tips and tools for assessing popular drinks and share information relating to the levels of caffeine found in many of these drinks. Find the complete *Healthy Eating Overview* at [www.actionschoolsbc.ca/resources](http://www.actionschoolsbc.ca/resources).

## KEY MESSAGES

Some drinks don’t fit into the four food groups in *Eating Well with Canada’s Food Guide* or *Eating Well with Canada’s Food Guide – First Nations, Inuit and Métis*.

- Sugar is a major ingredient in many popular drinks.
- Knowing what is in drinks helps us to make healthy choices.
- The number and size of servings we drink affects the amount of sugar we consume.
- Drinking sugary drinks “bumps out” nutritious drinks.
- Some ingredients in sugary drinks other than sugar, such as acid and caffeine, may damage our health.
- Drink choices can be influenced by various factors, including family, friends, and the media.
- We can decide for ourselves to make healthy drink choices.
- Drink water – it’s always a great choice!

*Adapted from: Sip Smart! BC™*

## What Are Sugary Drinks?

### Added Sugars



Sugary drinks are drinks (carbonated or not) that contain added sugars. These can include:

- Pop or soft drinks
- Energy drinks
- Hot chocolate
- Store-bought smoothies
- Slushes
- Fruity drinks (e.g., “punches”, “cocktails”, or “ades”)
- Sports drinks
- Flavoured or vitamin-enhanced waters

Added sugars are sugars and syrups that are added to drinks or food during processing (e.g., sugars added to soda by the manufacturer) or preparation (e.g., sugars added to a cup of coffee after it was bought at the coffee shop). Sugary drinks often have little to no nutritional value. For examples, children and adolescents who drink pop regularly are more likely to have lower intakes of calcium and other nutrients.

Sugary drinks are heavily marketed, available in many locations, and often displayed at the eye level of children. These drinks can contribute to unhealthy weight, which puts a child at increased risk of high blood pressure, heart disease, type 2 diabetes, cancer and other health problems. A healthy weight, on the other hand, supports the mental, physical and social health and well-being of individuals, families and communities.

## Naturally Occurring Sugars

Naturally occurring sugars are no different from added sugars in terms of their effects on the body. However, because drinks with naturally occurring sugars often contain important nutrients, they can be consumed in moderation as part of healthy eating. Some drinks with naturally occurring sugar are 100% fruit juice (contains fructose), and plain milk (contains lactose).

## Hidden Sugars



Hidden sugars are other names for added sugars that might not sound or look like sugar. These include: sucrose, dextrose, maltose, galactose, liquid glucose-fructose, invert sugar, raw cane sugar, brown sugar, corn sweetener, high-fructose corn syrup, rice syrup, fruit juice concentrates, honey, malt syrup, and molasses.

## Juice and Fruity Drinks



The difference between 100% fruit juices and “fruity drinks” (e.g., “fruit beverages”, “fruit drinks”, “fruit cocktails”) can be a difficult concept for students to grasp, but is a very important teaching point. Although the majority of added sugar consumed by students often comes from these drinks, they – and often their parents – may not know the difference between 100% fruit juice and fruity drinks.

100% fruit juice contains some of the natural vitamins (such as vitamin C, potassium and B-vitamins) found in fruit. However, fruit juice still contains a lot of concentrated sugar, and has the same effect on teeth as other sugary drinks. For this reason, children should have no more than 1 serving (125ml, 1/2 cup) of 100% fruit juice daily. A healthier alternative to 100% fruit juice would be a glass of water and a piece of fresh fruit, which provides all the vitamins, minerals, and fibre naturally present, but with much less sugar. Juice is not a necessary part of a healthy diet. Fruits and vegetables are!

## What About Artificial Sweeteners?



In keeping with the Guidelines for Food and Beverage Sales in B.C. Schools, drinks sweetened with artificial sweeteners such as aspartame, acesulfame potassium and sucralose are not allowed for sale in elementary and middle schools. Just like sugary drinks, artificially sweetened drinks get children used to sweet-tasting, non-nutritious items. They provide none of the nutrients that a child’s growing body needs to be healthy and strong, and can bump healthy foods and drinks out of a child’s diet. These drinks may also contain artificial sweeteners in amounts that exceed the acceptable daily intake (ADI) for children.



## Energy Drinks



Energy drinks contain as much or more added sugar than cola, are high or very high in caffeine, and often contain potentially harmful additives. Energy drinks are often marketed with images of extreme sports such as competitive downhill skiing, biking, snowboarding and skateboarding, with the implication that these drinks boost performance. Others, with flashy packaging and enticing names are designed to directly target the youth market.

Energy drinks are very high not only in sugar, but also in caffeine. For example, a 500mL can of a typical energy drink contains 160mg of caffeine. That is more than double the suggested daily caffeine maximum for a 7-12 year-old child.

Many energy drinks also contain stimulant herbs or other substances such as guarana and taurine. These additives are often listed misleadingly as “medicinal ingredients” on energy drinks, when in fact they are untested and potentially harmful, especially for children. Like sports drinks, energy drinks also tend to contain artificial flavours and/or colours.

When consumed in large amounts, or when combined with alcohol, energy drinks have been linked to serious health effects such as irregular heart function, nausea and vomiting, and electrolyte disturbances. Energy drinks can also interact with some medications.<sup>1</sup>

## Milk, Flavoured Milk and Other Beverages Made With Milk



Milk and milk alternatives (e.g., unsweetened fortified soy beverage) are the main source of calcium and Vitamin D in most Canadian diets. Both calcium and vitamin D help build and maintain strong bones and teeth. Plain milk is also a source of protein, vitamin A and riboflavin.

One cup (250mL) of plain milk = 1 serving from the Milk and Alternatives food group in *Eating Well with Canada's Food Guide* and in *Eating Well With Canada's Food Guide – First Nations, Inuit and Métis*. Children aged 4-13 should aim for 2 to 4 Food Guide Servings of Milk and Alternatives each day.

Adding vanilla, chocolate, strawberry and other flavours to plain milk can add a lot of extra sugar. It is best to offer children plain (not flavoured) milk regularly so they learn to enjoy it. If making flavoured milk at home, add a small amount of syrup or powder. Less is best.

### Drink water – it's always a great choice!

Adapted from: *Sip Smart! BC™*



### References:

1. Sip Smart! BC™ (<http://healthyschoolsbc.ca/program/298/sip-smart-bc>)