

An initiative of the Ontario Society of  
Nutrition Professionals in Public Health



## **Teacher Resource Guide**

*Sip Smart!™ Ontario is designed to help  
students at the grade 3 -7 level make  
healthy drink choices.*



Ontario Society of Nutrition  
Professionals in Public Health  
La société ontarienne des professionnel(le)s  
de la nutrition en santé publique



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# ➤ Teacher Resource Guide

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## Welcome to the Teacher Resource Guide for Sip Smart!™ Ontario

Sugary drinks are everywhere. Pop, fruit ‘punch’, sports and energy drinks, and many other beverages have a lot of added sugar. Too much sugar is not good for a child’s health. It can cause serious dental problems and take the place of more nutritious foods. The extra calories in sugary drinks can add up quickly. This can lead to an unhealthy weight, putting a child at higher risk for high blood pressure, heart disease, diabetes and cancer.

As a teacher, you are in a unique position to educate students about healthy food and drinks as part of the Ontario Health and Physical Education Curriculum, 2015 (revised). You can support student learning about healthy drink choices that can help them build and maintain a healthy body today and for a lifetime. The lesson plan activities (for grades 3 to 7) are fun and encourage students to think about and to make healthy drink choices.

Parents and caregivers are key to reinforcing healthy eating messages in the home, as are school community members who can integrate key messages of Sip Smart!™ Ontario into activities outside of the classroom. Taking this ‘whole school’ approach to promoting healthy eating is vital to support students in making healthy drink choices. Sip Smart!™ Ontario offers tools and resources for parents and school community members to help children replace sugary drinks with healthier choices.

Children and families spend time outside home and school, in arenas, grocery stores, sporting events, and child care facilities. Sip Smart!™ Ontario offers resources to support students to take action on their drink choices in community settings, tying the learning back to the classroom education.

The original Sip Smart!™ program was created and developed by the BC Pediatric Society and the Heart and Stroke Foundation with funding from the BC Healthy Living Alliance. The Ontario Society of Nutrition Professionals in Public Health would like to extend our thanks to the BC Pediatric Society and the Heart and Stroke Foundation for allowing the usage of the Sip Smart! BC™ program. We extend special thanks to Pat Zellinsky, Project Manager, Sip Smart! BC™ for her guidance and generous support to help us adapt the program for Ontario.



Healthy children  
learn better, perform  
better academically  
and socially, and have  
more energy to be  
physically active.



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# → Introduction

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## **Sip Smart!™ Ontario**

We all know that physical activity and healthy eating are essential parts of healthy living. What is less commonly known is that what we drink also has a major impact on our health. Child health experts believe, for instance, that reducing the consumption of sugary drinks (that is, drinks that contain added sugars) is a key strategy in curbing the rising rates of childhood obesity.

**Sip Smart!™ Ontario** aims to provide Grade 3 to 7 school children in Ontario with the knowledge and skills they need to make healthy drink choices, and raise awareness of the negative health effects associated with the consumption of sugary drinks.

**Sip Smart!™ Ontario** is an adaptation of Sip Smart! BC™, an interactive classroom-based program originally developed by the BC Pediatric Society and the Heart and Stroke Foundation. It has been adapted to meet the best practice and curriculum standards of Ontario by Registered Dietitians, members of the Ontario Society of Nutrition Professionals in Public Health (OSNPPH), working in public health units/departments across Ontario.

**Sip Smart!™ Ontario** lessons included in this Teacher Resource Guide reflect prescribed learning outcomes for the Health and Physical Education curriculum for grades 3 to 7 and also touch on other curriculum areas such as Science.

**Sip Smart!™ Ontario** recognizes and values the important role parents and caregivers play in a child's food and drink choices. The **Sip Smart!™ Ontario** Booklet, which contains information and tips about sugary drinks, helps families to help children make wise drink choices.

With its unique focus on student drink choices, **Sip Smart!™ Ontario** fills an important niche in school nutrition education. It fits well into the Foundations for a Healthy School model from the Ontario Ministry of Education that is practiced in many Ontario schools. Reducing intake of sugary drinks aligns with recommendations made by the Healthy Kids Panel in the report *No Time to Wait: The Healthy Kids Strategy*.<sup>1</sup>

The **Sip Smart!™ Ontario** Teacher Resource Guide complements existing healthy eating and physical activity learning resources. The guide contains fun and innovative extension activities so that students learning about healthy drink choices can extend their knowledge beyond the classroom and into the whole school, home, and community.

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<sup>1</sup> Available from:

[http://www.health.gov.on.ca/en/common/ministry/publications/reports/healthy\\_kids/healthy\\_kids.pdf](http://www.health.gov.on.ca/en/common/ministry/publications/reports/healthy_kids/healthy_kids.pdf)

We hope  
you and your students  
enjoy learning to  
**Sip Smart!**



# Organization of Content

The **Teacher Resource Guide (TRG)** includes just about everything you need to teach Sip Smart!™ Ontario in approximately three hours (depending on the needs of your students and how much time you allot for classroom discussion). This section introduces the resources included in subsequent sections of this document to support your work.

## Overview

The Sip Smart!™ Ontario Program is designed for grades 3 to 7. The lesson overview shows how the program has been structured to work for two levels: grades 3, 4, and 5; and, grades 6 and 7. **Appropriate grade levels are suggested beside the activity header.**

Although key messages about sugary drinks are consistent across the divisions, the activities are different enough that students can participate in the program twice in three years. Intermediate teaching staff can plan the most appropriate way to deliver the lessons based on students' needs, interests, and the Ontario Health and Physical Education Curriculum.

## Lessons

Sip Smart!™ Ontario contains five 40 minute interactive lessons and a series of assessment tools. Although lessons are presented in a recommended order, all activities are designed so that they can also be taught independently.

Sip Smart!™ Ontario is built on nine overarching key messages. Relevant messages are stated at the beginning of each activity. The same message is taught several times throughout the program, in different activities and from different perspectives, reinforcing student learning and retention. See Key Messages in the overview section.

All lessons contain:

- Key messages
- Relevant curriculum expectations
- Learning goals
- Suggested opportunities for assessment
- A list of necessary material
- And lessons which highlight:
  - instructions for the activity
  - 'activity tips'
  - a 'punchline'

Each 'activity tip' provides the most important nutritional and/or instructional facts required for the individual activity. Where knowledge or a resource from earlier activities is required, for example, in the "Tooth" Experiment or the Drink Diary activity, activities are cross-referenced.

The activities in this resource guide assume that students have prior knowledge about *Eating Well with Canada's Food Guide*. However, where this is not the case, teaching the Food Guide as an extension activity just before Lesson 2 works well. Similarly, basic knowledge about label reading is recommended prior to Lesson 2. We suggest using EatRight Ontario ([www.eatrightontario.ca](http://www.eatrightontario.ca) enter "nutrition label" in the search box) and the Government of Canada site to introduce *Eating Well with Canada's Food Guide* (<http://healthycanadians.gc.ca/eating-nutrition/healthy-eating-saine-alimentation/food-guide-aliment/index-eng.php>)

The Sip Smart!™ Ontario Drink Diary (page 86) is a valuable tool to raise students' awareness about their drinking patterns (and thereby their sugar intake). We therefore recommend that students fill in three Drink Diaries over the course of the program, and that class results are calculated and reported back to students. We strongly recommend that students are assured that their individual intake and sugar totals will not be displayed or shared.

## Backgrounders

Backgrounder documents are located in the section following the lesson plans. It is helpful to scan or read all 'Backgrounders' before starting to teach the program. Each one has valuable information about the sugary drinks you will be discussing.

## Resources

The 'Resources' section provides master copies of all handouts and overheads, along with additional teacher resources. Clear labeling in the 'Activity' sections enables you to easily locate required materials.

## Extensions

Because learning happens over time and with reinforcement, we have provided a few more ideas for teaching students about healthy drink selection in the 'Classroom Extensions' section. Some of these ideas were suggested by teachers participating in early delivery of the program. These may lead you to think of other creative ways to augment the program.

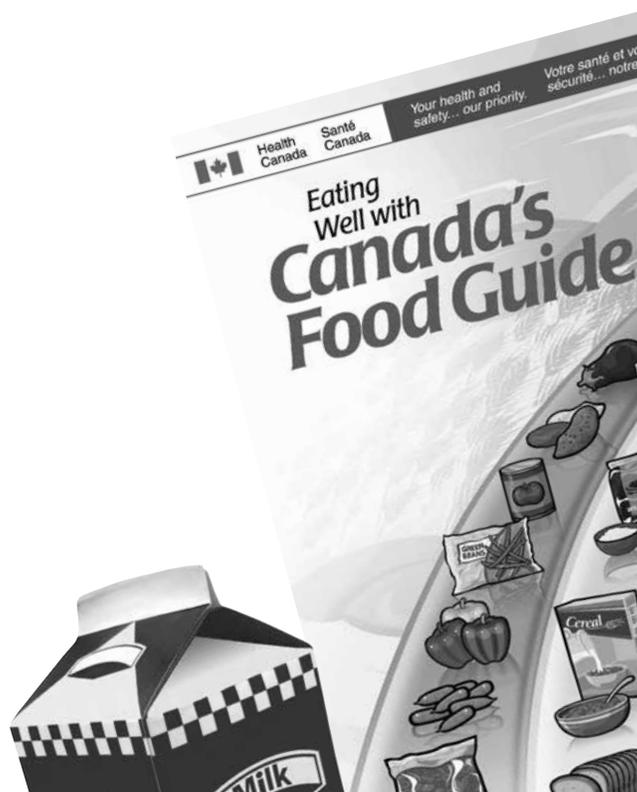
Pages in the 'Extensions' section also include activity ideas to extend learning beyond the classroom to the whole school, home and community. Visit [www.brightbites.ca](http://www.brightbites.ca) for updates on extension activities.

## Online Resources

The Sip Smart!™ Ontario website, [www.brightbites.ca](http://www.brightbites.ca), provides additional valuable learning tools for teachers including:

- A downloadable *Drink Diary Calculator* to calculate the results of the Sip Smart!™ Ontario Drink Diaries.
- Information about downloading the entire Sip Smart!™ Ontario package (Teacher Resource Guide, posters, drink cut-outs, and materials for families).

visit us at  
[www.brightbites.ca](http://www.brightbites.ca)  
for more learning tools



## Acknowledgements

- The original Sip Smart!™ program was created and developed by the BC Pediatric Society and the Heart and Stroke Foundation with funding from the BC Healthy Living Alliance. Ontario Society of Nutrition Professionals in Public Health would like to extend our thanks to the BC Pediatric Society for allowing the usage of the Sip Smart! BC™ program.
- Ontario Society of Nutrition Professionals in Public Health (OSNPPH) is the independent and official voice of Registered Dietitians working in public health in Ontario. The society's mission is to provide a leadership forum and official voice for public health nutrition practice in Ontario. Many public health units have contributed funding, staff time, resources and advice to support the development of this program. In particular, we wish to thank the members listed below for their assistance in the development of Sip Smart!™ Ontario.
- OSNPPH Sip Smart!™ Ontario Current Work Group Members: Karling Draper, RD (Thunder Bay District Health Unit), Lindsay Fera, RD (Algoma Public Health), Carolyn Froats-Emond, RD (Renfrew County and District Health Unit), Paula Ross, RD (Sudbury & District Health Unit), Michelle Saraiva, RD (Haldimand-Norfolk Health Unit), Elizabeth Strachan, RD (Windsor-Essex County Health Unit), Carolyn Tereszkowski, RD (Region of Waterloo Public Health and Emergency Services), Marie Traynor, RD (Leeds, Grenville & Lanark District Health Unit).

### Previous members:

- » Jennelle Arnew, RD (Chatham-Kent Public Health Unit)
- » Nancy Bevilacqua, RD (York Region Community and Health Services)
- » Jessica Bigelow, RD (Timiskaming Health Unit)
- » Carolyn Doris, RD (Peterborough County-City Health Unit)
- » Elizabeth Finlan, RD (former Peterborough County-City Health Unit)
- » Jessica Hambleton, RD (former Region of Waterloo Public Health and Emergency Services)
- » Doreen Henderson, RD (Wellington-Dufferin-Guelph Public Health)
- » Michele Hurd, RD (Perth District Health Unit)
- » Cathy MacPherson, RD (Elgin St. Thomas Public Health)
- » Luisa Magalhaes, RD (Peterborough County-City Health Unit)
- » Sandy Maxwell, RD (Niagara Region Public Health)
- » Pascale Messier, RD (Ottawa Public Health)
- » Meena Tipper, RD (Leeds, Grenville & Lanark District Health Unit)
- » Heather Wdowiak, RD (Region of Waterloo Public Health and Emergency Services)

### Reviewers:

- » Sandy Maxwell, RD (Niagara Region Public Health)
  - » Suzanne Neumann, RD (City of Hamilton-Public Health Services)
  - » Lucy Valteau, RD (York Region Community and Health Services)
- OSNPPH would like to thank the Haldimand-Norfolk Health Unit's Communications Services and the Windsor-Essex County Health Unit for the formatting and graphic design of the Sip Smart!™ Ontario resources.

→ Curriculum Connections



# Curriculum Connections

Lessons		Curriculum Expectations:	
Lesson 1 →	→ DRINK DETECTIVE	<b>Health and Physical Education - Healthy Living</b> <i>See the Ontario Curriculum, Health and Physical Education, Grades 1-8, for examples, teacher prompts and student responses related to expectations.</i>	
	What Will The Students Learn?		
Lesson 1 →	By the end of this lesson, students will be able to: <ul style="list-style-type: none"> <li>Use self-awareness and self-monitoring skills as they examine the nutritional content of various drinks and personal drink choices in order to make healthier choices.</li> </ul>	Gr. 3	<b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living <b>C1.1</b> demonstrate an understanding of how the origins of food affect its nutritional value and environmental impact [CT]
	How Will I Know What The Students Have Learned?		
Checkpoint 1	Can students apply self-awareness skills as they demonstrate an understanding of healthier drink choices? <ul style="list-style-type: none"> <li>Assessment Tool 1: Anecdotal Recording Chart</li> <li>Assessment Tool 2: Sip Smart!™ Ontario Drink Diary</li> <li>Teacher observation and verbal feedback</li> <li>Student self-assessment using Thumbs-Up Strategy</li> </ul>	Gr. 4	<b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living <b>C2.1</b> analyse personal food selections through self-monitoring over time, using the criteria in Canada’s Food Guide, and develop a simple healthy-eating goal appropriate to their age and activity level [CT] <b>C3.1</b> identify ways of promoting healthier food choices in a variety of settings and situations [CT]
		Gr. 5	<b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living <b>C2.1</b> explain how to use Nutrition Facts tables and ingredient lists on food labels to make healthier personal food choices [CT]
		Gr. 6	<b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living <b>C2.1</b> apply their knowledge of medical, emotional, practical, and societal factors that influence eating habits and food choices to develop personal guidelines for healthier eating [CT]
		Gr. 7	<b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living <b>C3.1</b> demonstrate an understanding of personal and external factors that affect people’s food choices and eating routines, and identify ways of encouraging healthier eating practices

Lessons		Curriculum Expectations:	
Lesson 2 →	→ SUGAR, SUGAR!	<b>Health and Physical Education - Healthy Living</b> <i>See the Ontario Curriculum, Health and Physical Education, Grades 1-8, for examples, teacher prompts and student responses related to expectations.</i>	
	What Will The Students Learn?	Gr. 3	<p><b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living</p> <p><b>C3.1</b> explain how local fresh foods and foods from different cultures can be used to expand their range of healthy eating choices [CT]</p>
Checkpoint 1	How Will I Know What The Students Have Learned?	Gr. 4	<p><b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living</p> <p><b>C1.1</b> identify the key nutrients provided by foods and beverages, and describe their importance for growth, health, learning, and physical performance</p> <p><b>C2.1</b> analyse personal food selections through self-monitoring over time, using the criteria in Canada's Food Guide, and develop a simple healthy-eating goal appropriate to their age and activity level [CT]</p>
	Can students apply self-awareness skills as they demonstrate an understanding of healthier food choices?	Gr. 5	<p><b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living</p> <p><b>C2.1</b> explain how to use Nutrition Facts tables and ingredient lists on food labels to make healthier personal food choices [CT]</p>
Checkpoint 2	Can students use nutrition labels to demonstrate an understanding of the amounts of sugar in various drinks?	Gr. 6	<p><b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living</p> <p><b>C2.1</b> apply their knowledge of medical, emotional, practical, and societal factors that influence eating habits and food choices to develop personal guidelines for healthier eating [CT]</p>
		Gr. 7	<p><b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living</p> <p><b>C3.1</b> demonstrate an understanding of personal and external factors that affect people's food choices and eating routines, and identify ways of encouraging healthier eating practices</p>

Lessons		Curriculum Expectations:	
Lesson 3 →	→ NOT JUST SUGAR	<b>Health and Physical Education - Healthy Living</b> <i>See the Ontario Curriculum, Health and Physical Education, Grades 1-8, for examples, teacher prompts and student responses related to expectations.</i>	
	What Will The Students Learn?	Gr. 3	<p><b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living</p> <p><b>C2.1</b> demonstrate an understanding of the importance of good oral health to overall health, and assess the effect of different food choices on oral health [PS]</p>
	By the end of this lesson, students will be able to: <ul style="list-style-type: none"> <li>Use self-awareness and self-monitoring skills to analyze the class' healthy drink choices.</li> <li>Explore the effects of various sugary drink ingredients on the body.</li> <li>Communicate research findings in a variety of forms for different audiences.</li> </ul>	Gr. 4	<p><b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living</p> <p><b>C2.1</b> analyze personal food selections through self-monitoring over time, using the criteria in Canada's Food Guide, and develop a simple healthy-eating goal appropriate to their age and activity level [CT]</p> <p><b>C3.1</b> identify ways of promoting healthier food choices in a variety of settings and situations [CT]</p>
	How Will I Know What The Students Have Learned?	Gr. 5	<p><b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living</p> <p><b>C2.1</b> explain how to use Nutrition Facts tables and ingredient lists on food labels to make healthier personal food choices [CT]</p>
Checkpoint 1	Can students apply self-awareness skills as they demonstrate an understanding of healthier drink choices? <ul style="list-style-type: none"> <li>Assessment Tool 1: Anecdotal Recording Chart</li> <li>Assessment Tool 2: Sip Smart!™ Ontario Drink Diary</li> <li>Teacher observation and verbal feedback</li> <li>Student self-assessment using Thumbs-Up Strategy</li> </ul>	Gr. 6	<p><b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living</p> <p><b>C3.1</b> explain how healthy eating and active living work together to improve a person's general health and well-being and how the benefits of both can be promoted to others [CT]</p>
	Can students identify the amount of caffeine in a drink and consider the effects of sugar, caffeine, and acid on their body, including oral health? <ul style="list-style-type: none"> <li>Assessment Tool 1: Anecdotal Recording Chart</li> <li>Teacher observation and verbal feedback</li> </ul>	Gr. 7	<p><b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living</p> <p><b>C2.1</b> demonstrate the ability to make healthier food choices, using information about the role that different foods play as contributing or preventive factors in a variety of health disorders [CT]</p>
Checkpoint 2		<b>Science: Understanding Life Systems</b> <i>See the Ontario Curriculum, Science, Grades 1-8, for examples, teacher prompts and student responses related to expectations.</i>	
Checkpoint 3	Can students communicate research findings with different audiences and for a variety of purposes? <ul style="list-style-type: none"> <li>Assessment Tool 1: Anecdotal Recording Chart</li> <li>Assessment Tool 3: Observations of "Tooth" Experiment</li> <li>Teacher observation and verbal feedback</li> </ul>	Gr. 3	2.7 use a variety of forms to communicate with different audiences and for a variety of purposes
		Gr. 4	2.6 use a variety of forms to communicate with different audiences and for a variety of purposes
		Gr. 5	2.5 use a variety of forms to communicate with different audiences and for a variety of purposes
		Gr. 6	2.5 use a variety of forms to communicate with different audiences and for a variety of purposes
		Gr. 7	2.5 use a variety of forms to communicate with different audiences and for a variety of purposes

Lessons		Curriculum Expectations:	
Lesson 4 →	<p>→ SIP SMART!</p> <p>What Will The Students Learn?</p> <p>By the end of this lesson, students will be able to:</p> <ul style="list-style-type: none"> <li>Use self-awareness and self-monitoring skills to analyze the class' healthy drink choices.</li> <li>Explore the effects of various sugary drink ingredients on the body.</li> <li>Communicate research findings in a variety of forms for different audiences.</li> </ul>	<p><b>Health and Physical Education - Healthy Living</b>  <i>See the Ontario Curriculum, Health and Physical Education, Grades 1-8, for examples, teacher prompts and student responses related to expectations.</i></p>	
		Gr. 3	<p><b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living</p> <p><b>C2.1</b> demonstrate an understanding of the importance of good oral health to overall health, and assess the effect of different food choices on oral health [PS]</p>
		Gr. 4	<p><b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living</p> <p><b>C2.1</b> analyse personal food selections through self-monitoring over time, using the criteria in Canada's Food Guide, and develop a simple healthy-eating goal appropriate to their age and activity level [CT]</p> <p><b>C3.1</b> identify ways of promoting healthier food choices in a variety of settings and situations [CT]</p>
Checkpoint 1	<p>How Will I Know What The Students Have Learned?</p> <p>Can students apply self-awareness skills as they demonstrate an understanding of healthier food choices?</p> <ul style="list-style-type: none"> <li>Assessment Tool 2: Sip Smart!™ Ontario Drink Diary</li> <li>Teacher observation and verbal feedback</li> <li>Student self-assessment using 3, 2, 1 Reflection Exit Card</li> </ul>	Gr. 5	<p><b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living</p> <p><b>C2.1</b> explain how to use Nutrition Facts tables and ingredient lists on food labels to make healthier personal food choices [CT]</p>
		Gr. 6	<p><b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living</p> <p><b>C3.1</b> explain how healthy eating and active living work together to improve a person's general health and well-being and how the benefits of both can be promoted to others [CT]</p>
Checkpoint 2	<p>Can students identify the amount of caffeine in a drink and consider the effects of sugar, caffeine, and acid on their body, including oral health?</p> <ul style="list-style-type: none"> <li>Assessment Tool 3: Observations of "Tooth" Experiment</li> <li>Teacher observation and verbal feedback</li> </ul>	Gr. 7	<p><b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living</p> <p><b>C2.1</b> demonstrate the ability to make healthier food choices, using information about the role that different foods play as contributing or preventive factors in a variety of health disorders [CT]</p>
			<p><b>Science: Understanding Life Systems</b> <i>See the Ontario Curriculum, Science, Grades 1-8, for examples, teacher prompts and student responses related to expectations.</i></p>
Checkpoint 3	<p>Can students communicate research findings with different audiences and for a variety of purposes?</p> <ul style="list-style-type: none"> <li>Assessment Tool 1: Anecdotal Recording Chart</li> <li>Teacher observation and verbal feedback</li> </ul>	Gr. 3	2.7 use a variety of forms to communicate with different audiences and for a variety of purposes
		Gr. 4	2.6 use a variety of forms to communicate with different audiences and for a variety of purposes
		Gr. 5	2.5 use a variety of forms to communicate with different audiences and for a variety of purposes
		Gr. 6	2.5 use a variety of forms to communicate with different audiences and for a variety of purposes
		Gr. 7	2.5 use a variety of forms to communicate with different audiences and for a variety of purposes

Lessons		Curriculum Expectations:	
Lesson 5 →	→ <b>THINK BEFORE YOU DRINK!</b>	<b>Health and Physical Education - Healthy Living</b> <i>See the Ontario Curriculum, Health and Physical Education, Grades 1-8, for examples, teacher prompts and student responses related to expectations.</i>	
	What Will The Students Learn?		
	By the end of this lesson, students will be able to: <ul style="list-style-type: none"> <li>Use self-awareness and self-monitoring skills to analyze the class' healthy drink choices.</li> <li>Demonstrate an understanding of personal and external factors that affect people's drink choices.</li> </ul>	Gr. 3	<b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living <b>C1.1</b> demonstrate an understanding of how the origins of food affect its nutritional value and environmental impact [CT]
		Gr. 4	<b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living <b>C3.1</b> identify ways of promoting healthier food choices in a variety of settings and situations [CT]
	How Will I Know What The Students Have Learned?	Gr. 5	<b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living <b>C3.1</b> describe how advertising and media influences affect food choices, and explain how these influences can be evaluated to make healthier choices [CT]
Checkpoint 1	Can students apply self-awareness skills as they demonstrate an understanding of healthier food choices? <ul style="list-style-type: none"> <li>Assessment Tool 1: Anecdotal Recording Chart</li> <li>Assessment Tool 4: Quiz Grades 3, 4, and 5</li> <li>Assessment Tool 5: Quiz Grades 6 and 7</li> <li>Student self-assessment using 5 Minute Write</li> </ul>	Gr. 6	<b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living <b>C2.1</b> apply their knowledge of medical, emotional, practical, and societal factors that influence eating habits and food choices to develop personal guidelines for healthier eating [CT]
		Gr. 7	<b>1.1</b> use self-awareness and self-monitoring skills to help them understand their strengths and needs, take responsibility for their actions, recognize sources of stress, and monitor their own progress, as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living <b>C3.1</b> demonstrate an understanding of personal and external factors that affect people's food choices and eating routines, and identify ways of encouraging healthier eating practices
Checkpoint 2	Can students demonstrate an understanding of personal and external factors that affect people's drink choices? <ul style="list-style-type: none"> <li>Assessment Tool 1: Anecdotal Recording Chart</li> <li>Teacher observation and verbal feedback</li> </ul>	<b>Science: Understanding Life Systems</b> <i>See the Ontario Curriculum, Science, Grades 1-8, for examples, teacher prompts and student responses related to expectations.</i>	
		Gr. 3	2.7 use a variety of forms to communicate with different audiences and for a variety of purposes
		Gr. 4	2.6 use a variety of forms to communicate with different audiences and for a variety of purposes
		Gr. 5	2.5 use a variety of forms to communicate with different audiences and for a variety of purposes
		Gr. 6	2.5 use a variety of forms to communicate with different audiences and for a variety of purposes
		Gr. 7	2.5 use a variety of forms to communicate with different audiences and for a variety of purposes

References:

*The Ontario Curriculum, Grades 1 – 8: Health and Physical Education, 2015 (revised)*

→ Key Messages and Guide to Making Healthy Drink Choices



# KEY MESSAGES

Some drinks don't fit into the four food groups in Eating Well with Canada's Food Guide.

Added 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.

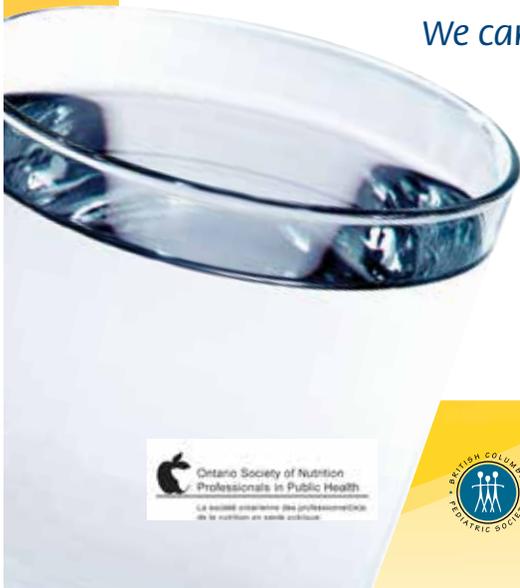
Drinking sugary (or artificially sweetened) drinks 'bumps out' nutritious drinks.

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!



## Sip Smart!™ Ontario Key Messages Explained

<p>Some drinks don't fit into the four food groups in <i>Eating Well with Canada's Food Guide</i>.</p>	<ul style="list-style-type: none"> <li>• Sugary drinks are beverages that have sugar or sugar syrups added to them.</li> <li>• Sugary drinks include energy drinks, fruit drinks, pop, sports drinks, slushies, specialty coffee and tea drinks, and vitamin-enhanced waters.</li> <li>• Most sugary drinks provide little or no nutrition and take the place of healthier choices like water and milk.</li> </ul>
<p>Added sugar is a major ingredient in many popular drinks.</p>	<ul style="list-style-type: none"> <li>• These words on the ingredient list mean sugar has been added: sugar, brown sugar, cane sugar, beet sugar, sugar/glucose-fructose, dextrose, fructose, high fructose corn syrup, glucose, maltose, sucrose, fruit juice concentrates, honey, molasses, maltodextrin, agave syrup, malt syrup, maple syrup, syrup.</li> <li>• There is little nutritional difference between the types of sugar.</li> <li>• Limiting intake of all kinds of added sugar reduces sugar consumption.</li> </ul>
<p>Knowing what is in drinks helps us to make healthy choices.</p>	<ul style="list-style-type: none"> <li>• Nutrition labels can help us make healthy drink choices.</li> <li>• Labels help us choose drinks that contain no added sugar.</li> </ul>
<p>The number and size of servings we drink affects the amount of sugar we consume.</p>	<ul style="list-style-type: none"> <li>• Many beverages come in very large portion sizes.</li> <li>• Drinking large sizes increases the amount of sugar we consume.</li> </ul>
<p>Drinking sugary (or artificially sweetened) drinks 'bumps out' nutritious drinks.</p>	<ul style="list-style-type: none"> <li>• It's better to get our energy from whole foods rather than sugary drinks or juice. Sugary drinks often replace healthier choices.</li> <li>• Calories from drinks don't fill us up. Sugary drinks can add a significant number of calories to the diet. Some sugary drinks contain as many calories as a whole meal.</li> <li>• Excess unhealthy food and drink choices can increase the risk of diabetes, high blood pressure and heart disease.</li> </ul>
<p>Some ingredients in sugary drinks other than sugar, such as acid and caffeine, may damage our health.</p>	<ul style="list-style-type: none"> <li>• Sipping on sugary drinks throughout the day can harm the teeth leading to cavities and tooth erosion.</li> <li>• Too much caffeine has been shown to disturb sleep and can make people nervous, anxious or jittery.</li> </ul>
<p>Drink choices can be influenced by various factors, including family, friends and the media.</p>	<ul style="list-style-type: none"> <li>• Sugary drinks are readily available and heavily promoted through media advertising, special offers, sporting and entertainment events, movie merchandising and beverage contracts.</li> <li>• In schools, children and youth can be exposed to sugary/unhealthy beverages through vending machines, school canteens, fundraising activities, school parties, and sporting events.</li> <li>• Parents can ensure that only healthy drink choices are available at meals and for snacks. They can encourage children to think of sugary drinks as a food to limit, or an occasional treat.</li> <li>• Parents and teachers can be positive role models by not having sugary drinks themselves.</li> </ul>
<p>We can decide for ourselves to make healthy drink choices.</p>	<ul style="list-style-type: none"> <li>• There are many factors that can influence our decision-making.</li> <li>• Once children understand the ways other people or the media can affect their drink choices, they can learn to decide for themselves to choose healthy drinks.</li> <li>• When we make healthy drink choices, our friends and family are more likely to make those choices too.</li> </ul>
<p>Drink water – it's always a great choice!</p>	<ul style="list-style-type: none"> <li>• Water is the best choice to satisfy thirst.</li> <li>• Drinking water with meals and regularly throughout the day is a sugar free way to keep hydrated, and feel energetic and alert.</li> <li>• Safe water is essential to good health.</li> <li>• Rinsing with water after eating or drinking anything helps to clear sugar and acids from your mouth.</li> </ul>

# → Guide to Making Healthy Drink Choices

Choose Every Day	Choose Sometimes	Avoid
<p><b>Water:</b> Best for quenching thirst. Sip all day to stay hydrated.</p> <p><b>Plain Milk:</b> Has some naturally occurring sugar but also contains key nutrients like protein, calcium, vitamins A and D.</p> <p><b>Unflavoured Fortified Soy Beverage:</b> Is the only plant based beverage that counts as a milk alternative in <i>Eating Well with Canada's Food Guide</i>.</p>	<p><b>100% Fruit Juice:</b> Has naturally occurring sugar, but may also contain some vitamins C and A, folate, potassium, and antioxidants. Limit juice serving size to 125 mL or ½ cup of juice or less for the day when offered.</p> <p><b>Vegetable Juice:</b> Is often high in added salt (sodium).</p> <p><b>Plain Coconut Water:</b> Has some naturally occurring sugar and also contains some potassium. It is not calorie free like plain water.</p> <p><b>Flavoured Milk (e.g., chocolate, strawberry):</b> Contains more sugar than plain milk but has just as much nutritional value.</p> <p><b>Flavoured Plant Based Beverages:</b></p> <ul style="list-style-type: none"> <li>• Flavoured fortified soy beverage that has added sugar.</li> <li>• Rice, hemp, flax, almond beverages because they might have added calcium, vitamin D and other nutrients but don't have the same amount of protein needed for growth and development as plain milk or fortified soy beverage. They may also contain added sugar.</li> </ul> <p><b>Plain Tea:</b> Can be made weak to reduce some caffeine and flavoured with milk (not sugar) as an occasional beverage for children.</p>	<p><b>Sports Drink:</b> Has high sugar content and is intended for use during continuous vigorous activity lasting longer than 60 minutes, or in hot and humid weather.</p> <p><b>Vitamin-Enhanced Water:</b> Is not necessary and can add excess calories to the diet. Can be unsafe for children because of excessive intake of vitamins, minerals and caffeine.</p> <p><b>Flavoured Coconut Water:</b> Can have added sugar, flavours (e.g., chocolate, coffee) and may contain caffeine.</p> <p><b>Fruit Flavoured Drink:</b> Made with water, flavouring and added sugar. Contains only a small amount of real juice, if any. They can be labelled fruit drink, beverage, punch, cocktail or –ade.</p> <p><b>Pop:</b> Is high in sugar and has no nutritional value. Cola often contains caffeine.</p> <p><b>Diet Pop:</b> Has no sugar, but contains acid (harmful to teeth), no nutrients, artificial sweeteners and sometimes caffeine.</p> <p><b>Energy Drink:</b> Has high sugar content and high or very high caffeine content. May also contain harmful additives.</p> <p><b>Bubble Tea:</b> Is very high in sugar and calories from tapioca, fruit-flavoured syrups and condensed milk in addition to tea.</p>

## What do the categories Choose Every Day, Choose Sometimes and Avoid mean?

- **Choose Every Day** – *Canada's Food Guide* advises people to drink water regularly to satisfy thirst and promote hydration. Other beverages in the “choose every day” category are part of *Canada's Food Guide* and have no added sugar. They have high nutritional value and contribute to nutritional well-being through consumption at meals and snacks. They represent the healthiest choices for growing children and teens. They should be consumed several times a day.
- **Choose Sometimes** – Beverages in the “choose sometimes” category offer good overall nutritional value. They are not the optimal choice for growing children and teens either because they have added sugar (e.g., chocolate milk) or because they are less nutritious than the whole food (e.g., vegetable and fruit juices, which lack the fibre found in the whole vegetable or fruit). Without avoiding them altogether, we should limit the serving size and how often we drink them. They should be occasional (i.e., once or twice a week) not daily choices.
- **Avoid** – Beverages in the “avoid” category are drinks (sugary or artificially sweetened) that have little nutritional value and their consumption must be kept to a minimum as advised by *Canada's Food Guide*. They provide few of the nutrients needed by growing, healthy children and bump out the everyday healthy choices.



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# Lesson 1: Drink Detective

## Curriculum Expectations

### Health and Physical Education:

**Grade 3:** 1.1, C1.1

**Grade 4:** 1.1, C2.1, C3.1

**Grade 5:** 1.1, C2.1

**Grade 6:** 1.1, C2.1

**Grade 7:** 1.1, C3.1

## Learning Goals

By the end of this lesson, students will be able to:

- Use self-awareness and self-monitoring skills as they examine the nutritional content of various drinks and personal drink choices in order to make healthier choices.

**Facility:** Classroom

**Time:** 40 minutes

## Materials

### Grades: All

- **Teacher Resources:**
  - Teacher Resource 1: Fruit Juice or Fruit Drink?
  - Teacher Resource 2: Sip Smart!™ Ontario Drink Diary Example
- **Student Resources:**
  - Student Resource 1: Sip Smart!™ Ontario Drink Diary Tracking Sheet
  - Poster 1: Sip Smart!™ Ontario What Size is Your Drink?
  - Drink Cut-outs
  - Drink Diary Calculator
- **Backgrounders:**
  - Sports Drinks
  - Energy Drinks
  - Milk and Flavoured Milk
  - Fruit and Fruit Drinks
- **Assessment Tools:**
  - Assessment Tool 1: Anecdotal Recording Chart
  - Assessment Tool 2: Sip Smart!™ Ontario Drink Diary
- **Optional:**
  - Empty beverage containers
  - Home Connection 1: Sip Smart!™ Ontario Fact Sheet

### Shopping List

- 1 – 250 mL (cup) glass
- 1 regular size can of pop (355 mL)
- Optional: 1.2 kg sugar

Help your students become  
Drink Detectives!



# Minds on: Sugar Shocker

## Activity Big Idea

- Knowing what is in drinks helps us to make healthy choices.

## Activity

All Grades

- Show students 1.2 kg of real sugar (*optional*).
  - Q1.** *How many cans of pop do you have to drink to add up to 1.2 kg of sugar? (Let them guess)*
  - A1.** 30 cans
- Show students one regular size can of pop (355 mL).
  - Q2.** *What if you drink 1 can of pop each day?*  
(*Work with the students on the calculation remembering that 1 tsp = 1 sugar cube = 1 sugar pack = 4 g*)
  - A2.** 1 can of pop = 10 cubes of sugar  
1 can/day x 1 month = 300 cubes of sugar  
1 sugar cube = 4 g  
300 cubes of sugar x 4 grams = 1.2 kg real sugar
- Show students an empty cup or glass (250 mL).
  - Q3.** *How many cups of fluid should we drink each day to stay healthy? (Let them guess)*
  - A3.** At least 8 cups of fluid
- Show students a sugar cube and/or teaspoon of sugar.
  - Q4.** *What is the maximum amount of added sugar a student your age should eat or drink in a day? (including food, drinks and fruit juice)? (Let them guess)*
  - A4.** No more than 10 sugar cubes and/or teaspoons of sugar
- Introduce the Sip Smart!™ Ontario program:
  - Sip Smart!™ Ontario is a program that teaches you about healthy drink choices!
  - The program will help you to “sip smart”.

## Assessment

Teacher observation with verbal feedback of students' knowledge of healthier drink choices.

## Activity Tips

Sugary drinks are drinks that contain added sugars (i.e. sugars and syrups that are added during processing or preparation). The maximum amount of added sugar a student should have in a day is a tricky topic. Please read the Backgrounder: *Sugar* (page 90).

## The Punchline!

People can do different things to help keep their bodies and minds healthy. Choosing healthy drinks can be one of those things.

# Action: Drink Check

## Activity Big Idea

- The number and size of servings we drink affect the amount of sugar we consume.
- Knowing what is in drinks helps us to make healthy choices.

## Activity

All Grades

- Organize students into 6 groups and assign each group to one of the following situations:
  1. At breakfast, lunch or dinner
  2. After sports
  3. At the movies
  4. At recess or lunch at school
  5. At a restaurant
  6. While watching TV

Ask the students to brainstorm drinks that they typically have in that situation. Students in grades 3, 4, and 5 brainstorm where the drink might originate from (packaging and content). Students in grades 6 and 7 reflect on and identify who or what might influence their choice of drink.

Have them present their result to the large group.

- **WHAT SIZE IS MY DRINK?**  
Introduce Poster 1: *What Size is Your Drink?*  
Show empty drink containers or drink cut outs to explain the sizes S, M, L and XL.  
Hand out different sized containers to teams and ask students to write size S, M, L or XL on the

containers with markers, or verbally report to the class. Have each team present their sizes.

- **DIFFERENT KINDS OF CONTAINERS**  
Explain the names of different kinds of drink containers (glass, carton, and bottle) with the help of Drink Cut-outs or empty beverage containers. Include water fountain. Have students identify which containers and size of drink they would typically drink from in their situation.
- **CLOSER LOOK AT DRINKS**  
Show Teacher Resource 1: *Fruit Juice or Fruit Drink?*  
Give a brief explanation of the differences between juice, cocktail/blend and punch, or involve the students by letting them explain the illustrations. Show different drink containers to emphasize the explanation. Have students identify how they might choose healthy drink alternatives for their specific group's setting and how they might promote these healthier options to their classmates.

## Assessment

Teacher observation with anecdotal writing of students' application of self-monitoring skills as they demonstrate their ability to apply healthy living skills to make healthier choices using Assessment Tool 1: *Anecdotal Recording Chart*.

## Activity Tips

This activity prepares the students for the Drink Diary. The size of drinks is a key concept. We also introduce the different drink containers in order to trigger students' recall.

### The Punchline!

The number and size of servings we drink affect the amount of sugar we consume. Knowing what is in drinks helps us to make healthy choices.

# Consolidation: Drink Diary

## Activity Big Idea

- Knowing what is in drinks helps us to make healthy choices.

### Activity

All Grades

- Explain to the students how to fill in the Student Resource 1: *Sip Smart!™ Ontario Drink Diary Tracking Sheet* correctly by using the drinks you had the previous day, and write them down on a blank Student Resource 1: *Sip Smart!™ Ontario Drink Diary Tracking Sheet* or use the completed Teacher Resource 2: *Sip Smart!™ Ontario Drink Diary* – Example.
- Note the need to record the number and size of each drink type consumed at one time.
- Note that there are six sections in the *Sip Smart!™ Ontario Drink Diary Tracking Sheet*, one for each of the following time periods:
  - before school
  - at school
  - after school
  - at dinner
  - at activities
  - before bed
- Prompt students to recall the time sequences (before, at and after school, in the evening) of the previous day.
- Then distribute Student Resource 1: *Sip Smart!™ Ontario Drink Diary Tracking Sheet* to each student.
- Have students reflect and fill in each section. Cue students with questions about each time period.

For example:

What did you do after school? How did you travel home from school? Did you eat out or at home? Were you watching TV?
- Collect the *Drink Diary Tracking Sheets* and use the *Drink Diary Calculator* to calculate the results of the survey before the next lesson.
- Ensure students know that the results will be for the class intake only and individual intakes will not be shared.

### Assessment

Teacher observation with anecdotal writing of students' application of self-monitoring skills as they demonstrate their ability to make healthier choices using Assessment Tool 2: *Sip Smart!™ Ontario Drink Diary*.

### Home Connection

Visit [www.brightbites.ca](http://www.brightbites.ca) to find printable information for parents – the *Sip Smart!™ Ontario Fact Sheet*. We suggest that you send this sheet home after Lesson 1 to let parents and caregivers know what their children are learning in class, and give them tips for making healthy drink choices.

## Activity Tips

Please also review the *Guidelines for Using the Drink Diary Calculator* (pg. 86) and the *Guide to Making Healthy Drink Choices* (pg. 18) before beginning this activity.

**The Drink Diary activity follows the Drink Check activity. If you choose to do the Drink Diary without first doing the Drink Check activity, please read through Drink Check carefully in order to better explain the instructions to the students.**

To raise students' awareness about drinking habits, we recommend that students complete three Drink Diaries over the course of the project (in Lesson 1, in/after Lesson 2, in/after Lesson 3).

Working through the Drink Diary together the first time ensures that students understand the concepts of types of containers, drink portion size and quantity of portions. There are two ways to do this; and for consistency of responses, choose one method or the other:

### Drink Diary Method #1:

Do the first Drink Diary together as a class on a Tuesday, Wednesday, Thursday or Friday, recalling the drinks they had the day before. Mondays are not the best day to do the drink recall. Students' weekend drink choices may be quite different than those consumed on school days. As well students often have more difficulty recalling beverages consumed on a weekend day. For subsequent Drink Diaries, students can fill in the parts of the Drink Diary in the same way, as a recall.

### Drink Diary Method #2:

Do the Drink Diary throughout the day. For example, early in the day, ask students to fill in what they had to drink that morning. After lunch, ask students to fill in what they had to drink with their meal, and ask students to fill it in again at home, before they go to bed. Have them hand in the Drink Diaries the next morning.

Before your next Sip Smart!™ Ontario lesson, go to [www.brightbites.ca](http://www.brightbites.ca) and download the *Drink Diary Calculator* to calculate results. Once you enter student drink reports into the spreadsheet, the summary information requested for Teacher Resource 3: *Drink Report* and Teacher Resource 8: *Caffeine Report* is automatically calculated for you.

We have reserved 5 minutes in Lessons 2, 3 and 4 to report back the results of the Drink Diaries using Teacher Resource 3: *Drink Report*. The required time for this report will vary depending on allotted time for discussion. Use the *Guide to Making Healthy Drink Choices* (pg. 18) to understand the classifications of Choose Every Day, Choose Sometimes and Avoid.



## The Punchline!

By remembering and recording what we drink during a regular school week, we can add up the results and see what our class is drinking. We will be able to see how much water, milk, 100% juice, etc., as well as how much sugar and caffeine, we drink. This information can make us more aware of our daily choices.

# Teacher Resource 1: Fruit Juice or Fruit Drink?



## FRUIT JUICE OR FRUIT DRINK?



**100% Fruit Juice**  
(unsweetened)



**Fruit Drink**  
(contains 0-25% real fruit juice)

→ Choose the product with the words "100% juice unsweetened"

→ Avoid anything called:

**Fruit**

- ☉ drink
- ☉ beverage
- ☉ punch
- ☉ -ade
- ☉ cocktail



**SIP SMART!**  
ontario

# DRINK DIARY EXAMPLE



Name Jane Date January 10, 2015

What did you have to drink...: (if you didn't drink anything for a certain time period write the word "none" in the first box)

### Before school? (Before and after breakfast)

Name of Drink	Size of Drink		How Many?
	# of mL	OR S, M, L, XL	
Milk	250		1
Orange juice	250		1

### At school? (Remember all nutrition and recess breaks, refills of your water bottle)

Name of Drink	Size of Drink		How Many?
	# of mL	OR S, M, L, XL	
Water	500		1
Chocolate Milk	250		1
Fruit Punch	200		1

### After school? (On the bus, in the car, at an after-school program, etc.)

Name of Drink	Size of Drink		How Many?
	# of mL	OR S, M, L, XL	
none			

### At Dinner?

Name of Drink	Size of Drink		How Many?
	# of mL	OR S, M, L, XL	
Milk	250		1

### At Activities? (e.g., at the rink, community centre, ball diamond, soccer field, etc.)

Name of Drink	Size of Drink		How Many?
	# of mL	OR S, M, L, XL	
Gatorade		L	1
Water	500		1

### Before Bed?

Name of Drink	Size of Drink		How Many?
	# of mL	OR S, M, L, XL	
Apple Juice		S	1



# Student Resource 1: Drink Diary

## DRINK DIARY



Name \_\_\_\_\_ Date \_\_\_\_\_

What did you have to drink...: (if you didn't drink anything for a certain time period write the word "none" in the first box)

### Before school? (Before and after breakfast)

Name of Drink	Size of Drink		How Many?
	# of mL	OR S, M, L, XL	

### At school? (Remember all nutrition and recess breaks, refills of your water bottle)

Name of Drink	Size of Drink		How Many?
	# of mL	OR S, M, L, XL	

### After school? (On the bus, in the car, at an after-school program, etc.)

Name of Drink	Size of Drink		How Many?
	# of mL	OR S, M, L, XL	

### At Dinner?

Name of Drink	Size of Drink		How Many?
	# of mL	OR S, M, L, XL	

### At Activities? (e.g., at the rink, community centre, ball diamond, soccer field, etc.)

Name of Drink	Size of Drink		How Many?
	# of mL	OR S, M, L, XL	

### Before Bed?

Name of Drink	Size of Drink		How Many?
	# of mL	OR S, M, L, XL	



# Assessment Tool 1: Anecdotal Recording Chart

Curriculum Expectations and Success Criteria:

Insert appropriate curriculum expectations for your grade.

1.	2.	3.	4.	5.
----	----	----	----	----

Teacher Observations:

Student Name					
Anecdotal Notes					
Student Name					
Anecdotal Notes					
Student Name					
Anecdotal Notes					
Student Name					
Anecdotal Notes					
Student Name					
Anecdotal Notes					

# Assessment Tool 2: Sip Smart!™ Ontario Drink Diary

## Teacher Assessment Tool

### → Sip Smart!™ Ontario Drink Diary

Name: \_\_\_\_\_

Grades 3 to 7

	Always (2 pts.)	Some- times (1 pt.)	Never (0 pt.)
Completes all time categories			
States specific drink category			
States or circles size of drink			
States number of drinks			
<b>Score</b>	<b>/ 8</b>		



## Teacher Assessment Tool

### → Sip Smart!™ Ontario Drink Diary

Name: \_\_\_\_\_

Grades 3 to 7

	Always (2 pts.)	Some- times (1 pt.)	Never (0 pt.)
Completes all time categories			
States specific drink category			
States or circles size of drink			
States number of drinks			
<b>Score</b>	<b>/ 8</b>		

# Home Connection 1: Sip Smart!™ Ontario Fact Sheet



Visit us at  
[www.brightbites.ca](http://www.brightbites.ca)

## Tips for making the healthy choice, the easy choice!

- Keep a jug of chilled water in the refrigerator — especially in the summer!
- To help your child drink less sugar from drinks,
  - Buy smaller sizes of sugary drinks.
  - Pour smaller servings.
- Serve drinks from the “Choose Every Day” list below more often.

**Choose Every Day**  
Water

Plain, unflavoured milk/fortified soy beverage

**Choose Sometimes**  
100% Juice (fruit, vegetable or combination\*)  
Flavoured milk/fortified soy beverage

**Avoid**  
Fruit drinks  
Fruit drinks and energy drinks  
Pop or diet pop, sports drinks  
Other sugar drinks  
(For example; iced tea, ice slushy, bubble tea)

\*A single serving is 125 mL or 1/2 cup, and 1 juice serving is enough in 1 day.

## The Sip Smart!™ Ontario Program teaches children in Grades 3 to 7 about sugary drinks!

Why is Sip Smart!™ Ontario important to you and your children?

- **Sugary drinks are everywhere.** Pop, fruit “punch”, sport drinks and many other drinks have a lot of sugar. Too much sugar is not good for your child’s health.
- **The extra calories in sugary drinks can add up quickly.** This can lead to an unhealthy weight, putting your child at higher risk of high blood pressure, heart disease and diabetes.
- **Healthy foods and drinks build a body that is just right for your child.**
  - Healthy children learn better.
  - Healthy children perform better at school and socially.
  - Healthy children have more energy to be physically active.

Healthy drink choices will help build and maintain a healthy body today, and build a strong body that is fit for a lifetime. Help your child to Sip Smart!™

An initiative of the  
BC Pediatric Society & the  
Heart and Stroke Foundation.  
Adapted with permission for Ontario  
by Ontario Society of Nutrition  
Professionals in Public Health.



Ontario Society of Nutrition  
Professionals in Public Health  
La Société ontarienne des professionnels de  
la nutrition en santé publique



**Water is always a great choice!**

# Lesson 2: Sugar, Sugar

## Curriculum Expectations

### Health and Physical Education:

**Grade 3:** 1.1, C3.1

**Grade 4:** 1.1, C2.1

**Grade 5:** 1.1, C2.1

**Grade 6:** 1.1, C2.1

**Grade 7:** 1.1, C3.1

## Learning Goals

By the end of this lesson, students will be able to:

- Examine nutrition fact tables of various drinks to make healthier food choices.
- Use self-awareness and self-monitoring skills to make classroom healthy drinking goals.

**Facility:** Classroom

**Time:** 40 minutes

Materials		
Grades: 3 - 5	Grades: 6 - 7	Shopping List
<ul style="list-style-type: none"> <li>• <b>Teacher Resources:</b> <ul style="list-style-type: none"> <li>– Teacher Resource 3: Drink Report</li> <li>– Teacher Resource 4: % Water in Human Body</li> <li>– Teacher Resource 5: How to Read a Label</li> </ul> </li> <li>• <b>Student Resources:</b> <ul style="list-style-type: none"> <li>– Student Resource 1: Sip Smart!™ Ontario Drink Diary Tracking Sheet (See Lesson 1)</li> <li>– Student Resource 3: Crossword Puzzle</li> <li>– Sip Smart!™ Ontario Booklet</li> <li>– Student Resource: Poster 2: How Much Sugar is in Your Drink?</li> <li>– Drink Cut-outs (download from <a href="http://www.brightbites.ca">www.brightbites.ca</a>)</li> <li>– Drink Diary Calculator (download from <a href="http://www.brightbites.ca">www.brightbites.ca</a>)</li> </ul> </li> <li>• <b>Backgrounders:</b> <ul style="list-style-type: none"> <li>– Sugar</li> <li>– Water</li> <li>– Guide to Making Healthy Drink Choices</li> <li>– Ingredients on Labels</li> </ul> </li> <li>• <b>Assessment Tools:</b> <ul style="list-style-type: none"> <li>– Assessment Tool 1: Anecdotal Recording Chart</li> <li>– Assessment Tool 2: Sip Smart!™ Ontario Drink Diary</li> </ul> <ul style="list-style-type: none"> <li>• Magnets</li> <li>• Sticky notes</li> <li>• Permanent markers</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Teacher Resources:</b> <ul style="list-style-type: none"> <li>– Teacher Resource 3: Drink Report</li> <li>– Teacher Resource 4: % Water in Human Body</li> <li>– Teacher Resource 5: How to Read a Label</li> </ul> </li> <li>• <b>Student Resources:</b> <ul style="list-style-type: none"> <li>– Student Resource 1: Sip Smart!™ Ontario Drink Diary Tracking Sheet (See Lesson 1)</li> <li>– Student Resource 3: Crossword Puzzle</li> <li>– Sip Smart!™ Ontario Booklet</li> <li>– Student Resource: Poster 2: How Much Sugar is in Your Drink?</li> <li>– Drink Cut-outs (download from <a href="http://www.brightbites.ca">www.brightbites.ca</a>)</li> <li>– Drink Diary Calculator (download from <a href="http://www.brightbites.ca">www.brightbites.ca</a>)</li> </ul> </li> <li>• <b>Backgrounders:</b> <ul style="list-style-type: none"> <li>– Sugar</li> <li>– Water</li> <li>– Guide to Making Healthy Drink Choices</li> <li>– Ingredients on Labels</li> </ul> </li> <li>• <b>Assessment Tools:</b> <ul style="list-style-type: none"> <li>– Assessment Tool 1: Anecdotal Recording Chart</li> <li>– Assessment Tool 2: Sip Smart!™ Ontario Drink Diary</li> </ul> <ul style="list-style-type: none"> <li>• Magnets</li> <li>• Sticky notes</li> <li>• Permanent markers</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• About 200 sugar cubes (or sugar packs)</li> <li>• 10 lunch baggies</li> <li>• 10 plastic cups</li> </ul>

# Minds on: Eating Well with Canada's Food Guide

## Lesson 2 Sugar, Sugar

### Activity Big Idea

- Some drinks don't fit into the four food groups in *Eating Well with Canada's Food Guide*.

### Activity

All Grades

- Ask students to brainstorm drinks and each write one idea on a sticky note.
- Review the four food groups with students. Write them on the blackboard.
- Have students put their sticky note on their forehead (or shirt) and silently group themselves into groups of drinks that fit into the four food groups vs. drinks that do not.
- Review student groups.
- Place the Drink Cut-outs and sticky notes into the appropriate food groups on the blackboard.

### Assessment

Teacher observation with verbal feedback of students' demonstrated knowledge of the four food groups.

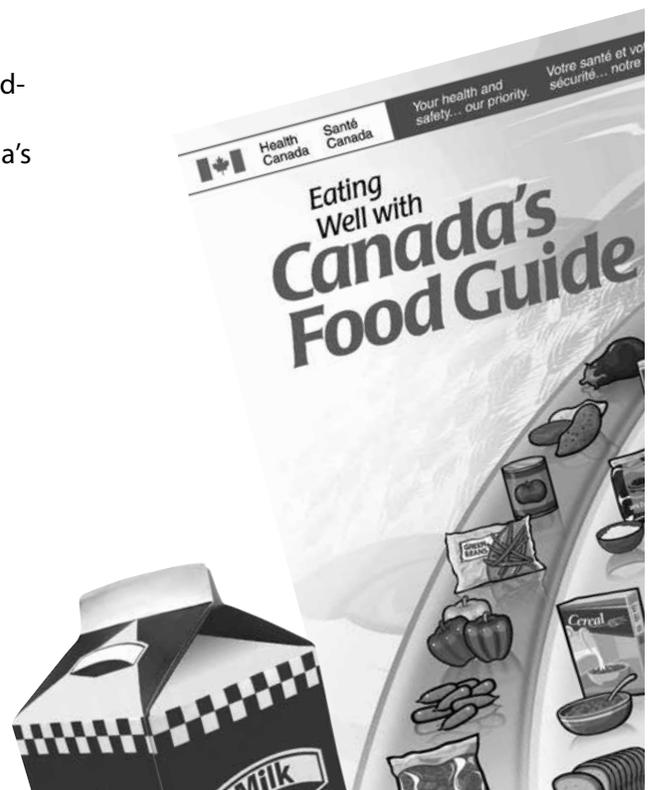
### Activity Tips

To introduce students to *Eating Well with Canada's Food Guide*, the following resources are recommended:

- Government of Canada: <http://healthycanadians.gc.ca/eating-nutrition/healthy-eating-saine-alimentation/food-guide-aliment/index-eng.php>
- EatRight Ontario: [www.eatrightontario.ca](http://www.eatrightontario.ca) Enter "Canada's Food Guide" in the Search Box

### The Punchline!

Many important nutrients are found in healthy drinks, like calcium and vitamin D in milk and fortified soy beverages, and vitamin C in 100% fruit juice. Other drinks may not have enough nutritional value to fit into one of the four food groups.



# Action: Drink Report 1

## Activity Big Idea

- Drink water - it's always a great choice!
- The number and size of servings we drink affect the amount of sugar we consume.
- Knowing what is in drinks helps us to make healthy choices.

## Activity

All Grades

- Explain with help of Teacher Resource 4: *% Water in Human Body* that the body is made up of approximately 65% water.
- Discuss the importance of water. Cue students by using questions such as those below:
  - **Q1.** *Why do we need water?*
  - **A1.** Our bodies need water to: cool off by sweating, carry nutrients (like vitamins and minerals) to different parts of our bodies, carry waste (like carbon dioxide) out of our bodies, digest food, maintain blood pressure and kidney health, allow our muscles to contract, and for many other vital bodily functions.
  - **Q2.** *How much water do we need?*
  - **A2.** Children (9-12 years old) need about 8 cups (2 L) of fluid each day (about 1 L of water for every 1,000 calories burned). The best way to know if we are drinking enough water is to check our urine output. We should urinate every 2 to 4 hours, and the urine should be pale yellow (like lemonade) not dark (like apple juice).
- **Q3.** *What happens if we don't get enough water?*
- **A3.** Our bodies become dehydrated if we don't get enough water or other fluids. That is, we may feel tired, dizzy, have trouble concentrating, have a headache, have a higher heart rate, or have muscle cramps. At extreme levels of dehydration we can become delirious, our muscle and nervous systems can fail, and we can die.
- Report results of *Drink Diary* from Lesson 1 to the students using Teacher Resource 3: *Drink Report*.
- Discuss results for that set of class results (each class will be different). For example: encourage the class to increase consumption of milk or fortified soy beverages (if needed), limit pop (if needed), etc.
- Have the class work out a daily class goal, e.g., fewer than 300 sugar cubes = fewer than 10 cubes of sugar each for 30 students.
- Distribute Student Resource 1: *Sip Smart!™ Ontario Drink Diary Tracking Sheet* and ask students to reflect and fill in *Drink Diary 2* (See Lesson 1 for details).

## Assessment

Teacher observation with anecdotal notes of students' application of self-monitoring skills as they demonstrate their ability to apply healthy living skills to make healthier choices using Assessment Tool 2: *Sip Smart!™ Ontario Drink Diary*.

## Activity Tips

Health professionals recommend fewer than 10 teaspoons of free sugar each day. This includes added sugar from food and drinks, and sugar in juice.

The activity offers teachable moments, such as: comparing the average student intake of water, milk or fortified soy beverages and added sugar with recommendations made in *Eating Well with Canada's Food Guide*.

## The Punchline!

- Now that we see what our class is drinking, it looks like we should:
- Set a goal to... drink more water, drink more plain milk / fortified soy beverages, drink less hot chocolate, choose more "every day" drinks, decrease caffeine intake, etc.
  - Set a goal to... drink fewer sugary drinks.
  - Celebrate our great drinking habits!
- Choose goals as appropriate for the set of class results.

# Action: Count the Cubes!

## Activity Big Idea

- Knowing what is in drinks helps us to make healthy choices.
- Added sugar is a major ingredient in many popular drinks.

## Activity

All Grades

- Assign the 12 drinks from Poster 2: *How Much Sugar is in Your Drink?*, a baggie of sugar cubes and a plastic cup(s) to groups of students (assign 1 or 2 drinks per group).
- Explain that each cup represents the actual container size of the drink.
- Have students guess the number of sugar cubes (or teaspoons of sugar) in their designated drink (s), count them out and fill their labeled cup with that number of sugar cubes (or teaspoons of sugar).
- Have each group report their guesses to the class.

Grades 3, 4 & 5

- Show the class Poster 2: *How Much Sugar is in Your Drink?* to compare the actual number of sugar cubes with the students' guesses.
- Explain the concept of label reading with the help of Teacher Resource 5: *How to Read a Label* and the Backgrounder: *Label Reading*.
- Hand out matching Drink Cut-outs and ask students to find sugar in the ingredient list.
- Have students identify how label reading could help them to make healthier drink choices. Have students reflect on fresh drink choices vs. those which are packaged.

Grades 6 & 7

- Explain the concept of label reading with the help of Teacher Resource 5: *How to Read a Label*.
- Do the math for the example on the label: 12 g sugar = 3 cubes (or teaspoons) of sugar.
- Hand out the matching Drink Cut-outs and let the students read the label and do the math.
- Show the class Poster 2: *How Much Sugar is in Your Drink?* to compare the actual number of sugar cubes with the students' results.
- Have students brainstorm ways they can encourage their classmates to make healthier drink choices.

## Assessment

Teacher observation with anecdotal notes of students' application of self-monitoring skills as they demonstrate their ability to apply healthy living skills to make healthier choices using Assessment Tool 1: *Anecdotal Recording Chart*.

### Activity Tips

- 1 teaspoon or 1 cube sugar or 1 sugar pack = 4 grams
- Sugar amounts are listed below Carbohydrates on the label.

### Cubes of sugar on Poster:

- Energy drink: 12 cubes or tsp/500 mL
- Bubble tea: 13 cubes or tsp/500 mL
- Citrus C: 10 cubes or tsp/355 mL can
- Iced tea: 6 cubes or tsp/355 mL can
- Chocolate milk: 3 cubes or tsp/237 mL carton
- Plain milk: 0 cubes or tsp/237 mL carton
- Water: 0 cubes or tsp/250 mL
- Iced coffee: 9 cubes or tsp/500 mL
- Sports drink: 10 cubes or tsp/710 mL bottle
- Cola: 17 cubes or tsp/591 mL bottle
- Slushie: 12 cubes or tsp/500 mL
- 100% orange juice: 5 cubes or tsp/200 mL

### Cubes of sugar on additional Drink Cut-Outs:

- Black coffee/tea: 0 cubes or tsp/250 mL
- Chocolate soy beverage: 4 cubes or tsp/250 mL

### The Punchline!

There can be a lot of sugar in drinks. Just one drink may use up our 10 cubes (teaspoons) sugar limit for the day – and that doesn't include added sugar from muffins, cookies, candies, and other sweet foods. Reading labels gives you the information needed to determine how much sugar is in a drink.



You need to know what the words on a label mean to make a healthy choice

# Consolidation: The Scoop on Sugar

## Lesson 2 Sugar,

### Activity Big Idea

- Knowing what is in drinks helps us to make healthy choices.

### Activity

All Grades

- Explain the difference between naturally occurring sugars and added sugars.
- Hand out the Drink Cut-outs and ask students if they can find other names for sugar on the labels.
- Cue: watch for words ending in “-ose”.
- Students demonstrate their understanding of added vs naturally occurring sugars by showing either a thumbs up for “I got it”, thumbs middle for “almost there” and thumbs down for “I still have questions”.

### Assessment

Teacher observation with verbal feedback of students’ demonstrated ability to apply healthy living skills to make healthier choices.

### Activity Tips

- Fructose: found in honey, fruit, and root vegetables
- Lactose: milk sugar
- Maltose: malt sugar
- Glucose: a simple sugar, used by living cells as a source of energy
- Sucrose: glucose combined with fructose, also known as table sugar

### Activity

Grades 6 & 7

- Distribute Student Resource 2: *The Scoop on Sugar!* and have students complete it.

### Assessment

Teacher observation with verbal feedback of students’ demonstrated ability to apply healthy living skills to make healthier choices using Teacher Resource 6: *The Scoop on Sugar Answer Key*.

### Home Connection

We recommend distributing the *Sip Smart!™ Ontario Booklet* and Handout 3: *Crossword Puzzle* (pg. 44) after Lesson 2. The booklet is available online at [www.brightbites.ca](http://www.brightbites.ca).

### The Punchline!

Knowing what is in drinks can help us make healthy choices. You need to know what the words on a label mean to make a healthy choice.

# Teacher Resource 3: Drink Report



	1	2	3
How much water did our class drink?			
How much milk did our class drink?			
How much pop did our class drink?			
What is the maximum (i.e., most) number of teaspoons of sugar recommended for our class in one day?			
How many teaspoons of sugar did we drink?			
How many teaspoons of sugar did we drink from:			
• Every Day Drinks			
• Sometimes Drinks			
• Avoid Drinks			
• 100% Juice			
• Pop			
• Plain Milk			
• Flavoured Milk			

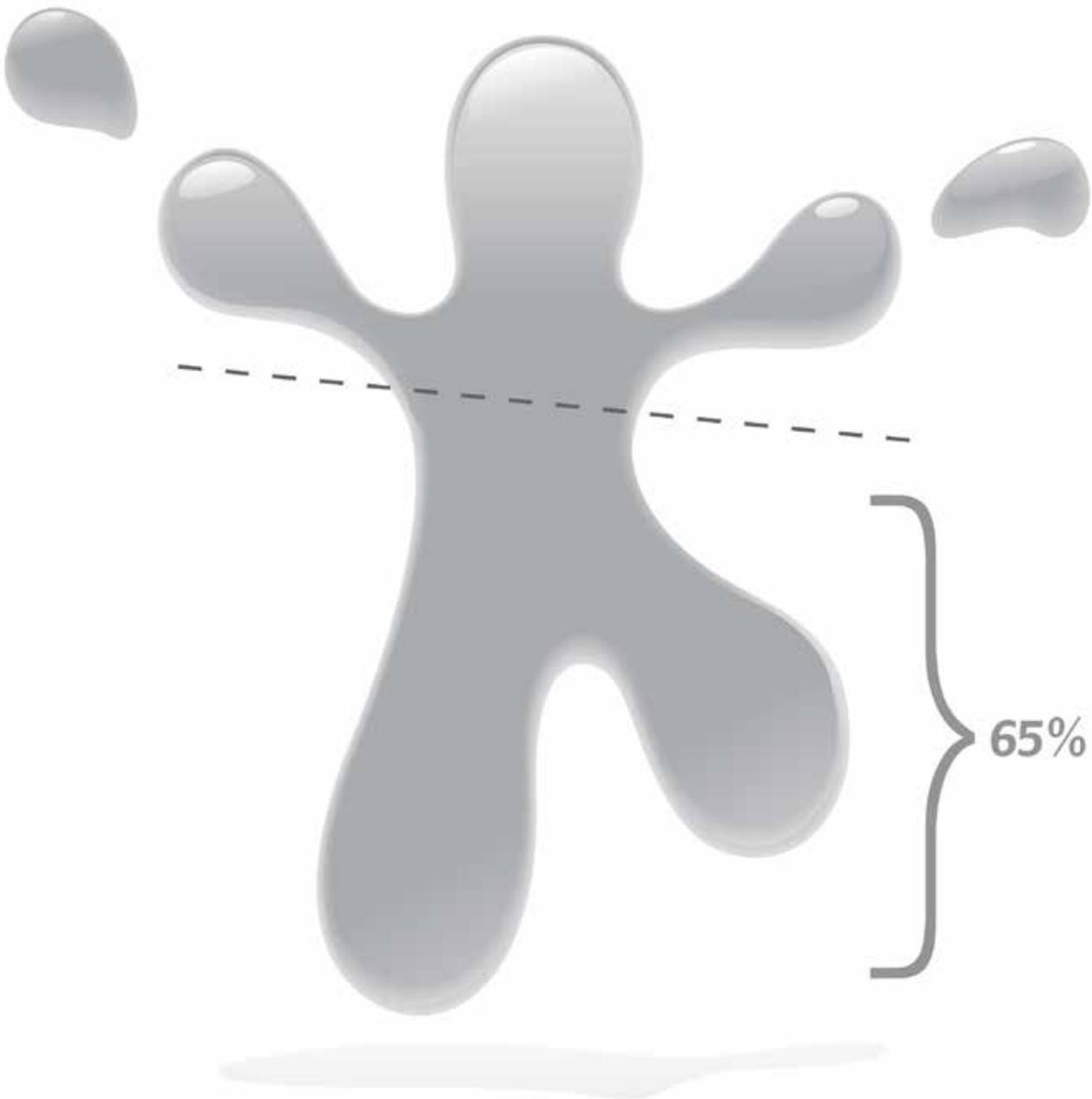
**REMEMBER!**

Maximum recommended amount of added sugar per student per day:  
10 sugar cubes = 10 teaspoons

# Teacher Resource 4: % Water in Human Body



## % WATER IN HUMAN BODY



# Teacher Resource 5: How to Read a Label

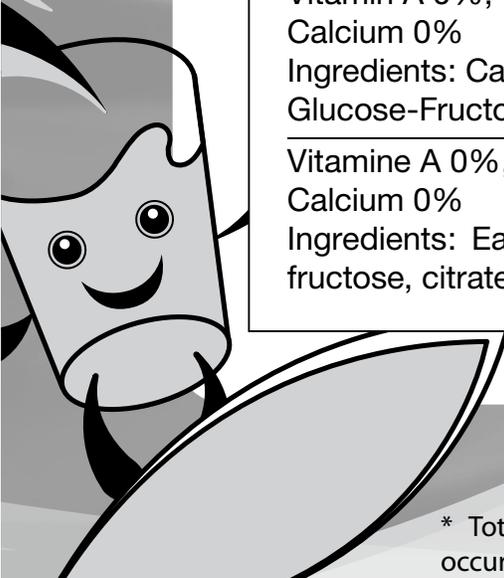


## HOW TO READ A LABEL

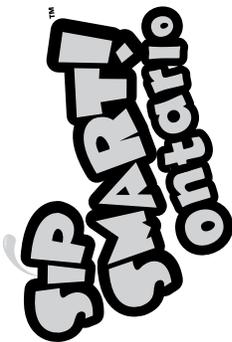
<b>Nutrition Facts</b>	
<b>Valeur nutritive</b>	
Per 355 mL / Par 355 mL	
<b>Amount</b>	<b>% Daily Value</b>
<b>Teneur</b>	<b>% valeur quotidienne</b>
Calories / Calories	160
Fat / Lipides 0 g	0%
Sodium / Sodium 30 mg	1%
Carbohydrate / Glucides 40 g	10%
Sugars / Sucres 40 g*	
Protein / Protéines 0 g	
Vitamin A 0%, Vitamin C 0%, Iron 4%, Calcium 0%	
Ingredients: Carbonated Water, Sugar, Glucose-Fructose, Sodium Citrate, Caffeine.	
Vitamine A 0%, Vitamine C 0%, Fer 4%, Calcium 0%	
Ingredients: Eau gazéifiée, sucre, glucose-fructose, citrate de sodium, caféine.	

Source: Composite Example

\* Total sugars include added sugars plus naturally occurring sugars (e.g., in fruit and milk)



# Student Resource 2: The Scoop On Sugar



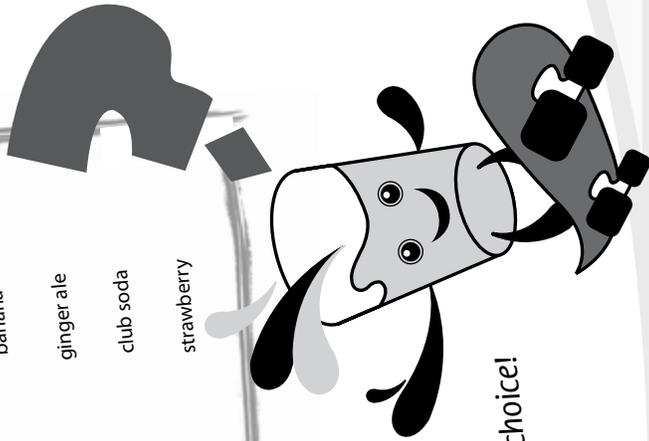
## THE SCOOP ON SUGAR!

Name \_\_\_\_\_  
Date \_\_\_\_\_

### Natural or Added?

Circle all the foods and drinks with only naturally occurring sugars:

- |                         |                |            |
|-------------------------|----------------|------------|
| plain milk              | root beer      | banana     |
| strawberry soy beverage | chocolate milk | ginger ale |
| fruit punch             | cola           | club soda  |
| orange juice            | grape cocktail | strawberry |
| 100% unsweetened        |                |            |



Drink water - it's always a great choice!

### Hidden Sugar

In the puzzle below, find and circle the different words for sugar!

L	F	R	U	C	T	O	S	E	M
D	P	E	I	M	E	Y	S	K	H
R	M	T	Y	O	F	V	R	L	O
U	A	R	H	L	D	N	T	G	N
E	L	F	G	A	J	L	V	F	E
W	T	S	G	S	P	P	S	H	Y
C	O	R	N	S	Y	R	U	P	G
U	S	S	U	E	K	Z	C	E	I
P	E	Q	D	S	U	V	R	R	H
Y	Q	W	L	L	R	I	O	T	F
E	U	I	B	N	U	L	S	M	Y
D	E	X	T	R	O	S	E	O	E
M	M	L	B	M	H	K	L	T	T

### Hints:

- 7 words are hidden!
- watch for words ending in "ose"

# Teacher Resource 6: The Scoop On Sugar Answer Key



## THE SCOOP ON SUGAR!

### Answer Key

**Natural or Added?**

Circle all the foods and drinks with only naturally occurring sugars:

plain milk - lactose	root beer	banana - fructose
strawberry soy beverage	chocolate milk	ginger ale
fruit punch	cola	club soda
100% orange juice - fructose	grape cocktail	strawberry - fructose

Naturally occurring sugars are usually present in foods that have many other vitamins and minerals.

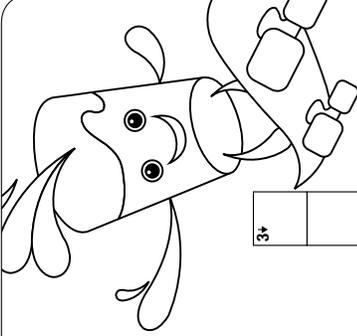
L	F	R	U	C	T	O	S	E	M
D	P	E	I	M	E	Y	S	K	H
R	M	T	Y	O	F	V	R	L	O
U	A	R	H	L	D	N	T	G	N
E	L	F	G	A	J	L	V	F	E
W	T	S	G	S	P	P	S	H	Y
C	O	R	N	S	Y	R	U	P	G
U	S	S	U	E	K	Z	C	E	I
P	E	Q	D	S	U	V	R	R	H
Y	Q	W	L	L	R	I	O	T	F
E	U	I	B	N	U	L	S	M	Y
D	E	X	T	R	O	S	E	O	E
M	M	L	B	M	H	K	L	T	T



# Student Resource 3: Crossword Puzzle



Name \_\_\_\_\_  
Date \_\_\_\_\_



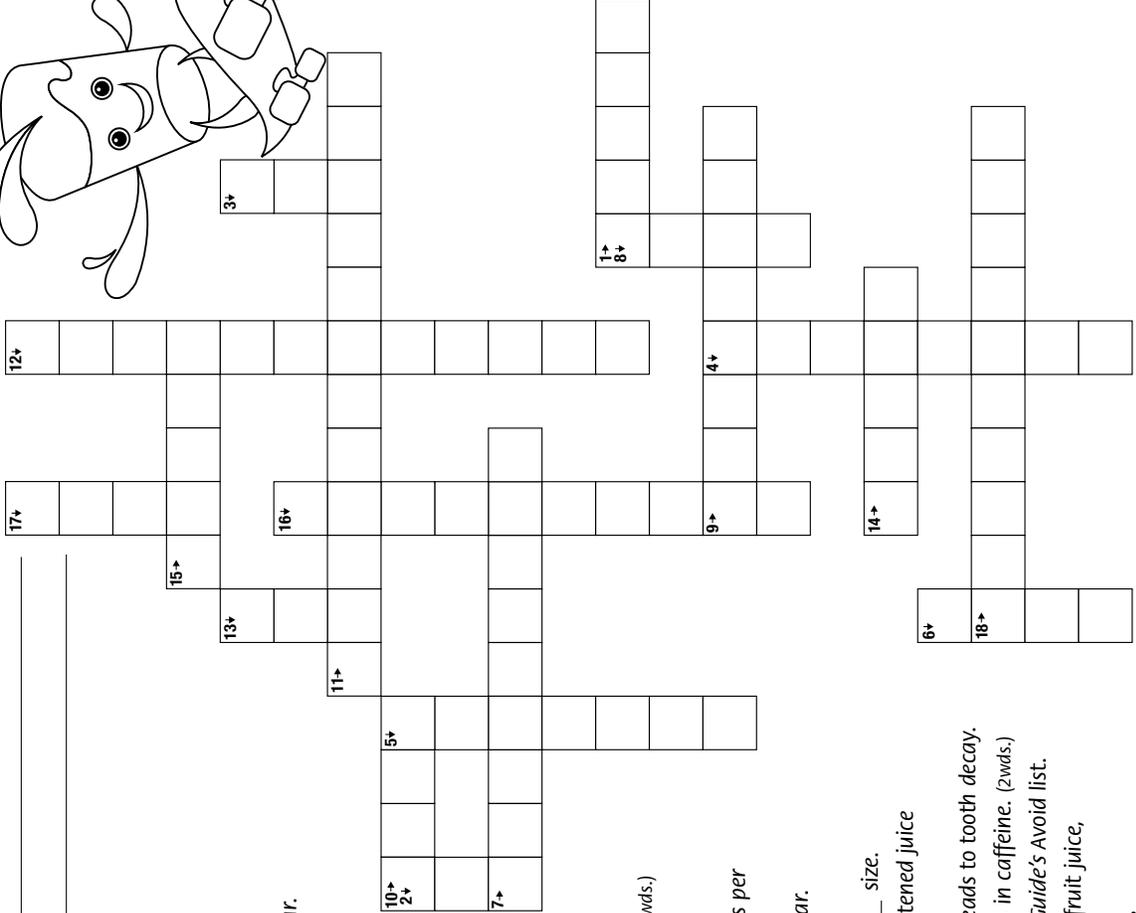
**All the answers can be found somewhere in your Sip Smart!™ Ontario booklet!**  
*(Clues progress from front to back)*

**ACROSS**

- Sugary drinks are drinks that contain \_\_\_\_\_ sugar.
- Healthy drink choices have lots of \_\_\_\_\_.
- An addictive stimulant that can affect the way a child feels.
- Hot beverages with 30 to 50 mg of caffeine per cup (250 mL) .
- Drinks that contain sugar and were designed to keep professional athletes hydrated. (2wds.)
- Find a drink whose recommended daily serving size is 125mL.
- Name of a drink that is always a great choice.
- Find the drink which has 9 sugar cubes per 500mL cup. (2wds.)

**DOWN**

- Find the recommended maximum amount of sugar cubes per day for a 7-13 year old girl.
- Find the number of sugar cubes equal to 40 grams of sugar.
- One of the many different names for sugar.
- Read labels carefully and double-check the \_\_\_\_\_ size.
- Drinks without added sugar include: water, 100% unsweetened juice and \_\_\_\_\_.
- Bacteria + sugar in sugary drinks = \_\_\_\_\_, which leads to tooth decay.
- Drinks that have as much sugar as pop and are very high in caffeine. (2wds.)
- Find the drink with the shortest name in *Canada's Food Guide's* Avoid list.
- A type of drink that may only contain a small amount of fruit juice, plus added sugar and chemicals. (2wds.)
- Find the drink which has 17 sugar cubes in a 591mL bottle.



# Poster 2: How Much Sugar is in Your Drink?



## HOW MUCH SUGAR IS IN YOUR DRINK?

Drink	Teaspoons of Sugar
ENERGY	12
bubble tea	13
clarifé	10
Chocolate Milk	3
ICED TEA	6
MILK	0
chilled out ICED COFFEE	9
sparkling water	10
cola	17
lime blast slushie	12
orange juice	5

Children ages 7-13 years should have no more than 10 teaspoons a day of added sugar plus sugar from fruit juices.





# Lesson 3: Not Just Sugar

## Curriculum Expectations

### Health and Physical Education:

**Grade 3:** 1.1, C2.1

**Grade 4:** 1.1, C2.1

**Grade 5:** 1.1, C2.1

**Grade 6:** 1.1, C3.1

**Grade 7:** 1.1, C2.1

## Science

### Understanding Life Systems:

**Grade 3:** 2.7

**Grade 4:** 2.6

**Grade 5:** 2.5

**Grade 6:** 2.5

**Grade 7:** 2.5

## Learning Goals

By the end of this lesson, students will be able to:

- Use self-awareness and self-monitoring skills to analyze the class' healthy drink choices.
- Explore the effects of various sugary drink ingredients on the body.
- Communicate research findings in a variety of forms for different audiences.

**Facility:** Classroom

**Time:** 40 minutes

Materials		
Grades: 3 - 5	Grades: 6 - 7	Shopping List
<ul style="list-style-type: none"> <li>• <b>Teacher Resources:</b> <ul style="list-style-type: none"> <li>– Teacher Resource 3: Drink Report (see lesson 2)</li> <li>– Teacher Resource 9: Acid in Drinks</li> <li>– Teacher Resource 10: "Tooth" Experiment Report</li> </ul> </li> <li>• <b>Student Resources:</b> <ul style="list-style-type: none"> <li>– Student Resource 1: Drink Diary Tracking Sheet (see lesson 1)</li> <li>– Student Resource 5: Observations of "Tooth" Experiment</li> <li>– Drink Diary Calculator</li> <li>– Drink Cut-outs (download from <a href="http://www.brightbites.ca">www.brightbites.ca</a>)</li> <li>– The "Tooth" Experiment</li> </ul> </li> <li>• <b>Assessment Tools:</b> <ul style="list-style-type: none"> <li>– Assessment Tool 1: Anecdotal Recording Chart</li> <li>– Assessment Tool 2: Sip Smart!™ Ontario Drink Diary</li> <li>– Assessment Tool 3: Observations of "Tooth" Experiment</li> </ul> </li> <li>• 8 Large sticky notes</li> <li>• Chalk</li> <li>• Optional: 2 or 3 skipping ropes</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Teacher Resources:</b> <ul style="list-style-type: none"> <li>– Teacher Resource 3: Drink Report (see lesson 2)</li> <li>– Teacher Resource 7: Every Serving Counts</li> <li>– Teacher Resource 8: Caffeine Report</li> <li>– Teacher Resource 9: Acid in Drinks</li> <li>– Teacher Resource 10: "Tooth" Experiment Report</li> <li>– Teacher Resource 11: Crossword Puzzle Answer Key</li> <li>– Teacher Resource 12: Caffeine Symptoms</li> <li>– Teacher Resource 13: Caffeine Scenario</li> <li>– Drink Diary Calculator</li> <li>– Drink Cut-outs (download from <a href="http://www.brightbites.ca">www.brightbites.ca</a>)</li> <li>– The "Tooth" experiment</li> <li>– Backgrounder: Caffeine</li> </ul> </li> <li>• <b>Student Resources:</b> <ul style="list-style-type: none"> <li>– Student Resource 1: Sip Smart!™ Ontario Drink Diary Tracking Sheet (see lesson 1)</li> <li>– Student Resource 4: Check the Caffeine!</li> <li>– Student Resource 5: Observations of "Tooth" Experiment</li> </ul> </li> <li>• <b>Assessment Tools:</b> <ul style="list-style-type: none"> <li>– Assessment Tool 1: Anecdotal Recording Chart</li> <li>– Assessment Tool 2: Sip Smart!™ Ontario Drink Diary</li> <li>– Assessment Tool 3: Observations of "Tooth" Experiment</li> </ul> </li> <li>• 8 Large sticky notes</li> <li>• Board markers in 4 colours</li> </ul>	<ul style="list-style-type: none"> <li>• 1 can regular cola</li> <li>• 1 can diet cola</li> <li>• 1 can clear pop</li> <li>• 1 can energy drink</li> <li>• 1 apple juice box</li> <li>• 1 glass of water</li> <li>• 6 clear containers (about 200 mL), ideally with lids</li> <li>• 6 pieces of bone (see pg. 53 for the "Tooth" Experiment explanation)</li> </ul>

# Minds On: Drink Report 2

## Activity Big Idea

- The number and size of servings we drink affect the amount of sugar we consume.
- Knowing what is in drinks helps us to make healthy choices.

## Activity

All Grades

- Report results of the Drink Diary from Lesson 2 to the students using Teacher Resource 3: *Drink Report*.
- Discuss results. For example: encourage class to increase consumption of water, milk, or fortified soy beverages (if needed), limit pop (if needed), etc.
- Compare the results of the *Drink Diary* from Lessons 1 and 2.
- Discuss if the class has reached their goal.
- Distribute Student Resource 1: *Sip Smart!™ Ontario Drink Diary Tracking Sheet* and ask students to fill in the Drink Diary (See Lesson 1 for details).
- If you sent home the *Sip Smart!™ Ontario Booklet* and Student Resource 3: *Crossword Puzzle* at the end of Lesson 2, take a few minutes to discuss the answers with the students. See Teacher Resource 11: *Crossword Puzzle Answer Key*.

## Assessment

Teacher observation with anecdotal writing of students' application of self-monitoring skills as they demonstrate their ability to apply healthy living skills to make healthier choices using Assessment Tool 2: *Sip Smart!™ Ontario Drink Diary*.

## Activity Tips

Congratulate the class on any decrease in consumption of sugary drinks and on any increase in healthy choices. If there is no progress toward positive goals, ask students why they think this is so. What is getting in the way of change?

### The Punchline!

Now that we see what our class is drinking, how well are we progressing toward achieving our goal? Should we...

- Drink more water or more plain milk/ fortified soy beverages?
- Drink fewer sugary drinks?
- Celebrate our great drinking habits?
- Think about some solutions for change?

# Minds On: “Bump Out”

## Activity Big Idea

- Drinking sugary (or artificially sweetened) drinks “bumps out” nutritious drinks.

### Activity

Grades 3, 4 & 5

- Draw a chalk line on the floor to represent the size of an imaginary stomach. Optional: use skipping ropes to outline a “stomach”.
- On 8 sticky notes write “milk or water”.
- Ask 8 students to come to the front and stand in the stomach area.
- Give each of them one of the “milk or water” sticky notes to represent the 8 cups of nutritious fluid per day. Take students through the following examples highlighting how drinking sugary drinks “bumps out” nutritious drinks.
- **Example 1:** What if you want pop at recess?
  - Assign the pop Drink Cut-out to another student.
  - Have a “pop” student enter the stomach area.
  - One pop bottle = 2 cups (500 mL) of liquid, so 2 water students get “bumped” out of stomach.
  - Ask the sugary drink students to sit down.
  - Have students count how many nutritious drinks are left (Answer: 6).
- **Example 2:** What if a friend offers you a sports drink instead of water after your soccer game?
  - Add a “sports drink” student.
  - One sports drink = 3 cups (750 mL), so take away another 3 cups (750 mL) of healthy drinks (2 water, 1 milk).
- Working in pairs, have students brainstorm how they can promote healthier drink alternatives to their classmates at recess or while at a sporting event. Have pairs who discussed a sporting event teamed up with a pair who discussed recess and have them share their responses. Have students share their responses as a large group. Consider recording student responses using a T-chart.

## Activity

Grades 6 & 7

- Display Teacher Resource 7: *Every Serving Counts!*
- Colour 5 cups (1250 mL) blue (for water) and 3 cups (750 mL) green (for milk or fortified soy beverage) to show ideal intake.
- Put new colours on top of the original coloured cups to explain the displacement of healthy drinks.
- **Example 1:** What if you want pop at recess?
  - One pop bottle = 2 cups (500 mL) of liquid
  - Pop = black
  - Colour 2 water cups black.
  - Have students count how many nutritious drinks are left (Answer: 6).
- **Example 2:** What if a friend offers you a sports drink instead of water after your soccer game?
  - One sports drink = 3 cups (750 mL) of liquid
  - Sports drink = red
  - Colour 3 water cups red.
- Have students count how many nutritious drinks are left.
- Working in pairs, have students brainstorm how they can promote healthier drink alternatives to their classmates at recess or while at a sporting event. Have pairs who discussed a sporting event teamed up with a pair who discussed recess and have them share their responses. Have students share their responses as a large group. Consider recording student responses using a T-chart.

## Assessment

Teacher observation with anecdotal writing of students’ ability to apply healthy living skills to make healthier choices using Assessment Tool 1: *Anecdotal Recording Chart*.

## Activity Tips

Health professionals suggest students aged 7 - 12 consume no more than 65 to 85 mg of caffeine each day.

Caffeine has a larger impact on children and youth than it does in adults. For example, one cup of coffee in an adult’s body will have the effect of 4 cups (1L) of coffee in a student’s body.

### The Punchline!

Think about the effects of caffeine on your body before choosing a drink that contains caffeine.

# Action: “Tooth” Experiment, Part 1

## Activity Big Idea

- Some ingredients other than sugar, such as acid and caffeine, can damage our health.

### Activity

All Grades

- Ask students to suggest reasons why acid may harm their teeth.
- Use Teacher Resource 9: *Acid in Drinks* to explain the impact of sugar and acid on our teeth.
- Put students into 6 groups and assign one drink and one piece of bone to each group.
- Distribute Student Resource 5: *Observations of “Tooth” Experiment*.
- Ask students to do the following:
  1. Write the drink they are observing on the sheet.
  2. Hypothesize what they think will happen where it says “Based on what I already know, I think...”
  3. Draw a picture of their “tooth” and make observations of what they see, smell and feel.
  4. Place one bone piece in their plastic container.
  5. Fill their container with approximately 125 mL of their drink to be observed (e.g., pop).
  6. Write the liquid used on the plastic container.
  7. Leave the container untouched until the next Sip Smart!™ Ontario lesson.
  8. Hold on to their handout; it will be completed in the next lesson.
  9. Ask each group to share their hypothesis and collect the ideas on Teacher Resource 10: *“Tooth” Experiment Report* (Worksheet will be completed in Lesson 4).

### Assessment

Teacher observation with anecdotal writing of students’ ability to communicate experiment procedure, observations, and results using Assessment Tool 3: *Observations of “Tooth” Experiment*.

### Activity Tips

This is a scientific experiment that is to be carried out in groups. Students will observe how sugary drinks affect teeth.

**Instead of teeth**, you will be using a small piece of bone, which contains calcium and shares many of the same materials as teeth. See The “Tooth” Experiment (pg. 53) for information about bone preparation. In this lesson, students will set up the experiment. To obtain best results, the pieces of bone should sit submerged for approximately two weeks.

Through testing, we’ve discovered that using: water, cola, diet cola, clear pop, energy drink, and apple juice will likely get you the most interesting variety of results. While students may find it boring to observe the tooth in water, it is important as a comparison and for drawing conclusions.

What is the impact of acid and sugar on our teeth?

- Sugar + bacteria (in our mouths) creates acid.
- This acid attacks our teeth, and, over time, causes decay.
- Many sugary drinks are very acidic, which adds even more acid to what our mouths produce.
- The combination of acid and sugar in sugary drinks can lead to severe tooth decay.
- It is important to be sensitive to students’ backgrounds. For example, using an animal bone as a “tooth” may not be appropriate for a student’s culture and/or religion. See The “Tooth” Experiment (pg. 53) for alternate material.

**The Punchline!**

Think about the effects of caffeine on your body before choosing a drink that contains caffeine.



Teachers say:  
“This experiment is well worth the effort!”

# The “Tooth” Experiment

## Part 1: Sipping Sugary Drinks and Acid Attacks

Acids are chemicals that are sometimes added to foods and beverages to alter taste and act as a preservative. One of the properties of acid is that it dissolves things.

When a person sips a sugary drink, an ‘acid attack’ occurs in the mouth for up to 20 minutes. The acid demineralizes the tooth during the attack and weakens the tooth. After about 20 minutes, saliva remineralizes the tooth and strengthens it. This balancing act is greatly challenged when a person snacks frequently on sticky foods, or sips regularly on sugar-laden drinks.

### A case-in-point:

- A child takes a drink of pop and there is a 20 minute acid attack.
- The body is about to remineralize the tooth but the child takes another sip so there is another 20 minute acid attack.
- This pattern continues throughout the day. The balance is offset and the demineralization time outweighs the remineralization time and tooth decay begins.

The good news is that children can sip water all day with no worries of acid attacks on their teeth. If children have an acidic drink, such as 100% fruit juice, they should drink it in one sitting versus sipping it all day. The same applies to sugary drinks, when they are consumed as a once-in-a-while treat!

After having a sugary drink health professionals recommend rinsing your mouth with water, a fluoride mouth rinse or chewing sugarless gum. Anyone of these actions will help neutralize the acid found in the drink.

Interestingly, brushing teeth is not recommended after consuming a sugary drink. The enamel of the teeth is in a weakened state because of the erosion caused by the acid in a drink, so the mechanical abrasion of the brush actually exacerbates the problem.

## Part 2: The “Tooth” Experiment

It is important to note that the tooth experiment does not simulate the processes occurring in the mouth after sipping a sugary drink. In placing the bone or “tooth” in different acidic sugary drinks, the only factor acting on the “tooth” is the acidity of the drink. There are no normal mouth bacteria present. Recall that when a child sips a sugary drink, the sugar interacts with the bacteria in the mouth to produce acid. Once this acid is made, it lasts for about 20 minutes, after which the saliva in the mouth neutralizes the acid, and the “acid attack” ends.

The tooth experiment does show the process of tooth erosion, whereby an acidic liquid chemically erodes away the hard mineralized surface of the “tooth”. Although the experiment cannot accurately capture all of the factors in the mouth that contribute to tooth decay, it is currently the best tool that we have to demonstrate the harmful effects on teeth. This hands-on approach gives an idea of the harmful effects of sugary drinks on their teeth.

In the spirit of experimentation, other drinks could be used, but we haven’t tested these or provided information in the resources. Milk may be used but it should be refrigerated and the experiment completed before the best before date, to simulate real drinking conditions. We trialed 100% orange juice and noticed that it often grew mold.

## Preparing Bones for the “Tooth” Experiment:



### 1. Shopping

Ask a butcher to cut a beef marrow bone (soup bone) into 1 cm thick slices.

You will get about 6 - 10 “teeth” per slice and to carry out the experiment as described, 6 pieces are necessary.



### 2. Cleaning

Soak the gristly bones in warm water overnight. Remove the gristle bone gently with a paring knife.



### 3. Cutting

To quickly cut bones into pieces, use a bolt cutter. You can also use a band saw or hit the bone with a hammer or a hammer and chisel (wear eye protection).

If you use a bolt cutter it works best when the bones are wet and soft. Cut the bones in a safe environment as pieces may fly off in several directions.

## Alternatives:

### Demonstration using extracted adult teeth

Oral surgeons may be willing to save extracted adult teeth (usually un-erupted wisdom teeth) for classroom experiments. After extraction, the oral surgeon will rinse the teeth with water to remove blood before sending them to you. The teeth should be cleaned and then held in a sanitizing solution made with 5 mL (1 tsp) of bleach in 1 L (4 cups) of water to adequately disinfect the teeth. Once received, the teeth can then be thoroughly cleaned with a toothbrush. Any remaining tissue will not interfere with this experiment. The teeth should then be stored in new dilute bleach solution made with 5 mL (1 tsp) of bleach in 1 L (4 cups) of water until required. The teeth should be rinsed with water to remove traces of bleach before starting the experiment. For protection against such things as viruses, **the teacher should use gloves** when handling the teeth.

If using bone or extracted adult teeth is not appropriate for some students’ culture or religion, teachers have also demonstrated the acidic nature of sugary drinks by placing a copper penny in an acidic liquid such as cola. Although the penny will become shinier, this is essentially due to the top layer of metal being etched away. This is an important distinction to be made as students could easily confuse this corrosive result with cleaning (or erroneously believing that drinking cola will clean their teeth).

# Consolidation: Stars and Stairs Self Reflection

## Activity Big Idea

- Some ingredients other than sugar, such as acid and caffeine, can damage our health.

## Activity

All Grades

- Working individually students complete an Exit Card or journal entry identifying two stars, which are things they are doing well when it comes to making healthy drink choices, and two stairs, which are steps they would like to take to make a healthier drink choice.
- Students share their responses with a partner before submitting to the teacher. Consider displaying student work on a bulletin board for reflection throughout and upon completion of the lessons.

## Assessment

Teacher observation with verbal feedback of students' self-monitoring of their ability to apply healthy living skills to make healthier choices.

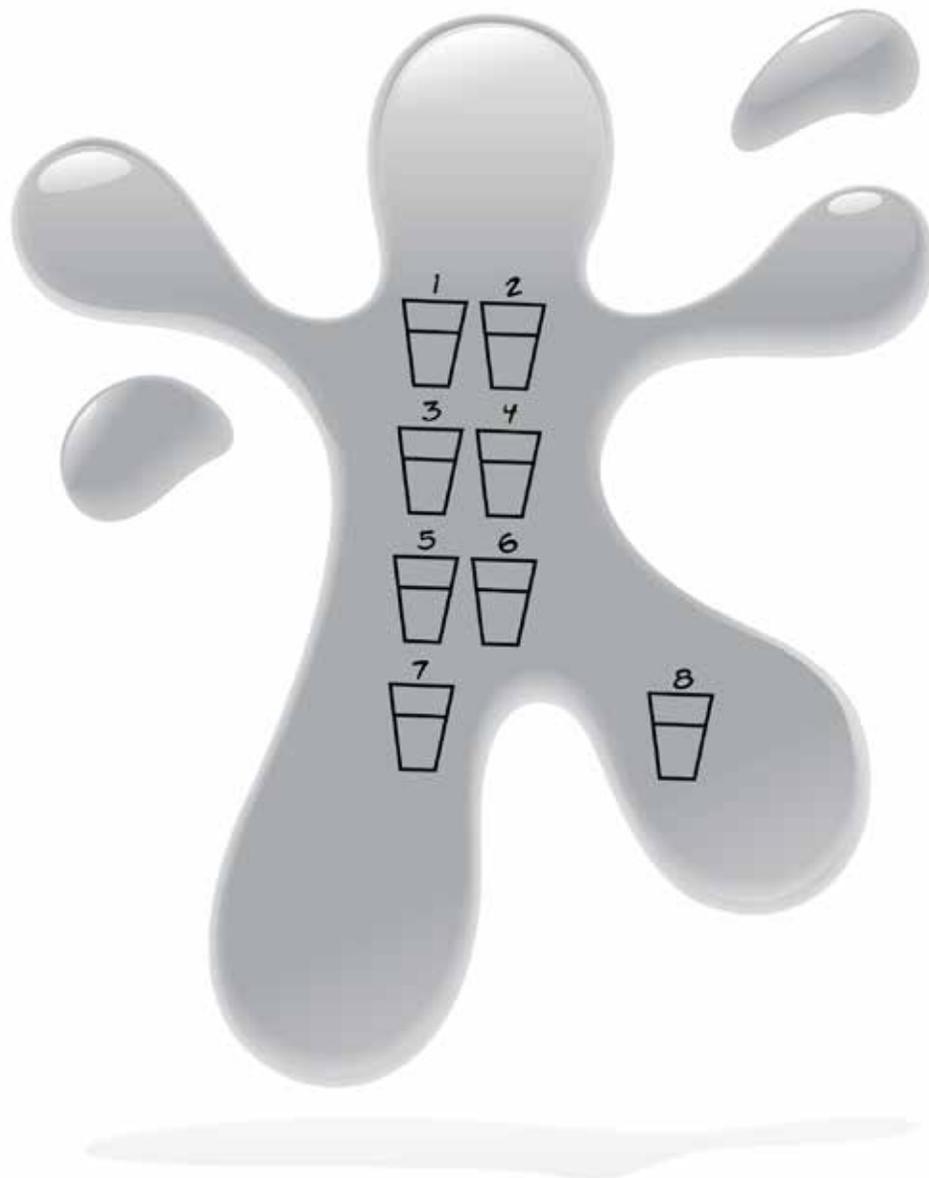
Children can sip water  
all day with no worries  
of acid attacks on their  
teeth



# Teacher Resource 7: Every Serving Counts!

**SIP  
SMART!  
ontario**

**EVERY SERVING COUNTS!**



**Sugary drinks bump out nutritious drinks!**

# Teacher Resource 8: Caffeine Report



	Caffeine
Caffeine from chocolate milk (7 mg/250 mL)	
Caffeine from cola (29 mg/250 mL)	
Caffeine from energy drinks (130 mg or more/250 mL)	
Caffeine from coffee (158 mg/250 mL)	
Caffeine from tea (30 mg/250 mL)	
How much caffeine did we consume?	

## COMPARE!

Maximum amount of caffeine recommended per student/day = 62 to 85 mg (7 to 12 years)

Number of students in class = \_\_\_\_\_

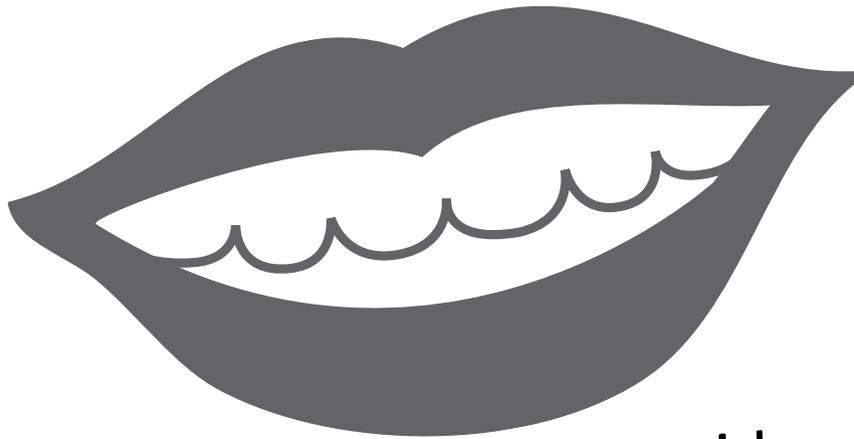
Maximum amount of caffeine recommended/class/day = \_\_\_\_\_



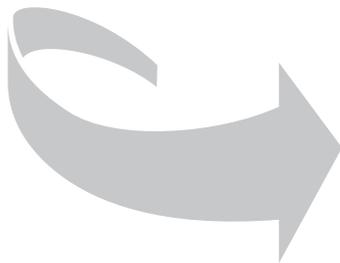
# Teacher Resource 9: Acid in Drinks



## ACID IN BEVERAGES



bacteria + sugar = acid



**tooth decay!**



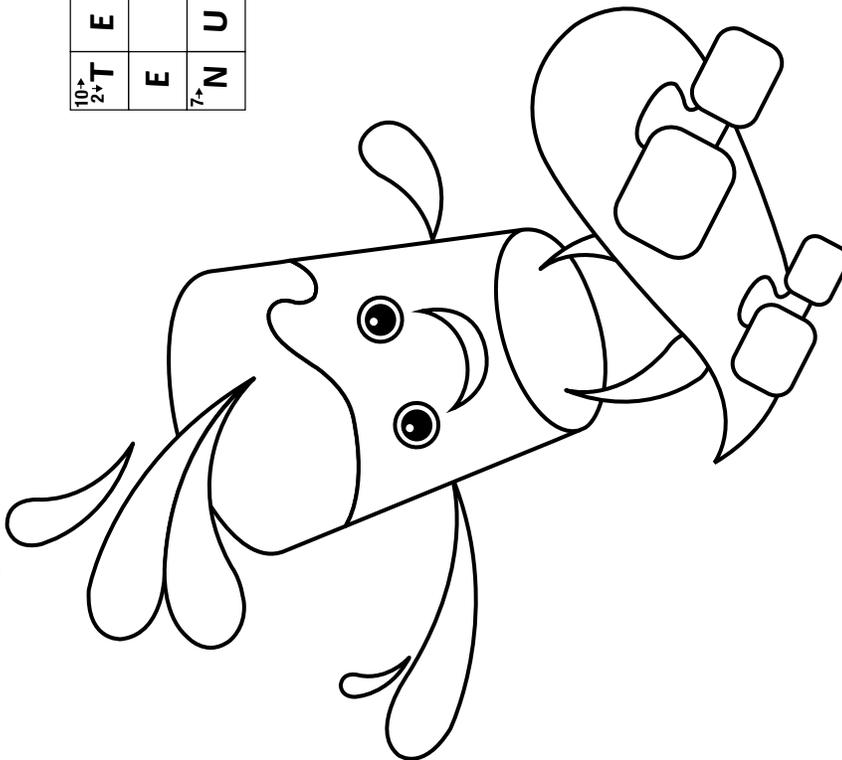
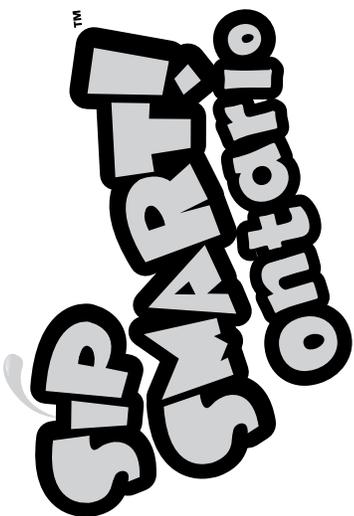
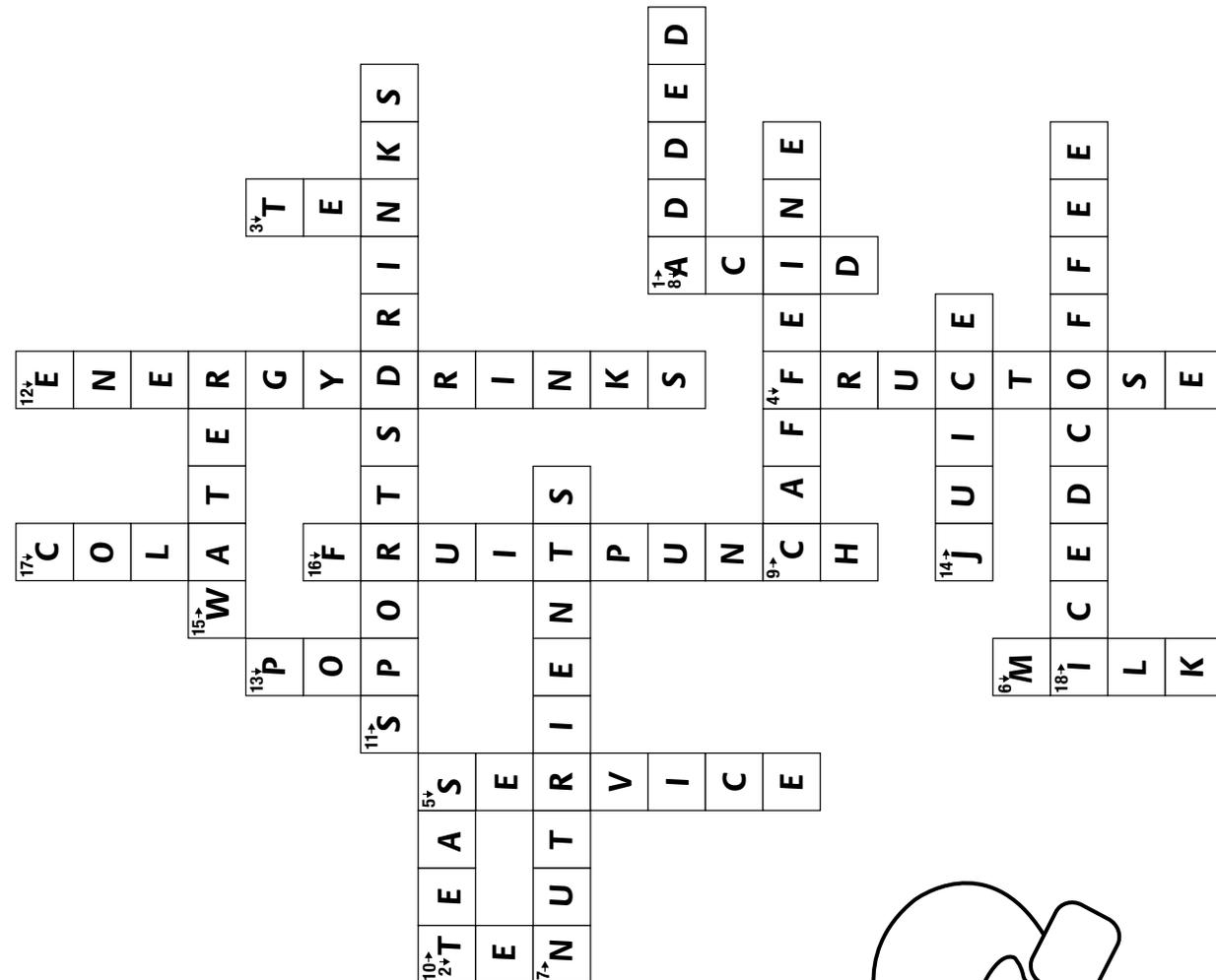
**MEANS SIPPING WATER  
- NOT DRINKS!**

# Teacher Resource 10: "Tooth" Experiment Report



Drink	Hypothesis	Observation
Regular cola		
Diet cola		
Clear pop		
Energy drink		
Apple juice		
Water		

# Teacher Resource 11: Crossword Puzzle Answer Key



Please visit us at [www.brightbites.ca](http://www.brightbites.ca)

# Teacher Resource 12: Caffeine Symptoms



## CAFFEINE SYMPTOMS

<p>mind wandering</p> A grey emoji with a sad, downcast expression and wide, staring eyes, representing mind wandering.	<p>heart beating too fast</p> A grey emoji with a worried expression, a hand holding a heart, and radiating lines, representing a heart beating too fast.
<p>headache</p> A grey emoji with a sad expression, a bandage on its forehead, and wavy lines around its head, representing a headache.	<p>more trips to the bathroom</p> A grey emoji with a sad expression next to a toilet, representing more trips to the bathroom.
<p>tired/trouble sleeping</p> A grey emoji with a sad expression, wide eyes, and a mustache, representing tiredness or trouble sleeping.	<p>feeling sick</p> A grey emoji with a sad expression and a mustache, representing feeling sick.
<p>fidgety and restless</p> A grey emoji with a wide-eyed, restless expression, a tongue sticking out, and question marks around its head, representing being fidgety and restless.	<p>irritable and anxious</p> A grey emoji with a wide-eyed, angry expression and a mustache, representing irritability and anxiety.

# Teacher Resource 13: Caffeine Scenerio



## CAFFEINE SCENARIO

### Sip Smart!™ Ontario Caffeine Scenario

It is a hot and sunny day at the beach. Tom is thirsty so he goes to the concession stand to buy a can of ICED TEA. It's delicious and refreshing. He feels fit to play beach volleyball for another hour! After an awesome game, he craves something to pick him up while cooling him down, so he buys a medium ICED COFFEE for the walk home.

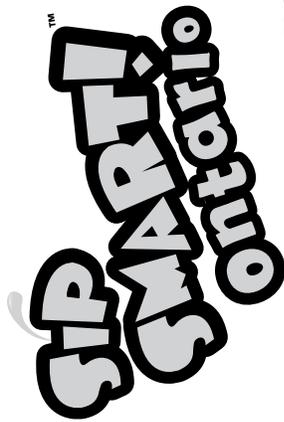
Once at home, he remembers that he has a test in school tomorrow. He sits at his desk and starts reading. He notices his mind wandering and his heart beating too fast. He is getting a headache. He also has to go to the bathroom way more often than usual. An hour later he feels tired, but he still has to study for the test. In the fridge he finds an ENERGY DRINK. He remembers that the commercial for this drink says that it wakes you up and gives you energy immediately. Exactly what he needs to focus on his studies!

Later, feeling sick, he decides to go to bed early. He feels fidgety and restless. The next morning he is irritable with his friends and anxious about just about everything.

### What happened?



# Student Resource 4: Check the Caffeine!



## CHECK THE CAFFEINE!

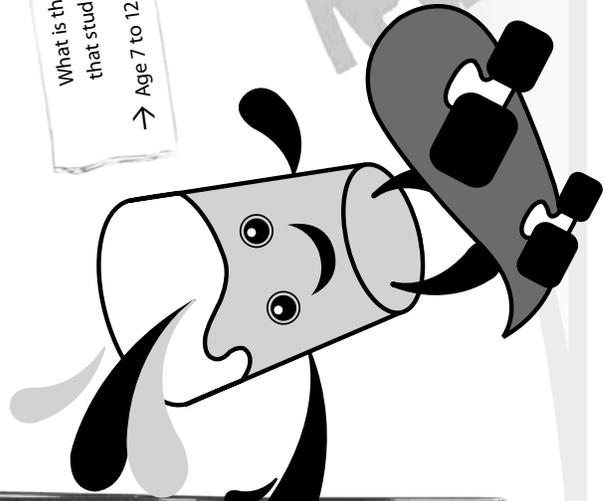
Name \_\_\_\_\_  
Date \_\_\_\_\_

Drink	Serving size (mL)	Caffeine (mg)
Hot chocolate	300 mL	8 mg
Cola	355 mL	40 mg
Iced tea	355 mL	25 mg
Root beer	355 mL	40 mg
Energy drink	250 mL	130 mg
Coffee (regular)	350 mL	186 mg
Coffee (decaf)	350 mL	4 mg
Iced coffee	500 mL	214 mg
Black or green tea	250 mL	30 mg
Tea (decaf)	240 mL	1 mg

How much caffeine did Tom drink?

Iced tea	_____ mg	
Iced coffee	+ _____ mg	
Energy drink	+ _____ mg	
<b>TOTAL</b>	<b>= _____ mg</b>	

What is the maximum amount of caffeine that students can safely have in one day?  
→ Age 7 to 12 years: \_\_\_\_\_ mg



Check or highlight the beverages that you've tried before!

Values in table sourced from Caffeine and Kids (Health Canada) and Caffeine in Food (Health Canada) and from manufacturer's website.

# Student Resource 5: Observations of “Tooth” Experiment



Name:

\_\_\_\_\_

Drink being observed:

\_\_\_\_\_

Use your senses to observe your tooth. What does it look like? What colour is it? How big is it? What does it feel like? How does it smell?

➤ **FIRST OBSERVATION:**

<b>What I observe:</b> _____ _____ _____ _____ _____	<b>Drawing of “tooth” before the experiment:</b>     
--	--

**Hypothesis:**

Based on what I know, I think...

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

➤ **FINAL OBSERVATION:**

<b>What I observe:</b> _____ _____ _____ _____ _____	<b>Drawing of “tooth” after the experiment:</b>     
--	---

**Conclusion:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Assessment Tool 3: Observations of “Tooth” Experiment

## Teacher Assessment Rubric

### ➔ Observations of “Tooth” Experiment

Grades 3 to 7

Name: \_\_\_\_\_

First observation addresses colour, texture and shape of “tooth”	8	6	4	2
First drawing matches first observation	8	6	4	2
Identifies ingredients of assigned drink in hypothesis (Does it contain sugar or acid?)	8	6	4	2
Predicts impact of ingredients on “tooth”	8	6	4	2
Second observation addresses clear differences in colour, texture and shape of “tooth”	8	6	4	2
Second drawing matches second observation	8	6	4	2
Conclusion demonstrates understanding of how the ingredients in the drink contribute to “tooth” erosion and theoretical decay	8	6	4	2
<b>Score</b>	_____ / 56			

#### Key:

8 = Exceeding expectations

6 = Meets expectations

4 = Approaching expectations

2 = Not yet meeting expectation





# Lesson 4: Sip Smart!

## Curriculum Expectations

### Health and Physical Education:

- Grade 3:** 1.1, C2.1
- Grade 4:** 1.1, C2.1 C3.1
- Grade 5:** 1.1, C2.1
- Grade 6:** 1.1, C3.1
- Grade 7:** 1.1, C2.1

## Science

### Understanding Life Systems:

- Grade 3:** 2.7
- Grade 4:** 2.6
- Grade 5:** 2.5
- Grade 6:** 2.5
- Grade 7:** 2.5

## Learning Goals

By the end of this lesson, students will be able to:

- Use self-awareness and self-monitoring skills to analyze class healthy drink choices.
- Explore the effects of various sugary drink ingredients on the body.
- Communicate research findings in a variety of forms for different audiences.

**Facility:** Classroom  
**Time:** 40 minutes

Materials	
Grades: All	Shopping List
<ul style="list-style-type: none"> <li>• <b>Teacher Resources:</b> <ul style="list-style-type: none"> <li>– Teacher Resource 3: Drink Report (from Lesson 2)</li> <li>– Teacher Resource 9: Acid in Drinks (from Lesson 3)</li> <li>– Teacher Resource 10: “Tooth” Experiment Report (from Lesson 3)</li> <li>– Teacher Resource 14: Tricky Questions for Advanced Scientists</li> </ul> </li> <li>• <b>Student Resources:</b> <ul style="list-style-type: none"> <li>– Student Resource 5: Observations of “Tooth” Experiment (from Lesson 3)</li> </ul> </li> <li>• Drink Diary Calculator</li> <li>• The “Tooth” Experiment</li> <li>• <b>Assessment Tools:</b> <ul style="list-style-type: none"> <li>– Assessment Tool 1: Anecdotal Recording Chart</li> <li>– Assessment Tool 2: Sip Smart!™ Ontario Drink Diary</li> <li>– Assessment Tool 3: Observations of “Tooth” Experiment</li> </ul> </li> <li>• Containers with “teeth” from Part 1</li> <li>• Paper towels</li> <li>• Sink to drain liquids</li> </ul>	<p>N/A</p>



# Minds On: Drink Report 3

## Activity Big Idea

- The number and size of servings we drink affect the amount of sugar we consume.
- Knowing what is in drinks helps us to make healthy choices.

## Activity

All Grades

- Report results of last drink diary to the students using Teacher Resource 3: *Drink Report*.
- Discuss results. Example: discuss that many factors may influence results, such as students becoming more aware of what they are drinking as compared to the beginning of the program, and are reporting more accurately as a result. Changes in weather or season may influence drink choices also; hot chocolate vs. lemonade and iced tea.
- Compare the results of the *Drink Diary* from Lessons 1, 2 and 3.
- Discuss decreases in consumption of sugary drinks and/or any increases in healthy choices.

## Assessment

Teacher observation with anecdotal writing of students' application of self-monitoring skills as they demonstrate their ability to make healthier choices using Assessment Tool 2: *Sip Smart!™ Ontario Drink Diary*.



### The Punchline!

- Generally have enough water to have healthy bodies.
  - Seem to be making different (healthier?) drink choices.
  - May be choosing (or not) smaller sizes of drinks.
  - Could be reading labels before choosing a drink.
- You will need to draw out learnings from the data on the report. The above are examples.

# Action: “Tooth” Experiment, Part 2

## Activity Big Idea

- Some ingredients other than sugar, such as acid and caffeine, can damage our health.

### Activity

All Grades

- Ask students to:
  - Drain off the liquid and place “tooth” on a paper towel.
  - Find Student Resource 5: *Observation of “Tooth” Experiment*.
  - Write down observations. Helpful cues are: change of colour, shape, texture, size.
  - Draw a (coloured) picture of their “tooth”.
  - Discuss in their group what happened to their “tooth” and write their conclusion.
  - Compare results with “tooth” in water.
- Let each group share their observations and present them using Teacher Resource 10: *“Tooth” Experiment Report*. Discuss if the hypothesis was supported by the observations.
- Use the questions on Teacher Resource 14: *Tricky Questions for Advanced Scientists* to check the students’ understanding. Show Teacher Resource 9: *Acid in Drinks* again, while discussing results.

### Assessment

Teacher observation with anecdotal writing of students’ ability to communicate experiment procedure, observations, and results using Assessment Tool 1: *Anecdotal Recording Chart* and students’ ability to consider the effects of sugar, caffeine, and acid on their body, including oral health using Assessment Tool 3: *Observations of “Tooth” Experiment*.

### Activity Tips

After at least two weeks the students will probably have the following observations:

Beverage	Texture	Colour	Explanation
Water	No changes	No changes	<ul style="list-style-type: none"> <li>Neither acid, nor colour in water.</li> </ul>
Apple Juice	Softer texture, squishy, mouldy	Light brown	<ul style="list-style-type: none"> <li>Teeth with some organic material on their surface make a great substrate for mold to grow, in the presence of moisture and sugar.</li> <li>Acid causes dental erosion. Teeth soften and dissolve.</li> </ul>
Clear pop	Softer, holes, dissolves, squishy	Slight changes, yellow	<ul style="list-style-type: none"> <li>Food colouring in drinks stains and colours teeth.</li> <li>Acid causes dental erosion. Teeth soften and dissolve.</li> </ul>

Beverage	Texture	Colour	Explanation
Diet Cola	Softer, holes, dissolves, squishy	Dark, almost black (same colour as cola)	<ul style="list-style-type: none"> <li>• Acid causes dental erosion. Teeth soften and dissolve.</li> <li>• Food colouring in drinks stains and colours teeth.</li> <li>• There is no sugar in diet cola. It is the acid that causes erosion!</li> </ul>
Cola	Softer, holes, dissolves, squishy	Dark, almost black (same colour as cola)	<ul style="list-style-type: none"> <li>• Acid causes dental erosion. Teeth soften and dissolve.</li> <li>• Food colouring in drinks stains and colours teeth.</li> </ul>
Energy Drink	Softer, holes, dissolves, squishy, shrinks	Dark, depending on brand: dark brown, red, yellow, green or black, white deposit	<ul style="list-style-type: none"> <li>• Acid causes dental erosion. Teeth soften and dissolve.</li> <li>• Food colouring in drinks stains and colours teeth.</li> </ul>

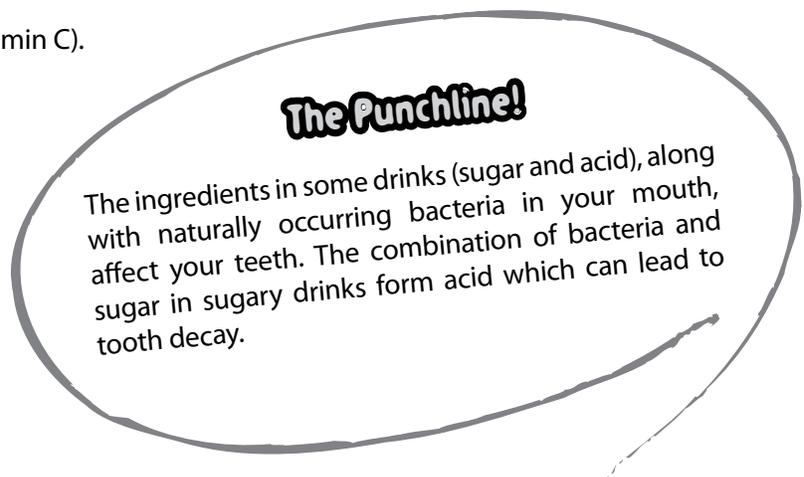
It is important to note that the “tooth” experiment is different from what occurs in our mouths when we drink sugary drinks because:

1. The bone or “tooth” sits in each acidic sugary drink for two weeks or more, but we don’t usually hold drinks in our mouths for this long;
2. When we place the bone or “tooth” in different acidic sugary drinks, the only factor acting on the “tooth” is the acidity of the drink. Recall that when we sip a sugary drink, the sugar interacts with the bacteria in our mouths to produce acid. Once this acid is made, it lasts for about 20 minutes, after which the saliva in the mouth neutralizes the acid, and the “acid attack” ends.

**Dental Erosion:** the loss of the hard mineralized surface of the tooth structure due to chemical dissolution by acids.

**Acids** that may be found in drinks:

- Ascorbic acid (also known as vitamin C).
- Phosphoric acid.
- Citric acid.
- Lactic acid.



# Consolidation: 3, 2, 1 Reflection

## Activity Big Idea

- Knowing what is in drinks helps us to make healthy choices.

### Activity

All Grades

- Working individually students complete an Exit Card or journal entry identifying three things they learned throughout the lesson, two concepts they would like to learn more about, and one step they will take to promote what they've learned to others.
- Students share their responses with a partner before submitting to the teacher for review.

### Assessment

Teacher observation with verbal feedback of students' self-monitoring of their ability to make healthier drink choices and promote healthier choices to others using Assessment Tool 1: *Anecdotal Recording Chart*.



# Teacher Resource 14: Tricky Questions for Advanced Scientists



## TRICKY QUESTIONS FOR ADVANCED SCIENTISTS



Drink	Conclusion (= explain what happened to your tooth)
Regular cola	
Diet cola	
Clear pop	
Energy drink	
Apple juice	
Water	

### Tricky questions for advanced scientists:

1. Which drink damages our teeth the least?

---

2. If we want a sugary drink once in a while, what can we do to reduce the "acid attack"?

---

---

3. Diet pop has no sugar. Why does the tooth in diet cola look exactly like the tooth in cola?

---

---

# Lesson 5: Think Before You Drink!

## Curriculum Expectations

### Health and Physical Education:

**Grade 3:** 1.1, C1.1

**Grade 4:** 1.1, C3.1

**Grade 5:** 1.1, C3.1

**Grade 6:** 1.1, C2.1

**Grade 7:** 1.1, C3.1

## Learning Goals

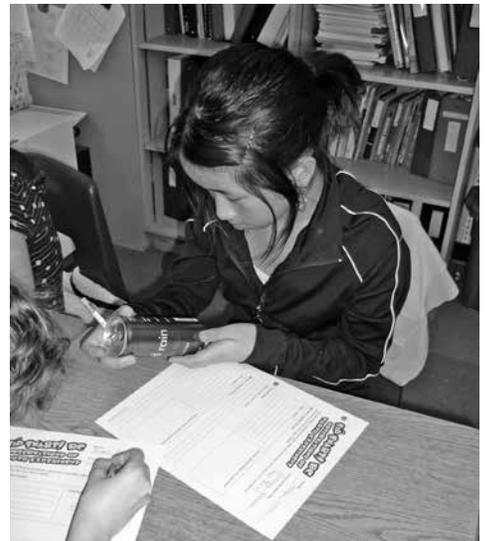
By the end of this lesson, students will be able to:

- Use self-awareness and self-monitoring skills to analyze the class' healthy drink choices.
- Demonstrate an understanding of personal and external factors that affect people's drink choices.

**Facility:** Classroom

**Time:** 40 minutes

Materials	
Grades: All	Shopping List
<ul style="list-style-type: none"> <li>• <b>Teacher Resources:</b> <ul style="list-style-type: none"> <li>– Teacher Resource 15: "Role" With It! Scenarios</li> <li>– Student Resource 16: Have a Blast!</li> <li>– Teacher Resource 17: Quiz Answers</li> </ul> </li> <li>• <b>Student Resources:</b> <ul style="list-style-type: none"> <li>– Student Resource 6: Check the label first!</li> </ul> </li> <li>• <b>Backgrounders:</b> <ul style="list-style-type: none"> <li>– Guide to Making Healthy Drink Choices</li> <li>– Water</li> </ul> </li> <li>• <b>Assessment Tools:</b> <ul style="list-style-type: none"> <li>– Assessment Tool 1: Anecdotal Recording Chart</li> <li>– Assessment Tool 4: Quiz Grades 3, 4, and 5</li> <li>– Assessment Tool 5: Quiz Grades 6 and 7</li> </ul> </li> <li>• <b>Optional:</b> Props e.g., glass of water</li> <li>• <b>Optional:</b> Drink ads from magazines</li> </ul>	N/A



# Minds On: “Role” With It!

## Activity Big Idea

- 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!

## Activity

All Grades

- Write the sentence on the board, “When someone asks me to drink something that I don’t like, I...” and have students brainstorm endings to it.
- Ask students to think of specific situations when they might feel pressured to drink a sugary drink rather than a healthy drink.
- Draw suggestions from students about how they face such situations, then tie these to the four steps:
  1. Stop
  2. Think
  3. Decide
  4. State your decision clearly and firmly
- Tell students that they will perform a role-playing scenario from Teacher Resource 15: “Role” With It! Scenario using the 4 steps.
  1. Stop
  2. Think
  3. Decide
  4. State your decision clearly and firmly

## Assessment

Teacher observation with anecdotal writing of students’ ability to apply healthy living skills to make healthier drink choices using Assessment Tool 1: *Anecdotal Recording Chart*.

## Activity Tips

There are several ways to set up the role playing scenario, for example:

- You can use Teacher Resource 15: “Role” With It! Scenarios for a more structured activity.
- Another less structured way would be to ask students to come up with their own scenarios based on curricular themes and could take longer. These scenarios could include the following

### Success Criteria:

- » The role-playing scenarios show that (at least) one player knows how to make healthy choices.
- » Students must be able to state reasons for their choices of drinks.

If students choose the sugary drink in the role-playing scenario, a comment may be made about our ability to enjoy “other” foods once in a while. “Other” foods are the foods or drinks that:

- » Are high in calories, fat, sugar, and/or salt (sodium).
- » Do not fit in the four food groups of *Eating Well with Canada’s Food Guide*.
- » Should be limited for portion size and frequency.

It may be suggested that “other” foods be consumed no more than 20% of the time, leaving 80% of food choices to be healthy, everyday foods.

## The Punchline!

There are many factors that can influence our decision making - we can decide for ourselves to choose healthy drinks.

# Action: Have a Blast!

## Activity Big Idea

- 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.

## Activity

All Grades

- Show Teacher Resource 16: *Have a Blast!*
- Prompt answers to the following questions (answers below):
  - **Q1.** What is done to make the product look attractive to you?
  - **Q2.** How does the ad try to sell the drink?
  - **Q3.** How can you find out the real facts about the drink?
- Distribute Student Resource 6: *Check the Label First!* and have students complete it.
- Compare results. Cue students by using questions such as:
  - » Are what I know and what the message is telling me the same thing?
  - » Is the message leading me to a healthy choice?

## Assessment

Teacher observation with verbal feedback of students' demonstrated knowledge of media influences on drink choices using Assessment Tool 1: *Anecdotal Recording Chart*.

## Activity Tips

- **Q1.** *What is done to make the product look attractive to you?*
- **A1.** Examples of ways to increase attractiveness:
  - Labeling appeal: logos, happy people, fun activities, action shots
  - Colour of the liquid – bright or unusual colours (neon blue, orange)
  - Shape of the bottle
- **Q2.** *How does the ad try to sell the drink?*
- **A2.** Examples of techniques used to sell drinks:
  - Attractive model drinking the beverage and smiling, having fun
  - Surrounded by active, healthy, good looking friends
  - Container shows picture of fruit, implying good nutrition
- **Q3.** *How can you find out the real facts about the drink?*
- **A3.** Ways to check accuracy of information about drinks:
  - Check the ingredient list
  - Check if the label reflects size of drink or per serving
  - Calculate how much sugar is contained in drink
  - Check the logic of claims made

## The Punchline!

Drink choices can be influenced by various factors, including family, friends and the media.

# Action: Water - A Bestseller!

## Activity Big Idea

- 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!

## Activity

All Grades

- Have students review their knowledge about the benefits of water. Write a list on the board. See Backgrounder: *Water* for a list of the benefits.
- Organize students into groups.
- Instruct groups that they will brainstorm and decide on one ad to sell a glass of water using one advertising theme. For example: a sports celebrity endorsement type of ad, a creative slogan, and a drawing of the ad or a skit performance.
- Allow groups 5-7 minutes to create their advertisement.
- Have each group pretend they are a marketing company pitching their ad to the owner of a water company. Each group has to try to win the business of the water company with the best ad.
- Decide after the presentations which group best sold the benefits of water.

## Assessment

Teacher observation with anecdotal notes of students' demonstrated knowledge of media influences on drink choices using Assessment Tool 1: *Anecdotal Recording Chart*.

## Activity Tips

Examples of advertising themes:

- Peer pressure
- Scare tactics
- Celebrity testimonial
- Humour
- Bandwagon (everyone is buying it)
- Shockvertising

## Teaching Hint

Celebrity testimonials are quickly understood by students and popular with this activity.

### The Punchline!

Advertisers use clever ways, as you have noticed, to influence your drink choice. Remember that you can make your decision based on the nutrition information and your health goals.

# Consolidation: 5 Minute Write Reflection

## Lesson 5 Think Before You Drink!

### Activity Big Idea

- Knowing what is in drinks helps us to make healthy choices.

### Activity

All Grades

- Working individually students complete an Exit Card or journal entry of their big ideas learned throughout the unit. Each student will write continuously for 5-minutes recording as many ideas they can think of regarding all of the topics they have learned and how they will continue to make healthy choices beyond the end of this unit. Students may write in point form, sentence form, or illustrate their thoughts.
- Students share their responses with a partner before submitting to the teacher for review.
- As an alternative to the 5 Minute Write Reflection consider having students demonstrate their learning through the completion of the Assessment Tool 4: *Quiz Grades 3, 4, and 5* or Assessment Tool 5: *Quiz Grades 6 and 7*. You can use the Quiz either individually or in small groups to wrap up the unit. Consider having students work together to respond to the questions read aloud or displayed on the overhead.

### Assessment

Teacher observation with verbal feedback of students' self-monitoring of their demonstrated ability to apply healthy living skills to make healthier choices or using Teacher Resource 17: *Quiz Answer Key*.



# Teacher Resource 15: Sip Smart!™ Ontario “Role” WITH IT! Scenario



## "ROLE" WITH IT! SCENARIOS

### THE SOCCER GAME

**Players:** 3-4 soccer players (at least 1 player knows how to make healthy drink choices)

**Scene:**

You and your friends have just finished a soccer game against a really tough team. You are walking off the field, recapping the best parts of the game while congratulating each other on playing well. You are all thirsty and walk to a concession that offers sports drinks, milk and water. What drink do you choose? Let us know why!

What drink do you choose? Let us know why!



### THE LONG DRIVE

**Players:** 2 adults, 2 children (at least 1 player knows how to make healthy drink choices)

**Scene:**

Your family is going on a summer camping holiday. It is hot and you are all very tired, but the trip is not yet over. You have all been in the car for 4 hours now and are really thirsty and hungry. The driver pulls into a gas station, gives the kids some money and asks them to buy drinks.

What drinks do you choose? Now that you are back in the car, explain to the adults why you chose these drinks!



### AT THE MOVIES

**Players:** 3-4 friends (at least 1 player knows how to make healthy drink choices)

**Scene:**

You and your friends have just watched a movie at the local multiplex. You chat about how great the movie was and that now you want a drink. On your way out you notice they have pop for sale after the show because the movie star is also in the pop commercials. You can either buy a bottle of pop for \$2, a carton of milk for \$2 or a bottle of fruity drink for \$2.

What do you choose? Let us know why!

# Teacher Resource 16: Have A Blast!

**Have a **BLAST** this summer!**

Try new refreshing **ORANGE BLAST!**

It's fruity!  
It's a great thirst quencher!  
It's full of Vitamins!

**GO GET ONE!! NOW!!**

**SIP SMART! Ontario**

The advertisement features a woman in a white tank top smiling and drinking from a clear plastic bottle of Sip Smart! beverage. The background is a bright blue sky over a beach scene with people and a net. To the right of the woman are several whole and sliced oranges. The Sip Smart! Ontario logo is in the bottom right corner, featuring a blue character with a red hat and the text 'SIP SMART! Ontario' in a stylized font.

# Student Resource 6: Check The Label First!



Name \_\_\_\_\_

Date \_\_\_\_\_

## CHECK THE LABEL FIRST!

Read the ORANGE BLAST label!

Nutrition Facts Valeur nutritive		Ingredients
Per 250 mL / par 250 mL		
Amount Teneur	% Daily Value % valeur quotidienne	<ul style="list-style-type: none"> <li>• filtered water</li> <li>• sugar / glucose-fructose</li> <li>• concentrated fruit juice (orange, lime)</li> <li>• citric acid</li> <li>• vegetable oil</li> <li>• ascorbic acid (vitamin C)</li> <li>• artificial flavour</li> <li>• colour</li> <li>• caffeine</li> </ul>
Calories / Calories	130	
Fat / Lipides 0 g	0%	
Sodium / Sodium 120 mg	5%	
Carbohydrate / Glucides 29 g	10%	
Fibre / Fibres 0g	0%	
Sugars / Sucres 27 g		
Protein / Protéines 0g		
Vitamin A / Vitamine A	0%	
Vitamin C / Vitamine C	50%	
Vitamin B / Vitamine B	10%	



1) Which ingredients did you not expect in a refreshing and fruity drink?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2) Does the message of the ad match the ingredient list?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



## Assessment Tool 4: Quiz Grades 3, 4 and 5

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Instructions:** Please circle either "True" or "False" after each question.

**Q#1: Fruity drinks like fruit punch fit into the Vegetables and Fruit food group in *Canada's Food Guide*.**

True

False

**Q#2: Sometimes people choose an unhealthy drink because their friends have an unhealthy drink.**

True

False

**Q#3: Sugary drinks can bump out or replace healthier drinks by making you feel full.**

True

False

**Q#4: Many sugary drinks have acid in them.**

True

False

**Q#5: Sugar is a main ingredient in many popular drinks.**

True

False

**Q#6: Advertisements always help you make healthy drink choices.**

True

False

**Q#7: A label can tell you how much sugar is in a drink.**

True

False

**Q#8: It is OK for you to drink water, even if your friends are drinking less healthy drinks like pop and sugary fruit drinks.**

True

False

**Q#9: If a medium sized can of pop has 9 teaspoons of sugar (or sugar cubes), then a large can of pop will also have 9 teaspoons of sugar (or sugar cubes).**

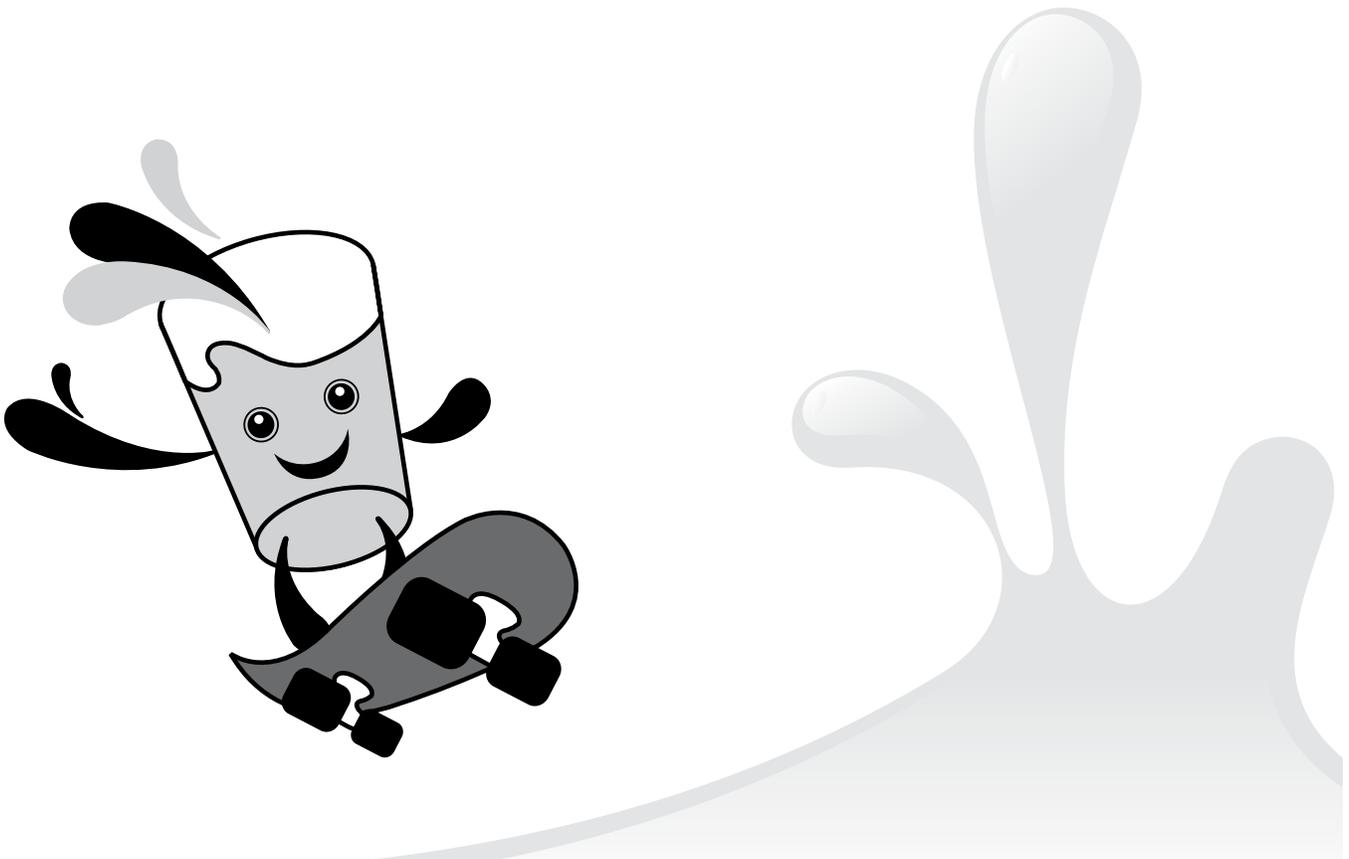
True

False

**Q#10: It is important to drink a lot of water because your body and mind need water to be healthy.**

True

False





# Assessment Tool 4: Quiz Grades 6 and 7

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Instructions:** For each of the following questions, circle the letter beside the answer you think is **BEST**.

**Q#1: Why don't sugary drinks fit into any of the food groups in *Eating Well with Canada's Food Guide*?**

- a) They have more sugar than is good for you and have little or no nutritional value.
- b) Naming all the kinds of sugary drinks would take up too much room.
- c) No drinks are included in *Eating Well with Canada's Food Guide*.
- d) Everybody knows that sugary drinks are not a food.

**Q#2: What does it mean when you are told that sugary drinks "bump out" healthier drinks?**

- a) Sugary drinks absorb the good ingredients of healthy drinks and make them useless.
- b) If we are drinking a lot of sugary drinks, we don't have room for healthy drinks.
- c) If people drink too many sugary drinks, stores probably will bump healthier drinks from their shelves.
- d) Sugary drinks make other drinks taste boring.

**Q#3: You can best make healthy drink choices by:**

- a) Reading the labels on drinks to learn what they contain.
- b) Listening to what others tell us about the drinks they choose.
- c) Testing drinks for a fresh taste.
- d) Listening to what the media says we should buy.

**Q#4: Which drinks are listed correctly from those containing the most sugar to those containing the least sugar?**

- a) Orange juice, pop, sports drink.
- b) Pop, plain milk, orange drink.
- c) Chocolate milk, sports drink, orange juice.
- d) Sports drink, plain milk, water.

**Q#5: Which is the correct order for the amount of caffeine in the same-sized drinks (from most caffeine to least caffeine)?**

- a) Cola, coffee, chocolate milk.
- b) Cola, chocolate milk, coffee.
- c) Coffee, cola, chocolate milk.
- d) Coffee, chocolate milk, cola.

**Q#6: Other people can affect your drink choice by:**

- a) Lecturing you about how much better their choice is.
- b) Refusing to pay for your drink if you don't choose what they do.
- c) Making fun of healthy choices.
- d) All of the above.

**Q#7: How do sugary drinks affect your teeth?**

- a) Sugary drinks often contain acid, which can lead to tooth decay.
- b) Sugar coats your teeth and makes other food stick more.
- c) Sugar eats holes in your teeth.
- d) Sugar in drinks sticks to your teeth more than foods such as candy or cookies.

**Q#8: You should be aware of the size and number of drinks that you have because:**

- a) You must make sure it fits in your backpack.
- b) The more sugary beverages you drink, the better for your body.
- c) You should only have three small drinks each day.
- d) The size and number will likely change the amount of sugar you have.

**Q#9: What do advertisements tell or show you about drinks?**

- a) Information about all the ingredients of the drink.
- b) Good things about the drink, and good things that happen when you drink it.
- c) Warnings about negative side-effects of drinking the products.
- d) The conditions under which the drink has been made.

**Q#10: The healthiest drink choice at any time is:**

- a) A sports drink because sometimes you need quick energy.
- b) Water because it is most refreshing and best for your body.
- c) A pop because the caffeine can keep you awake to study more effectively.
- d) A sweetened fruit drink because it has fruit in it.

**Q#11: When you choose a drink, you should base your decision on:**

- a) Whether it gives us a feeling of energy.
- b) How "cool" it looks.
- c) How its contents may affect your body.
- d) What your friends think of the drink.

# Teacher Resource 17: Quiz Answers

## Teacher Assessment Tool

### → Sip Smart!™ Ontario Quiz

Grades 3 to 7

#### **Notes about this assessment tool:**

- This quiz should be given after teaching all five lessons, as both quizzes cover the key messages of all activities.
- Level 1 has 10 questions and is a “True/False” quiz.
- Level 2 has 11 questions and is a multiple choice quiz.
  - Level 2 covers the additional topic of caffeine (Q # 5).



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## Teacher Assessment Tool

### → Quiz Answer Key

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#### \*Grades 3, 4 & 5 \*

#	Answer
1	False
2	True
3	True
4	True
5	True
6	False
7	True
8	True
9	False
10	True

---

#### \*\*Grades 6 & 7\*\*

#	Answer
1	a
2	b
3	a
4	d
5	c
6	d
7	a
8	d
9	b
10	b
11	c

# Guidelines for Using the Drink Diary Calculator

**Purpose:** The *Sip Smart!™ Ontario Drink Diary Report* is used to help you calculate the drink data from your class. After each lesson you can see what kinds of drink choices your class is making as a whole in order to discuss with them how their choices change as they learn more about healthy drink choices.

## Notes re: Sugar and Caffeine Amounts

The Heart and Stroke Foundation recommends that in both adults and children, intake of free sugars not exceed 10% of total daily energy (calories). Free sugar includes added sugars and sugar from fruit juice. It does not include sugar naturally occurring in milk. Based on this, *Sip Smart!™ Ontario* uses a maximum daily amount of no more than 10 tsp (50 mL) of free sugar for children ages 7 – 13 years.

Some drinks contain both naturally occurring and added sugars. The amounts listed in the Drink Diary reflect both the total teaspoons of sugar and the free sugars in these beverages.

**Note:** To determine the amount of sugar and caffeine that are used in the *Drink Diary Calculator*, a Registered Dietitian reviewed several sources, including beverage company nutrition information on the Internet, and checked labels of drinks in local supermarkets. Drinks were then grouped into like categories and sizes, and the average sugar and caffeine amounts were calculated.

## Drink Diary Tutorial

This tutorial will explain how to fill in the given spreadsheet.

### Using the Drink Diary Excel® Spreadsheet:

1. Download the Excel Spreadsheet from [www.brightbites.ca](http://www.brightbites.ca) and save a copy on your computer.
2. Open the file and click the **DD1** (Drink Diary Day 1) tab in the bottom left corner, if it is not already selected. Note that this sheet has also been copied for additional days – see tabs DD2 and DD3.
3. At the top of the spreadsheet fill in your school, your name (Teacher), the grade(s) of your class, the date of this Drink Diary, and the number of students in who will be entered in this Drink Diary. This information is used in the calculations.

### Filling in the spreadsheet once your students have completed their Drink Diary sheets:

1. Click the DD1 tab in the bottom left corner to input data from Day 1.
2. Using the first student's Drink Diary Tracking Sheet, fill in the information in the column labelled **S1** (Student 1).
3. Write in the number of beverages the student reported having, noting the size they marked on their sheet. Example: If Student 1 drank three 500 ml glasses of water, enter 3 in cell C9, under the **S1** heading, beside **M (500ml)**.
4. Continue filling in the different beverages that S1 drank. Enter the beverages exactly how the student wrote them. For example, if the student wrote that they had two 250 ml glasses of water, do not mark down that they drank one 500 ml glass of water.
5. Using Student 2's Drink Diary sheet, fill in the column for S2 (Student 2).
6. Continue until all student Drink Diary sheets have been entered into the spreadsheet.
7. For Drink Diary Day 2 and Day 3 data, use the DD2 and DD3 tabs respectively, and repeat steps 1 through 6 above.

### The spreadsheet will automatically calculate totals for you:

- Column AG displays the number of each type of drink that was consumed by the students in your class.
- Column AJ displays the total teaspoons of sugar consumed by your class for each beverage type.
- Cell AJ88 displays the total teaspoons of sugar consumed from drinks in one day by the students in your class.

- Other totals are also calculated and listed on the spreadsheet under the Results section. Each day displays only the totals for that day. The following results are calculated:
  - Water intake (blue box)
  - Milk intake (white box)
  - Pop intake (pink box)
  - Caffeine intake (light orange box)
  - A comparison of total free sugar intake to the recommended amount (grey box)
  - Total sugar intake (red box)
  - Sugar intake from “Every Day”, “Sometimes” and “Avoid” drinks (green box)
  - Sugar intake from 100% juice (yellow box)
  - Sugar intake from pop (orange box)
  - Sugar intake from plain vs. flavoured milks (purple box)

The spreadsheet is designed to print only the results on letter size paper (8.5” x 11”). Click File then Print – in Microsoft Excel 2010 you should see a print preview so you can double check that just the results will be printed. If you want to print the whole spreadsheet you’ll have to change the print area settings.

## Troubleshooting

**If the spreadsheet is not working as expected, here are a few things to try:**

1. For basic Excel instructions, go to: <http://office.microsoft.com/en-us/excel/FX100646951033.aspx>
2. If cells are not visible on the screen:
  - » Note that there are scroll bars along the right and bottom of the spreadsheet.
  - » Rows or columns may be hidden, click in the top left of the spreadsheet, where the row and column headings intersect, to select the entire sheet: Then right-click anywhere on the column or row headings and select “Unhide”.





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# Backgrounders

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## Introduction

It is helpful to scan or read all 'Backgrounders' before starting to teach the program:

- Each one offers valuable information about the sugary drinks you will be discussing. As well, each backgrounder has links for more information.
- Students will ask a variety of questions, and these will vary from year to year. Backgrounders will be helpful, quick reference for you when one of these questions is unexpectedly posed by a student.

## Sugar Backgrounder

### What is sugar?

The word "sugars" describes the group of carbohydrates that provide energy to the body and help to make our food sweet. Sugars come in many forms and have different names because of their chemical structures. "Glucose", "fructose" and "lactose" are different types of sugars. The word "sugar" usually means white or brown table sugar. It is found naturally in sugar cane and sugar beet, extracted through a refining process and then granulated.

### Sources of sugars

Sugars can occur naturally in fruit, vegetables, starches, grains and most plant-based foods. Fructose is found in fruits and vegetables, while lactose is in milk and milk products. Granulated sucrose or table sugar is sold in grocery stores in brown, white and powdered forms.

"Added sugars" are the granules, syrups and sugars added to food and drinks for flavour, texture or colour.

"Free sugars" is another word used when talking about sugar. Free sugar is any sugar that is added to foods by the manufacturer or when cooking at home, plus it includes the sugar that is naturally present in honey, syrups, and fruit juices. It does not include sugar naturally present in milk or whole fruit and vegetables.

### Is there any nutrition in sugar?

Other than providing energy, sugar offers no nutrition. Most of the sugar we eat will be broken down into glucose or "blood sugar". It is the energy source for organs, tissues and all of the body's activities. Glucose is very important for healthy brain function. The brain uses glucose almost exclusively for its energy needs. Fruits, vegetables, milk and milk alternatives have naturally-occurring sugar, but also have important nutrients such as fibre (in vegetables and fruit), protein, vitamins, minerals, and antioxidants.

### How much sugar is recommended for healthy eating?

Your body does not need to get carbohydrates from free sugars for good health. The Heart and Stroke Foundation recommends that in both adults and children, intake of free sugars not exceed 10% of total daily energy (calories). Based on this, **Sip Smart!™ Ontario** uses a maximum daily amount of no more than 10 tsp (50 mL) of free sugar for children ages 7 – 13 years.

10 tsp = 10 sugar cubes = 10 sugar packs = 40 grams of sugar

This Daily Sugar Total (DST) is to be used as a guideline only. The number would change slightly based on the student's age, gender, body composition, and activity level.

**Included in the DST (10 tsp/50 mL sugar) is:**

- Sugar added to flavoured milk and flavoured soy beverages
- Sugar added to soft drinks, fruit beverages, cocktails, energy and sports drinks
- Sugar in honey and syrups
- Naturally occurring sugar in 100% fruit juice. This is included because we don't actually need to drink juice to be healthy. It's easy to get the same nutrients (and more) from whole fruits

**Not included in the DST is:**

- Naturally occurring sugar in milk (lactose)
- Sugar in plain soy beverages
- Naturally occurring sugar in whole fruits or vegetables

As an example, if a child consumes one 355 mL can of pop, which contains 10 - 12 teaspoons of sugar, he has reached his DST (daily sugar total) for that day!

For more information on the Heart and Stroke Foundation's advice on ways to reduce sugar consumption visit their website at [www.heartandstroke.com](http://www.heartandstroke.com).

**Does sugar cause hyperactivity?**

No! Although it is a commonly held belief that sugar causes hyperactive behaviour in children, research has not found any negative effects of sugar on behaviour. Children can become naturally excited and active for class parties and other special events, so it can be easy to think that eating special treats, such as cake and candy, is the cause. Research makes it quite clear that sugar does not cause hyperactivity.

Commonly reported negative effects of sugar on children's behaviours may be because people closely watch a child's behaviour and expect it to cause problems. Parents who thought their child was sugar sensitive reported hyperactivity just by being told their child had received a large dose of sugar in a sugar-sweetened beverage (even though the drink had artificial sweetener).

There are other reasons besides hyperactivity to limit children's sugar intake, including to prevent dental caries and to limit excess calories, which could lead to overweight and obesity.

**Main points:**

- Sugar is a type of carbohydrate.
- Sugar can be naturally present in food (i.e., naturally-occurring sugar) or added to food at the table and during processing (i.e., added sugar).
- There are many names for added sugars that can be found in ingredient lists.
- Added sugars provide calories but no nutritional value.
- Limit food and beverages high in added sugar.
- A high intake of sugars can contribute to poor oral health and other chronic diseases.
- Sugar does not cause hyperactivity.

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<sup>1</sup> Heart and Stroke Foundation of Canada Position Statement. *Sugar, Heart Disease and Stroke*.

Available at [http://www.heartandstroke.com/site/c.ikiQLcMWJtE/b.9201361/k.47CB/Sugar\\_heart\\_disease\\_and\\_stroke.htm](http://www.heartandstroke.com/site/c.ikiQLcMWJtE/b.9201361/k.47CB/Sugar_heart_disease_and_stroke.htm)

# Label Reading Backgrounder

Teaching students to read the food labels found on packaged food will help them to make informed food choices when it comes to choosing healthy drinks.

**Ingredient List:** The ingredient list shows all the ingredients in a packaged food. Ingredients are listed in order of weight, beginning with the ingredient that weighs the most and ending with the ingredient that weighs the least. This means that a food contains more of the ingredients found at the beginning of the list, and less of the ingredients at the end of the list.

Common words for sugar in the ingredient list:

- Agave nectar
- Barley malt
- Beet sugar
- Brown sugar
- Caramel
- Corn sweetener
- Corn syrup solids
- Dextrin
- Dextrose
- Evaporated cane juice
- Fructose
- Fruit juice concentrations
- Galactose
- Glucose
- High-fructose corn syrup
- Honey
- Lactose
- Liquid glucose-fructose
- Liquid invert sugar
- Maltodextrin
- Maltose
- Molasses
- Raw cane sugar
- Sucrose
- Syrup (e.g., malt, barley, rice, maple, corn)

**Nutrition Facts:** The Nutrition Facts Table is found on almost all pre-packaged foods. It gives you information on the amount of 13 core nutrients and calories in an amount of food. "Sugars" is one of the core nutrients that must be listed on the Nutrition Facts Table. It is listed under carbohydrates. The Nutrition Facts Table lists total sugars, which includes both added and naturally occurring sugars.

All of the information in the Nutrition Facts Table is based on an amount of food called "serving size." The serving size is listed at the top of the Nutrition Facts Table. The serving size is not necessarily the amount of food you should eat. It is a reference amount for the calories and nutrients on the Nutrition Facts Table.

In the example for chocolate milk, the 26 grams of total sugar per 1 cup (250 mL) would include the naturally occurring lactose, as well as the added sugars (e.g., sugar, glucose/fructose). The added sugars would be listed in the ingredient list.

## How many teaspoons of total sugar are in a sugary drink?

One teaspoon (5 mL) of sugar is equal to 4 grams, which can be compared to 1 sugar cube or 1 sugar packet.

Nutrition Facts Valeur nutritive	
Per 1 cup (250 mL) par 1 tasse (250 mL)	
Amount Teneur	% Daily Value % valeur quotidienne
<b>Calories / Calories</b> 170	
<b>Fat / Lipides</b> 2.5 g	<b>4 %</b>
Saturated / saturés 1.5 g + Trans / trans 0 g	<b>8 %</b>
<b>Cholesterol / Cholestérol</b> 10 mg	<b>3 %</b>
<b>Sodium / Sodium</b> 180 mg	<b>8 %</b>
<b>Carbohydrate / Glucides</b> 26 g	<b>9 %</b>
Fibre / Fibres 0 g	<b>0 %</b>
Sugars / Sucres 26 g	
<b>Protein / Protéines</b> 9 g	
Vitamin A / Vitamine A	10 %
Vitamin C / Vitamine C	0 %
Calcium / Calcium	30 %
Iron / Fer	2 %
Vitamin D / Vitamine D	45 %

1. Look at the number of grams of “sugars” in the beverage on the Nutrition Facts Table (this number includes both naturally occurring and added sugars).
2. Divide the number of “sugars” by four (4) to find out the teaspoons of sugar in the serving size used for the Nutrition Facts Table.

**Watch out:** The serving size shown on the Nutrition Facts Table might be less than the full bottle. If the container has more than one serving, multiply the number of grams of sugar in one serving by the number of servings to get the **total grams** of sugar in the container.

**Example 1:**

Your drink has 8 grams of sugar per serving according to the Nutrition Facts Table. Divide 8 by 4 to determine the number of teaspoons of sugar in the drink. Therefore, 8 divided by 4 equals 2 tsp (10 mL) of sugar per serving.

**Example 2:**

A 591 mL cola has 30 grams of sugar per serving, and one serving is 250 mL

How many teaspoons of sugar are in this bottle of cola?

*Step 1: Figure out the number of servings in the bottle.*

591 mL per bottle ÷ 250 mL per serving = **2.4 servings per bottle**

*Step 2: Figure out the grams of sugar in the bottle.*

30 grams sugar per serving x 2.4 servings = **72 grams of sugar per bottle.**

*Step 3: Figure out the teaspoons of sugar in the bottle.*

72 grams of sugar per bottle ÷ 4 grams per teaspoon = **18 teaspoons of sugar per 591 mL bottle**

**There are 18 teaspoons of sugar in this 591 mL cola.**

**For more information:**

- Visit Health Canada website: Nutrition Labelling at <http://www.hc-sc.gc.ca/fn-an/label-etiquet/nutrition/index-eng.php>

## Sugar-Sweetened Beverages Backgrounder

### What are sugar-sweetened beverages?

Sugar-sweetened beverages are drinks (carbonated or not) that contain added sugars. Examples include:

- Soda pop or soft drinks
- Fruit drinks (e.g., “punches”, “cocktails” or “-ades”)
- Energy drinks
- Sports drinks
- Flavoured or vitamin-enhanced waters
- Specialty tea and coffee beverages (e.g., iced cappuccinos or iced teas)
- Flavoured milk drinks and milkshakes
- Sweetened plant based beverages (e.g., soy, almond, rice beverages)
- Hot chocolate
- Sweetened smoothies made with added honey or fruit juice
- Slush type drinks

## Health Effects of Drinking Too Many Sugary Drinks

1. **Poor nutrition:** Sugary drinks contain mostly sugar and water. They provide calories but little, if any, nutritional value.
2. **Tooth decay:** Sipping sugary drinks, especially ones high in acid (e.g., sports drinks or pop) can lead to tooth decay. Sugary drinks mix with bacteria in the mouth to produce acid. Acid erodes enamel, which can lead to cavities. Diet drinks may not contain sugar but they do contain acid.
3. **Displace healthier beverages in the diet:** When the frequent choice is a sugary drink instead of milk or water, it can affect the intake of important nutrients such as calcium and vitamin D. Some research suggests that people who drink this “liquid candy” do not feel as full as if they had eaten the same calories from solid food and do not compensate by eating less.
4. **Weight gain:** Greater intake of sugary drinks is linked to increased energy intake and body weight. Obesity puts children at risk for other health problems such as heart disease, high blood pressure, stroke and diabetes.
5. **Chronic diseases:** Regular consumption of sugar-sweetened beverages is associated with cardiovascular disease (e.g., stroke, high blood pressure) and type 2 diabetes.

### Main points:

- Sugary drinks provide calories but often little, if any, nutritional value.
- Sugary drinks often take the place of healthier drinks.
- Regular consumption of sugary drinks is associated with weight gain and development of chronic diseases.
- Sipping sugary drinks can lead to tooth decay and acid erosion.

## Food Additives Backgrounder

Food additives are substances that are added to foods to increase their shelf life, to enhance their taste, or colour. There has been much controversy regarding the risks and benefits of food additives. Hyperactivity in children, allergies, asthma, and migraines have been associated with adverse reactions to food additives. However, most food additives are considered safe if consumed in moderate quantities, and Health Canada requires all food additives to go through a rigorous process of approval before they can be used in Canada. Sugary drinks often have many additives.

Ingredient	Use in food or beverages
<b>Carrageenan</b>	A food additive from seaweed sometimes called Irish moss (a type of red seaweed). It is used as both a gelling and stabilizing agent. Gelling agents help thicken beverages and stabilizing agents help keep suspended food particles from settling to the bottom (e.g. chocolate in chocolate milk).
<b>Citric Acid</b>	This food additive acts as a preservative by regulating the acidity of a beverage or food. It also adds an acidic or sour taste to foods and soft drinks, and increases the carbonation and foaming properties of soft drinks.
<b>Disodium phosphate, Sodium Citrate</b>	These food additives help keep ingredients in a beverage from separating, act as preservatives by regulating the acidity of a beverage, protect the colour or flavour of a beverage from trace minerals like iron, and add to a beverage's carbonation or foaming properties.
<b>Ester gum (Glycerol Ester of wood rosin)</b>	Ester gum is a resin that is produced by combining glycerol (syrup used for sweetening and preserving food) with rosin (dark brown resin from the stumps and sap of pine trees). It is used in beverages as an emulsifier (keeps oil droplets evenly distributed in water) and carbonation agent.
<b>Maltodextrin</b>	A carbohydrate produced from starch and used as a food additive. It is easily digestible, being absorbed as rapidly as glucose.
<b>Monopotassium phosphate, Tricalcium phosphate</b>	Food additives that protect the flavour and colour of food and beverages and are also used as food for yeast in the fermentation of beer. Tricalcium phosphate is also used to keep ingredients in a beverage from separating, and as a carbonation agent in soft drinks.
<b>Vegetable Oil and Bromated Vegetable Oil</b>	Vegetable oil may be added to some fruit and soft drinks as a flavouring agent and emulsifier. By law, if the amount of oil included is 0.5% or lower per reference amount, manufacturers are allowed to put 0% fat on the nutrition label.

Ingredients Added to Energy Drinks	
<b>Ginseng</b>	This is a species of plant within Panax, a genus of 11 species of slow-growing perennial plants with fleshy roots.  It is added to energy drinks to improve physical and athletic stamina; however, studies have not supported this role for ginseng.
<b>Glucoronolactone</b>	This is a naturally occurring chemical compound produced by the metabolism of glucose in the human liver. It is added to energy drinks to reduce fatigue and to remove toxins, however, there is no scientific evidence to support these claims.
<b>Guarana extract</b>	Guarana is a plant from the Amazon that contains caffeine and other chemicals which are similar to caffeine. One Guarana berry has five times more caffeine than a coffee bean. It is added to energy beverages to enhance athletic performance and to reduce mental and physical fatigue. High doses may cause the heart to race and trouble sleeping.
<b>Inositol</b>	It is a vitamin-like substance found in many plant and animal cells and is made by the body. It is used to treat circulation disorders.
<b>Taurine</b>	An amino acid that occurs naturally in meat, seafood and milk. Taurine is often added to energy drinks to boost mental and physical performance though this has not been proven. When mixed with alcohol, taurine may mitigate the effects, encouraging greater consumption of alcohol.
<b>Yerba mate</b>	This is a species of holly native to South America. The dry leaves are toasted and/or steeped as a beverage and contain caffeine. It is a central nervous system stimulant and has cardiovascular benefits however it is also associated with a higher risk of cancer of the mouth, esophagus, kidney and more. It is <b>not</b> recommended for children.

## Vitamins Added to Beverages

Declarations of vitamins and mineral nutrients in the Nutrition Facts Table are based on the combined total of both the naturally occurring nutrient content and any added nutrient content of a food. Vitamins and mineral nutrients are declared as percentages of the Daily Value per serving of stated size.

<b>Vitamin A palmitate</b>	An animal source of vitamin A that can be synthesized and added to beverages, especially low-fat milk that loses some of its Vitamin A when the fat is removed. It also can be added to cereals and vitamin waters.
<b>Pantothenic Acid</b>	A form of vitamin B5 added to energy drinks to improve exercise performance but research does not support its benefit.

For more information on additives permitted in food and beverages in Canada, go to: Food Additives Dictionary, [www.hc-sc.gc.ca/fn-an/securit/addit/diction/index-eng.php](http://www.hc-sc.gc.ca/fn-an/securit/addit/diction/index-eng.php)

# Oral Health Backgrounder

## What is oral health?

Good oral health means teeth and gums that are free from infection and decay. A healthy mouth helps to eat, speak, and socialize in comfort.

## How to maintain oral health?

Oral health depends on good oral hygiene and proper nutrition to prevent tooth decay (cavities) and keep mouth tissues healthy. It is recommended to floss daily and brush teeth for two minutes, twice a day:

“2 for 2 is what you do!”

## What are the risks to oral health?

Oral health can have a huge impact on a child’s overall health and well-being. Having and keeping a full set of teeth (both baby teeth and permanent teeth) allows children to maintain good nutrition, proper speech and contributes to positive self-esteem. Both tooth decay and tooth erosion can threaten oral health.

## Why can drinking too many sugary drinks cause tooth decay?

Plaque is a sticky film that forms daily on teeth, and is made up of live bacteria. These bacteria feed on sugar (natural or added) and produce an acid, which causes tooth decay also known as cavities. If left untreated, tooth decay can cause pain and infection.

Bacteria + Sugar = Acid (Tooth Decay)

## What is tooth erosion?

Tooth erosion occurs when the outer surface of the tooth (enamel) wears away. This makes the enamel thinner and the tooth more sensitive and more susceptible to decay.

## Why can too many acidic beverages cause tooth erosion?

Some drinks, such as soft drinks, lemonades and citrus fruit juices, are acidic. This is true for regular and diet versions of these beverages. This acid can also put teeth at risk, but in a different way than that of the sugar-eating plaque. Prolonged exposure to acid can have a direct eroding effect on the outer surface of the teeth (enamel).

Acidic beverages + Tooth + Time = Erosion

## Can water contribute to oral health?

Yes. Rinsing with water after eating or drinking anything helps to clear sugar and acids from the mouth.

### For more information:

- Ontario Association of Public Health Dentistry: <http://www.oaphd.on.ca>
- Canadian Dental Association: [http://www.cda-adc.ca/en/oral\\_health/cfyt/dental\\_care\\_children/](http://www.cda-adc.ca/en/oral_health/cfyt/dental_care_children/)

### Main points:

- A healthy mouth is an important part of overall health.
- Sugar in foods and beverages (even naturally-occurring sugar) can contribute to tooth decay, also known as cavities.

- Acids in beverages (even sugar-free ones) can cause tooth erosion and increase tooth sensitivity and risk for decay.
- Three steps will help promote oral health:
  - Brush your teeth for two minutes twice a day.
  - Floss your teeth once a day.
  - Rinse your mouth with water after eating or drinking anything.

\* Ontario has government programs to assist with dental care for kids under 18. Check with your local Public Health Unit for more information.

Children can sip water  
all day with no worries  
of acid attacks on their  
teeth



# Water Backgrounder

Water is an essential nutrient. Our bodies are made up of about 65% water.

Our bodies need water to:

- Regulate body temperature. Evaporation of sweat helps to release heat made by working muscles.
- Carry nutrients (glucose, vitamins, minerals, fats) and oxygen around the body as part of our blood.
- Carry waste (carbon dioxide, lactic acid) away from cells.
- Digest food and maintain bowel regularity.
- Maintain blood pressure and kidney health.
- Cushion organs and joints.
- Allow muscles to contract.
- Maintain fluid and electrolyte (such as sodium and potassium) balance.
- Carry out many vital functions.

## Sources of water:

In addition to basic drinking water, water is also found in food and beverages, such as milk, juices, soups, fruit and vegetables. Although our bodies can get water from all of these sources, *Eating Well with Canada's Food Guide* recommends drinking water regularly to satisfy thirst. Drinking water keeps us hydrated without adding extra calories, sugar, sodium or caffeine to our diets.

## What if we don't get enough water?

We cannot survive without water. Without adequate fluid intake, our bodies can become dehydrated. Our bodies naturally lose water during the day, through sweating, breathing and getting rid of waste. These fluids must be replaced to avoid dehydration.

Dehydration can lead to fatigue, weakness, dizziness, headache, irritability, muscle cramps and impaired physical performance. Other signs of dehydration include dry mouth and dark yellow/orange, strong smelling urine.

## How much water do children need?

On average, boys and girls aged 6-11 years need about 6-7 cups (1.5 – 1.7 L) of fluid each day. Water, in addition to fluid contained in food and other beverages, can contribute to this amount. Specific water requirements have not been set because they vary so much for each person. The amount of water we need each day depends on our age, gender and activity level. In addition, people often need more fluids when they are physically active or when the weather is hot and humid.

## Is bottled water safer than tap water?

There is no evidence that bottled water is safer than tap water. In Canada, the quality standards of both bottled water and municipal tap water are similar. Both meet or exceed their required health and safety standards and are considered to be safe.

Which one we choose to drink is a personal preference, but there are some advantages to drinking tap water, such as:

- It is available in most places
- It is much cheaper than bottled water
- It is much more environmentally friendly than bottled water

**Note:** Under some circumstances tap water can be unsafe. For example, untreated or inadequately treated water from wells or other sources can have disease-causing organisms such as bacteria, parasites and viruses that cause illness. Bottled water would be a safer choice in this case. Contact your local public health unit for information on safe water.

### **Flavoured and vitamin-enhanced water**

Most of these products are marketed to enhance health and well-being but they are NOT necessary for good health. These beverages are often sweetened with sugar and may contain a variety of other added ingredients, such as flavourings, herbs, vitamins, minerals, anti-oxidants, sodium, protein and fibre. Some popular brands have between 6-8 teaspoons of sugar (30-40 mL), while others may be sweetened with an artificial sweetener. Many also contain caffeine.

Drinking too much of these products can result in excess intake of vitamins, minerals and caffeine. It is important to read the label to find the maximum amount that can be consumed on a daily basis. These products should be kept out of children's reach and are usually not recommended for children under the age of 12 years.

#### **For more information:**

- Frequently Asked Questions About Bottled Water (Health Canada) [http://www.hc-sc.gc.ca/fn-an/securit/facts-faits/faqs\\_bottle\\_water-eau\\_embouteillee-eng.php](http://www.hc-sc.gc.ca/fn-an/securit/facts-faits/faqs_bottle_water-eau_embouteillee-eng.php)
- It's Your Health – The Safety of Bottled Water (Health Canada) <http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/food-aliment/bottled-embouteillee-eng.php>
- Water Quality (Health Canada) <http://www.hc-sc.gc.ca/ewh-semt/water-eau/index-eng.php>

#### **Main points:**

- Plain water is best for quenching thirst.
- Children should have free access to water, particularly during school hours.
- Drink more water in hot and humid weather, or when you are very active.
- Sip water throughout the day; with and between meals.
- Food and other beverages can contribute to your overall water intake.
- Tap water and bottled water are both safe to drink, but there are some advantages to drinking tap water; convenience, cost and it is more environmentally friendly.
- Flavoured or vitamin-enhanced waters are not recommended for children. They can contain added sugar and can result in an excess consumption of vitamins, minerals and caffeine.

# Milk, Flavoured Milk and Other Beverages Made with Milk Backgrounder

## Milk

Milk is a healthy drink. It has protein, calcium, vitamin D, vitamin A, and riboflavin. Milk and milk alternatives (e.g., fortified soy beverage) are the main source of calcium and vitamin D in our diets, which help to build strong bones and teeth, contract muscles and carry nerve signals.

While young children (nine months to two years) are advised to drink homogenized (3.25% MF) milk, school-age children are encouraged to choose lower-fat options (2% MF or less). Lower-fat options have the same nutrients as 3.25% MF milk with less calories and saturated fat.

One cup (250 mL) of milk is considered one serving from the Milk and Alternatives food group in *Eating Well with Canada's Food Guide*. Children aged 4-8 should get two Food Guide Servings of Milk and Alternatives each day, while children aged 9-18 should get 3-4 Food Guide Servings daily.

## Flavoured milk

Sugar occurs naturally in milk in the form of lactose. Chocolate, strawberry and other flavoured milks, however, contain lactose and added sugars. Flavoured milk has the same nutrients as plain milk; however, it is a 'sometimes' choice. Less is best. Children should be offered plain (not flavoured) milk regularly so they learn to enjoy it.

## Milkshakes

Milkshakes are made from milk, ice cream or iced milk, often with added flavourings, syrups or sauces. Milkshakes made with ice cream will have a lot more sugar and fat than the same amount of milk. Not including any added syrups, one cup of plain ice cream has almost the same amount of sugar as a can of pop. Smoothies made with real fruit, low-fat, plain milk or yogurt are healthier alternatives to milk shakes.

## Hot chocolate and specialty drinks

A hot chocolate or specialty latte can have the same amount of sugar as two cans of coke. The sugar comes from the chocolate or chocolate mix and the added whipped cream, marshmallows, and chocolate syrup. Skipping the additions, asking for 'half sweet' and choosing a smaller serving size reduces the sugar; however, these drinks are still a choice to avoid.

Lattes and espresso beverages are not recommended for kids. Not only do they contain high amounts of sugar, but they also contain caffeine.

### Main points:

- Milk is a great source of protein, calcium, vitamin D and B vitamins.
- Flavoured milk is a 'sometimes' choice.
- Sugar-sweetened drinks that contain some milk (e.g., milkshakes, hot chocolate, specialty lattes) often have a lot of sugar, calories and fat, and should be avoided.

## Plant Based Beverages Backgrounder

Plant based or non-dairy beverages are made from plants, such as soy, rice, almonds, hemp or flaxseed. They may be used by someone who avoids milk, either because of a cow's milk allergy, personal preferences or dietary practices, such as a vegan diet, which does not include animal products.

### **Which plant based beverages count as a milk alternative in *Canada's Food Guide*?**

Only soy beverages fortified with calcium and vitamin D count as milk alternatives in *Canada's Food Guide*. Fortified soy beverages have added vitamins and minerals to make them a nutritionally adequate alternative to cow's milk.

Rice, oat, almond or other plant based beverages might have added calcium, vitamin D and other nutrients; however, they don't have the same amount of protein, and may not have the same amount of vitamins and minerals as cow's milk and fortified soy beverage.

### **Examples of protein in cow's milk versus plant based beverages\*:**

1 cup cow's milk:	9 grams of protein
1 cup soy beverage:	7 grams of protein
1 cup hemp beverage	2 grams protein
1 cup rice beverage	1-2 grams protein
1 cup almond beverage	1 gram protein

\*Values based on a review of product examples (i.e., not an exhaustive list). July 2014

### **Is there sugar in plant based beverages?**

Most plain non-dairy beverages are fairly low in sugar. Flavoured non-dairy beverages often have added sugars and can contain twice the amount of sugar as the plain variety.

#### **Main points:**

- Fortified soy beverage is nutritionally similar to cow's milk. It counts as a milk alternative in *Eating Well with Canada's Food Guide*.
- Other fortified non-dairy beverages are NOT part of the milk and alternatives food group, but they can still be a good source of calcium and vitamin D. Check the Nutrition Facts panel.
- Choose plant based beverages that are "enriched" with calcium and vitamin D. If they are not enriched they are not as nutritious.
- Read the ingredient list for added sugars.
- Choose plain plant based beverages instead of the sweetened flavoured varieties.

# Fruit Juice and Drinks Backgrounder

## What is fruit juice?

Beverages labeled 100% fruit juice are made from real fruit and do not contain added sugars. Unsweetened 100% fruit juice has some of the nutrients, such as vitamin C, potassium and B vitamins, found in the whole fruit; however, fruit juice lacks the fibre found in whole fruit. Health care professionals consider fruit juice a source of free sugar even when unsweetened.

Drinking juice is not as filling as eating the whole fruit. You would have to eat about 1½ - 2 oranges or apples to get 125 mL (½ cup) of juice (with a similar amount of calories and sugar). This makes it much easier to over-consume juice than to over-eat fruit.

## What is fruit drink?

Fruit drinks are sugary drinks made with water, flavouring, added sugar and often only a small amount of fruit juice. They can be labeled fruit drink, beverage, punch, cocktail or –ade and should not be confused with real fruit juice. Some have vitamin C added, but fruit drinks do not have the other nutrients found in real fruit juice. Do not be fooled by the colourful fruit pictures on the container! Read the ingredient list to find out what is actually

in the drink.	100% Orange Juice	Orange Drink
<b>Ingredient</b>	<ul style="list-style-type: none"> <li>• Filtered water</li> <li>• Concentrated orange juice</li> </ul>	<p><b>Example 1:</b></p> <ul style="list-style-type: none"> <li>• Filtered water</li> <li>• Sugar/glucose-fructose</li> <li>• Concentrated water extract of orange, concentrated fruit juices (orange, pineapple, grape and pear)</li> <li>• Citric acid</li> <li>• Natural flavour</li> <li>• Ascorbic acid (vitamin C)</li> <li>• Natural colour</li> </ul> <p><b>Example 2:</b></p> <ul style="list-style-type: none"> <li>• Water</li> <li>• Corn syrup</li> <li>• 2% or less of each of the following concentrated juices (orange, tangerine, apple, lime grapefruit, pear)</li> <li>• Citric acid</li> <li>• Ascorbic acid</li> <li>• Thiamin hydrochloride (vitamin B1)</li> <li>• Natural flavours</li> <li>• Modified cornstarch</li> <li>• Canola oil</li> <li>• Sodium citrate</li> <li>• Cellulose gum</li> <li>• Sucralose</li> <li>• Acesulfame potassium</li> <li>• Neotame</li> <li>• Sodium hexametaphosphate</li> <li>• Potassium sorbate</li> <li>• Yellow #5</li> <li>• Yellow #6</li> </ul>

## What about vegetable juice?

Vegetable juice can be made from vegetables (e.g., tomatoes) or vegetable blends (e.g., tomatoes, carrots, celery, beets, parsley, lettuce, watercress, spinach). They are often high in added salt (sodium). Some can be made with added fruit juice but might have added water and sugar. Like fruit juice, vegetable juice does not have as much nutritional value as the whole vegetable.

## Fortified juices

Some juices, such as orange juice, may be fortified with added calcium or vitamin D. These juices have the same amount of calcium or vitamin D as milk or fortified soy beverage, but are much lower in protein and should not be used to supplement calcium and vitamin D requirements on a regular basis.

## Are unpasteurized fruit juices and ciders safe?

Not for everyone. Young children, pregnant women, elderly and people with weakened immune systems should avoid unpasteurized juices and ciders as they can cause severe illness or even be fatal.

Unpasteurized juice or cider does not undergo the treatment needed to kill harmful bacteria. Often they are sold at health food stores, local orchards, roadside stands, farmers' markets, country fairs and juice bars. Unpasteurized juice or cider may also be found on ice or in refrigerated display cases and in produce sections at grocery stores.

## How much juice should children drink?

It is easy for children to drink fruit juice because it tastes good. Juice has no nutritional advantage over whole fruit and is not a good source of fibre. Fibre helps people feel full and satisfied, which may help to reduce the risk of obesity.

Too much juice can lead to tooth decay and erosion, diarrhea and stomach upset. Also, children who drink a lot of juice may be too full to eat nutritious whole foods or drink water and milk. For these reasons, it is best to limit juice intake to one Food Guide Serving, 125 mL (½ cup) per day or less, and encourage eating whole fruits and vegetables. *Eating Well with Canada's Food Guide* recommends choosing vegetables and fruit more often than juice.

### Main points:

- Whole fruit and vegetables provide more nutrition and fibre than juice. Choose them more often.
- Limit juice to 125 mL (½ cup) per day or less for children.
- Avoid fruit flavoured drinks (e.g., punches, drinks, cocktails, -ades).
- Choose unsweetened 100% fruit juice rather than fruit flavoured drinks.
- Choose low sodium vegetable juice.
- Be cautious of unpasteurized juice and cider.
- Choose water first to quench your thirst.

# Caffeine Backgrounder

## What is caffeine?

Caffeine is a stimulant, which means it temporarily increases activity in the body or one of its parts. Caffeine is found in the leaves and seeds of many plants such as coffee beans, tea leaves, cocoa beans (chocolate), kola nuts (cola) and some herbs. Guarana and yerba mate are caffeine-containing herbs found in some energy drinks and soft drinks.

## Sources of caffeine

Caffeine is found in soft drinks (cola and some non-cola brands), chocolate, coffee, tea, chocolate milk and iced mocha drinks. Energy drinks and some brands of vitamin-fortified water also have caffeine. Small amounts of caffeine are found in baked goods and desserts made with chocolate. Caffeine in foods is usually measured in milligrams (mg).

## Stimulant effects of caffeine

Caffeine may increase heart rate, body temperature, breathing rate, blood pressure and urine production. It can also cause anxiety, restlessness and decreased concentration. Caffeine has a stronger effect on children because their bodies are smaller and their brains are still developing.

## How much caffeine is safe for children?

Health Canada advises caffeine limits based on average body weights of children.

**Children 4-6 yrs:** 45 mg of caffeine per day, or less

**Children 7-9 yrs:** 62.5 mg of caffeine per day, or less

**Children 10-12 yrs:** 85 mg of caffeine per day, or less

Beverage	Serving Size	Approximate Amount of Caffeine (mg)
<b>Coffee</b>	250 mL	150
<b>Energy drink</b>	250 mL	95
<b>Tea</b>	250 mL	43
<b>*Iced tea</b>	250 mL	10 - 20
<b>Cola beverage, regular</b>	355 mL (1 can)	36 - 46
<b>Cola beverage, diet</b>	355 mL (1 can)	39 - 50
<b>Chocolate bar</b>	45 g	11 - 23
<b>Chocolate milk or hot chocolate</b>	250 mL	5 - 9

Values in table sourced from Caffeine and Kids (Health Canada) and Caffeine in Food (Health Canada)

\*Values sourced from manufacturer's website.

## Check the label

Pure caffeine and caffeine citrate may be added to cola-type beverages and they must be listed in the ingredients on the product label. The caffeine in food from natural food ingredients or natural flavours is not regulated but products must follow safety requirements of the Food and Drugs Act. An exception is for energy drinks,

where caffeine content in mg can be found on the Nutrition Facts Table. Food manufacturers must list the food additives (e.g., caffeine) on the ingredient list of most prepackaged food labels but not the total amount of caffeine from all sources.

**For more information:**

- Caffeine in Food (Health Canada): <http://www.hc-sc.gc.ca/fn-an/securit/addit/caf/food-caf-aliments-eng.php>

**Main points:**

- Caffeine is a stimulant found in various beverages and foods.
- Caffeine has a stronger effect on children.
- Children should follow the caffeine limits per day set out by Health Canada.

## Tea Beverages Backgrounder

Tea is made by steeping the young leaves and leaf buds of the tea plant (*Camellia sinensis*) in freshly boiled water. Tea is grown around the world. There are more than 1,500 kinds of tea but the most common are black, green, oolong and white. Unsweetened tea is calorie-free and provides fluids to keep a person hydrated. There may be some health benefits to drinking tea; however, more research is needed.

Tea contains caffeine and should not replace more nutritious beverages such as water and milk. Flavouring milk with a small amount of weak tea is a lower caffeine option and “sometimes” choice for children. Regular iced tea is similar to pop in that it contains added sugars and offers little nutrition.

Herbal tea does not come from the *Camellia sinensis* plant. Herbal teas are made from the roots, barks, leaves, seeds or flowers of different plants. Some herbs may not be well tested on children or adults and may contain harmful ingredients. As well, some tea drinks add ingredients, such as ginseng and B vitamins to make them appear to be a healthy drink choice. The health claims for herbal remedies in these products have less stringent standards of evidence than do health claims for foods. Many of these ingredients have not been well researched with respect to their effects in children.

Bubble tea is not a healthy choice. Different types of green and black tea are used as a base, and then fruit-flavoured syrups, milk, condensed milk (high in sugar), or cream are added. Bubble tea has tapioca pearls or “bubbles” that sit at the bottom of the cup. They are sucked up through a wide straw and need chewing like a gummy bear candy. Bubble teas can have a lot of sugar and caffeine.

**Main points:**

- Many tea drinks have more sugar and caffeine than is healthy for children.

**For more information:**

- Visit the EatRight Ontario website at: <http://www.eatrightontario.ca/en/Articles/Antioxidants/Tea-Time.aspx>

# Energy Drinks Backgrounder

## What are energy drinks?

Energy drinks are beverages that claim to give you energy, make you more alert, improve your athletic ability and/or help with weight loss. Energy drinks typically contain water (carbonated or not), caffeine, taurine (an amino acid), vitamins, herbal ingredients and sugar or artificial sweeteners. Examples of energy drinks include Red Bull®, Monster Energy Drink®, and Full Throttle Energy Drink®, among others.

## Caffeine in energy drinks

Most energy drinks have 70 to 95 mg of caffeine per 250 mL (8 fl oz). This is almost the same amount of caffeine found in three cans of cola.

Health Canada limits the amount of caffeine that can be included in an energy drink to 180 mg in a single serving. This would be twice the maximum daily caffeine intake for children aged 10 to 12 years based on the Health Canada recommended maximum daily caffeine intake.

## Energy drinks are not healthy or safe for children

- **Caffeine:** Children can very easily get too much caffeine by drinking energy drinks. Too much caffeine has been shown to disturb sleep and can make people nervous, anxious or jittery. It can also cause stomach upsets and make the heart beat faster.
- **Herbal ingredients:** Energy drinks contain herbal ingredients (e.g., ginkgo biloba, ginseng, taurine and glucuronolactone). The long term safety of these herbal ingredients is not known. Guarana, a plant extract added to energy drinks, contains caffeine, thereby increasing the overall caffeine level.
- **Extra calories but no nutrition:** Most energy drinks are high in sugar (approximately 10 tsp per 355 mL can) and can add calories with no nutritional benefit to the diet.
- **Dental:** High sugar content can cause cavities. In addition, energy drinks contain citric acid, which can lead to tooth erosion.

## Energy drinks are not necessary

Healthy, growing children are naturally full of energy. This energy comes from eating a balanced diet, proper hydration, regular physical activity and good sleeping habits.

## Do energy drinks improve athletic performance?

No. Energy drinks are not the same as sports drinks, which are specially made to hydrate the body of an elite athlete. Energy drinks are not made to hydrate the body and can mask the effects of dehydration. Even the slightest amount of dehydration can negatively affect athletic performance. In addition, the high sugar content in energy drinks, as well as the carbonation, can cause stomach upset.

## Energy drinks and alcohol

Mixing energy drinks with alcohol is dangerous and should be avoided. Caffeine is a stimulant and masks the effects of alcohol, which can lead to overconsumption of alcohol (alcohol poisoning) and risky behavior.

## Check the label

Health Canada manages the quality and safety of energy drinks, setting the following requirements for their sale:

- A maximum amount of caffeine from all sources shown in mg per container or per serving size. There is now a caffeine limit of 180 mg per single serving.

- Limits for ingredients such as added vitamins and minerals.
- Labels that meet food labeling standards such as a Nutrition Facts Table, ingredient list, and allergy labeling.

**The label must also include precautionary statements including:**

- "Not recommended for children, pregnant/breastfeeding women, individuals sensitive to caffeine".
- "Do not mix with alcohol".
- "High source of caffeine".
- "Do not consume more than (X) container(s)/serving(s) daily". This limit must not result in the daily maximum limit being exceeded for any added vitamins, minerals or amino acids.

**Note:** The labels on energy drinks state that they are not recommended for children; unfortunately, there are no restrictions preventing children from buying them.

**For more information:**

- Information for Parents on Caffeine in Energy Drinks (Health Canada): <http://www.hc-sc.gc.ca/fn-an/securit/ad-dit/caf/faq-eng.php>
- Caffeinated Energy Drinks (Health Canada): <http://www.hc-sc.gc.ca/fn-an/prodnatur/caf-drink-boissons-eng.php>
- Questions and Answers Caffeinated Energy Drinks (Health Canada): <http://www.hc-sc.gc.ca/fn-an/prodnatur/questions-caf-eng.php#a6>

**Main points:**

- Children should not consume energy drinks.
- The caffeine in energy drinks can cause harmful side effects.
- Energy drinks are bad for teeth.
- Energy drinks are not the same as sports drinks.
- Energy drinks can negatively affect sports performance.
- Energy drinks are dangerous when combined with alcohol.
- Energy comes from eating a balanced diet, proper hydration, regular physical activity and good sleeping habits.

## Sports Drinks Backgrounder

**What are sports drinks?**

Sports drinks are generally made with water, sugars and a small amount of minerals or electrolytes, such as sodium and potassium. They often contain artificial colours and flavours, such as citric acid, artificial sweeteners, and other additives.

During exercise, the body uses stored carbohydrates (glycogen) as fuel. People use sports drinks to replace water (rehydrate), to refuel muscles and to restore carbohydrates that were used during activity. The electrolytes replace what the body loses through sweat and help maintain fluid balance in the body. As a source of added sodium, sports drinks may add to increasing sodium intakes among children.

**Do children need a sports drink?**

Water and a balanced diet give most children the energy and fluids they need. Sports drinks add sugar and calories with little nutritional value. They are not needed by children involved in sports of lower intensity and

duration, or doing routine physical activity for less than one hour. Regular water breaks every 15 to 20 minutes and enjoying water and a healthy snack after a game or workout is adequate.

Children may not recognize the need to replace fluids and often need reminders to drink. Also, they tend to drink more fluids if they are flavoured. For sporting events and practices, add sliced fruit (e.g., lemons, limes or oranges) or frozen cubes of fruit juice to water.

### **When is a sports drink better than plain water?**

If children are involved in prolonged, vigorous physical activity in hot, humid conditions for more than one hour, or, are wearing heavy protective gear, which can increase sweating and reduce the evaporation of sweat to cool the child, small amounts of sports drinks may be useful. For the typical child or teen doing routine physical activity for less than three hours in normal weather conditions, the use of sports drinks in place of water is unnecessary.

### **What about coconut water?**

Coconut “water” is the thin liquid found in the centre of young, green coconuts. It is not the same as coconut milk, which is the high fat liquid that comes from the grated coconut meat.

The nutrition in coconut water can vary with the age of the plant. Generally, plain coconut water has much less sodium, much more potassium and less carbohydrate than commercial sports drinks. For shorter periods of activity, coconut water can be a source of hydration, but water works just as well. For longer periods of intense activity, sports drinks may be the better choice, but more research is needed.

Coconut water has fewer calories than juice but is not calorie-free like plain water. Because it has a distinct taste, companies now make flavoured blends, which can have added sugar or fruit juice. The latte blend is made with coffee and therefore has caffeine. It is important to read the ingredient list.

#### **For more information:**

- Visit EatRight Ontario at [www.eatrightontario.ca](http://www.eatrightontario.ca) and enter ‘sports nutrition’ in the search box.

#### **Main points:**

- Sports drinks are not necessary for young athletes involved in sports of lower intensity and duration.
- If a child is doing continuous vigorous activity for longer than 60 minutes, in hot and humid weather wearing heavy protective gear, they may benefit from a sports drink.
- Sports drinks should not replace low-fat milk or water at meals or snacks.
- Children need to be encouraged to drink water before, during and after activity even though they may not feel thirsty.

→ Extensions

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Note to Teachers: Extension activities are intended as idea starters, rather than complete and formal activities. They are meant to help you integrate and reinforce the Sip Smart!™ Ontario learning by extending the sugary drink messaging to a variety of settings. The “Punchline” will depend on how you construct the activity and what happens!

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# → Classroom Extension Activities

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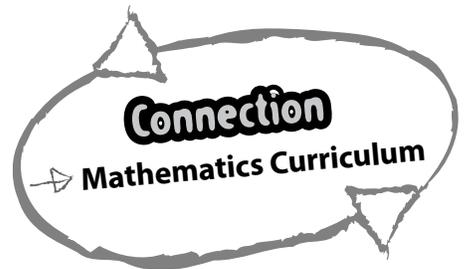
These activities:

- Enhance the learning outcomes of the lessons.
- Offer connections to other curriculum areas.
- Can be used for differentiation.
- Can extend the length of the lesson.
- Can be done just for fun!

## **Snack Check**

### **CONNECTION: Mathematics Curriculum**

- Collect used beverage containers in the class recycling bin. Give them a quick wash.
- Ask the students to check the labels for the number of sugar cubes or teaspoons of sugar (1 sugar cube = 1 teaspoon = 4 grams of sugar) in each container.
- Have students calculate the total number of sugar cubes in “their” beverage and collate the total number from everyone.
- Add up the number of sugar cubes. Have the students graph the results.
- Repeat this exercise a day or a week later. Compare the results.



### **Alternative:**

- Collect the total number of used beverage containers for several classes or the school. If your class gets the whole school involved in this activity then you will have created a **School Connection and extended the learning about sugary drinks to others in the school.** (See next section).
- Ask the students to check the labels of their own snack and lunch beverages one day. This activity will be appropriate **only** if everyone typically carries a packaged beverage, and if they are advised in advance of the exercise so they can make more deliberate choices that day. Do not single out children who have a less-than-healthy choice in their lunch or no lunch.

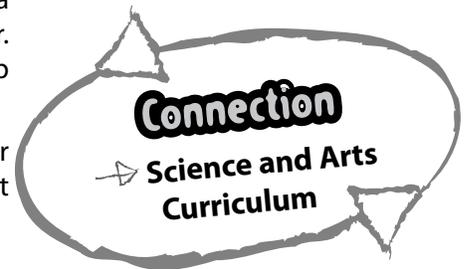
# Create-A-Drink

## CONNECTION: Science and Arts Curriculum

Extend the collection of *Drink Cut-outs* by having students create their own cut out.

Ask students to:

- Choose a drink that is not part of the *Drink Cut-out* collection yet.
- Research the nutrition facts of “their” drink, either online or in a grocery store.
- Draw an outline of a drink container (bottle, glass, cup, juice box) on a blank, white sheet of paper; add drink name and colour the container. Optional: Write one or two key marketing messages on the bottle to help sell the drink.
- Prepare the following information on a second blank, white sheet of paper with the same container outline: a Nutrition Facts Table and an ingredient list.
- Glue the two parts together and laminate the drink cut-out (if available).



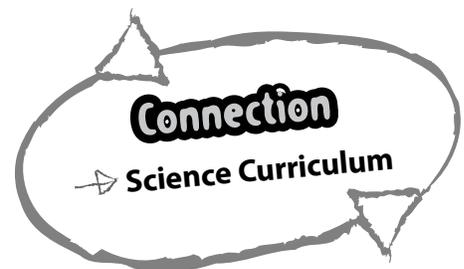
Display the creations in the school hallways for all students and staff to enjoy!

# Taste it!

## CONNECTION: Science Curriculum

→ **Note:** *It is important to be sensitive to the needs of all students. Should some students not be able to participate in this activity for health reasons (such as diabetes), it may not be appropriate for the class to do this activity.*

- Prepare several containers (3 - 5) filled with the same amount of water in each. Add different quantities of sugar cubes to each water container to make solutions of varying concentration.
- For example, fill each container with 2 Litres (8 cups) of water, and add 8 sugar cubes to the first container. Concentration = 1 cube/250 mL water.
- Label the bottom of each container with the number of sugar cubes added. Pour the different solutions into individual cups for students to taste.
- Have students try the sugary water and guess how many sugar cubes are in each cup.
- Have students compare the concentration of the sugary water with the sugary drinks on the *How Much Sugar is in Your Drink?* poster.



### Alternative:

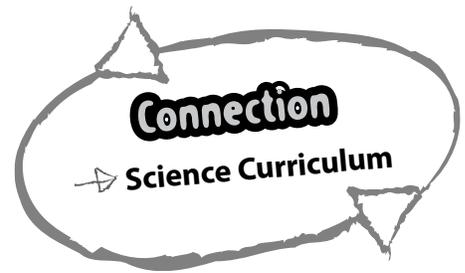
- Add some lemon juice (citric acid) and let the students try again.
- Count how many students guessed fewer sugar cubes after lemon juice was added.
- Have students research which sugary drinks contain citric acid.

**Recycling:** Consider having a discussion around what happens to drink containers after you have finished your drink? [garbage, recycling, etc.]



### CONNECTION: Science Curriculum and Health and Physical Education Curriculum

- A Registered Dietitian or other health professional could connect healthy beverage consumption to the Grade 5 Life Science curriculum (e.g., milk and milk alternatives to the skeletal muscular system) and discuss how the different body systems are interconnected.
- Similarly, coaches, athletes and other sports figures could talk about water and the importance of properly replacing its loss and that of electrolytes during intense, vigorous sports activities.



## Think before you Drink

### CONNECTION: Language Curriculum

- Ask students to find ads for beverages and post them on a board in the classroom.
- Compare the ads with the actual labels of the given beverage containers.
- Have students write comments about the persuasive features of each ad on squares of paper and pin them onto the pictures.
- This makes a nice display for your classroom!



### Alternative:

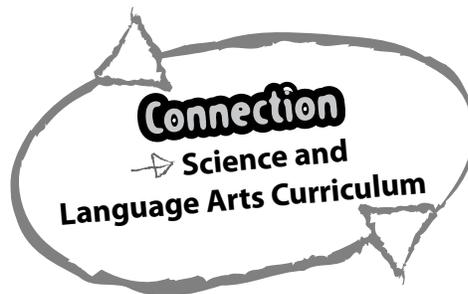
- If you have access to a computer lab, select an ad from the internet in advance, then ask the students to analyze it for the persuasive features.

## More Bestsellers!

### CONNECTION: Language Curriculum

#### Grades 3, 4, and 5

- Have students recap their knowledge about the different juice and milk products on the market.
- Brainstorm a list of benefits of 100% unsweetened juice and of the benefits of milk or fortified soy beverages or water and write them on the board.
- Have students identify key nutrients contained in milk and juice.
- Instruct students to create role playing scenarios where the healthy choice is either 100% juice or milk/fortified soy beverage using the same criteria as in activity *“Role” With It!* (Lesson 5). Ask them to include their knowledge about nutrients in their drink.
- Have students discuss the benefits of eating vegetables and fruit instead of juice. Brainstorm a list of vegetables and fruit and research if they are grown locally or if they are ones that grocery stores bring in from other places. Write a profile of the vegetables and fruit available in your community.



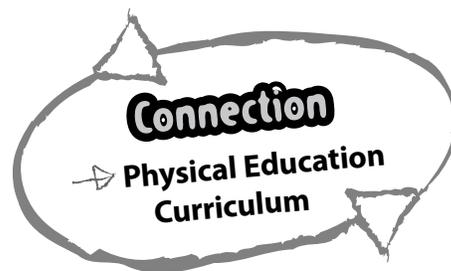
#### Grades 6 and 7:

- Have students recap their knowledge about the different juice and milk products on the market.
- Brainstorm a list of benefits of 100% unsweetened juice and of the benefits of milk or fortified soy beverages or water and write them on the board.
- Instruct students to create an ad to sell 100% juice or milk/fortified soy beverage using one advertising theme and the same criteria as in activity *Water - a Bestseller* (Lesson 5).

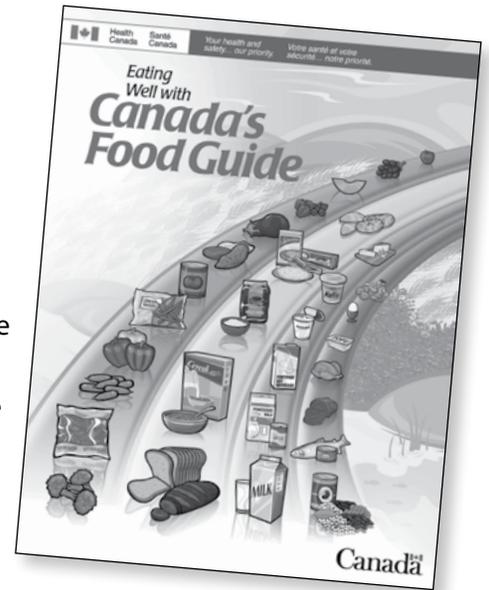
## Drink Dash!

### CONNECTION: Health and Physical Education Curriculum

- Create 5 to 6 sets of drink names by writing each of the following drinks on a separate piece of coloured paper (e.g., one set of blue drink names, one red, etc.)
  - 100% apple juice
  - vegetable juice (V8)
  - smoothie (made of banana, 100% orange juice and strawberries)
  - plain 1% milk
  - chocolate milk
  - plain unsweetened soy beverage
  - water
  - peach beverage
  - iced tea
  - sports drink
  - coffee
  - milkshake



- Arrange students into 5 or 6 groups. Give each group one set of drink names (e.g., one blue group, one red, etc.).
- Label 4 sheets of paper:
  1. Vegetables and Fruit
  2. Milk and Alternatives
  3. Part of *Eating Well with Canada's Food Guide*, but not in a food group
  4. Not part of *Eating Well with Canada's Food Guide*
- Place the labeled sheets of paper in each corner of the gym.
- Place the drink names scattered and face-down in the centre of the gym.
- Time each group to see how long it takes them to put the drinks into the correct categories in each corner of the gym.
- Ensure that the drink names are in the correct categories and record the time for each group.



**Alternative:**

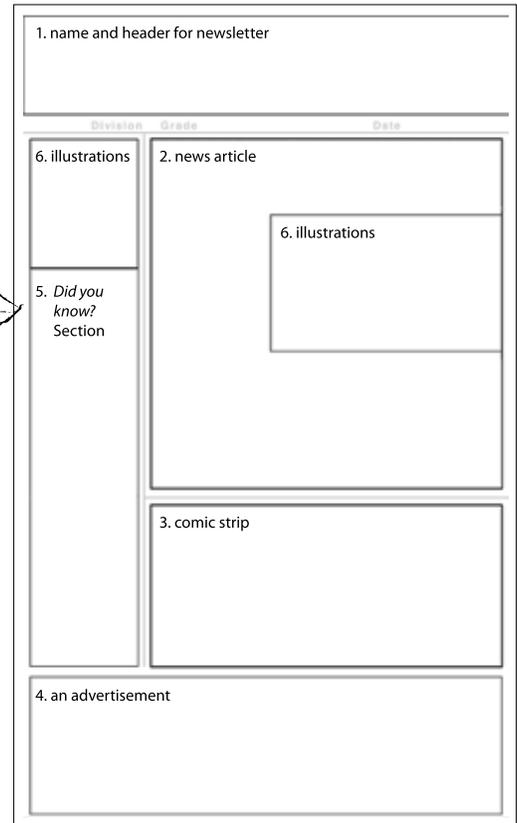
- Make up sets of 12 drinks that are somewhat different from one group to the next.
- Begin with the drinks placed in all of the wrong categories, and have each group race around to rearrange them into their correct categories.

# → School Connections

Here are some ideas for connecting with others in your school to promote students' healthy drink choices.

## Spread the Word!

- Guide the students to make a class newsletter about sugary drinks. This is an opportunity for them to demonstrate understanding about making healthy beverage choices.
- See illustration for sample sections.
- Organize 6 groups and have each group create one of the sections.
- Post finished newsletter in the school. →



## More Ways to Spread the Word!

- Display sugar charts and graphs from Graph the Results and Snack Check activities around the school.
- Post the finished beverage ads in a high traffic area of the school.
- Let the students vote on which beverage ad convinced them most, graph the results, and post the graphed results.

## "Tooth" Experiment, Part III

- Put the results of the tooth experiment on display in a public space like a hallway, so that the other classes can observe the experiment results too.
- Display each of the tooth samples next to a picture or an empty container of the beverage in which it was immersed.

## Healthy Choices

- Expand the role playing activity "*Role*" With It! or the skits from *Water - a Bestseller* and present it to the rest of the school during an assembly.

## Health Tip

- Have students write a health tip for the monthly school newsletter. For example, it could be a "*Did you know?*" fact about beverages.

# → Home Connections

Home Connections offer resources for parents and caregivers that:

- Contain valuable information to support healthy drink choices.
- Encourage a common learning process.

**We strongly recommend distributing the material during the program as parents are a key factor in this learning process.**

## Sip Smart!™ Ontario Fact Sheet

- On [www.brightbites.ca](http://www.brightbites.ca) you will find printable parent information in the form of a factsheet. We suggest that you send this sheet home after Lesson 1 to let parents and caregivers know what their children are learning in class, and give them tips for making healthy drink choices.
- Available in French.



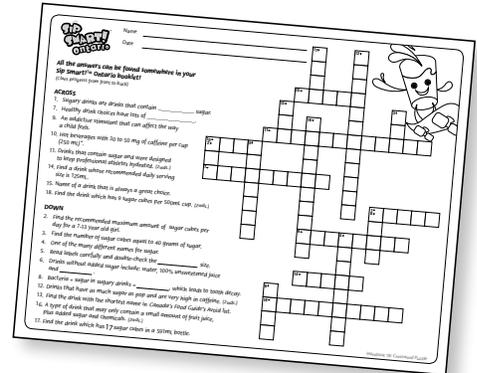
## Sip Smart!™ Ontario Booklet

- Too much sugar is not good for a child's health. The extra calories in sugary drinks can add up quickly. This may lead to an unhealthy body weight, putting a child at higher risk for high blood pressure, heart disease, diabetes and cancer. The *Sip Smart!™ Ontario Booklet* gives parents and caregivers all the important information that they need to support healthy drink choices.



# Crossword Puzzle

- All the answers for the *Crossword Puzzle* are found in the *Sip Smart!™ Ontario Booklet*.
- You can send Handout 18: *Crossword Puzzle* (pg. 44) home after Lesson 2, together with the *Sip Smart!™ Ontario Booklet*. The intention is to encourage parents to read the information booklet and then talk with their children about healthy drink choices. Parents and students can fill in the puzzle together at home.
- Or, you can hand out the *Sip Smart!™ Ontario Booklet* to students and assign the crossword as in-class assignment, for example to wrap up the program, or for students who get work done quickly, etc.
- Share the correct results and discuss other responses in class, using Handout 19: *Crossword Puzzle, Answer Key* (pg. 60).



# Sip Smart!™ Ontario PowerPoint™ Presentation

- In addition to sending home the *Sip Smart!™ Ontario Fact Sheet*, you can introduce the classroom program to parents and caregivers by using a ready-to-use PowerPoint™ presentation available on the website [www.brightbites.ca](http://www.brightbites.ca).
- Inviting a Registered Dietitian to your classroom or a School Council or Parent Involvement Committee meeting would be a great extension to the Sip Smart!™ Ontario program.
- Presenting this session at a School Council or Parent Involvement Committee meeting distributes information about sugary drinks, extending the sugary drink key messages beyond the classroom.



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# Community Connections

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Community connections show ideas that can:

- Encourage students to take the learning process to a higher level by doing research in their community.
- Have students present their experience and results to the classroom.
- Encourage students to take action as a result of this research, and learn they have a voice in the community.
- Support students' future drink choices in "real life situations".

→ **Note 1:** For additional **Community Connection** ideas, we suggest you talk to a Registered Dietitian at your local public health unit.

## **At the Recreation Centre**

After skating, playing hockey or doing some other activity at your recreation centre, ask students to take a look at the options for quenching their thirst.

- What drinks are in the canteen? How many of the choices are "Every Day" choices compared to the number of "Avoid" choices?
- What drinks are in the vending machines? How many of the choices are "Every Day" choices compared to the number of "Avoid" choices?
- How many water fountains did they notice?
- How are sugary drinks advertised compared to healthier options (e.g., a soft drink company's name or logo on the vending machine).

## **In the Grocery Store**

Encourage students to take a look at the drinks on the shelves the next time they are in a grocery store. They can also take a look at the types of drinks in the coolers at the local corner store.

- Encourage them to talk with their family about the proportion of drinks that are high in sugar, relative to those that are low in sugar.
- Have students compare the number of fruity drinks with the number of 100% fruit juices.

## At a Sporting Event

Organize a student survey at a sporting event to find out how many students have sports drinks during or after a game or training. Have class members speak with students to find out why they are having a sports drink.

- Graph the results of the number of students with a sports drink.
- Collect facts about sports drinks and for whom sport drinks are appropriate.
- Research ingredients in healthy drinks that quench thirst during and/or after working out.
- Based on this research, find or create fun recipes for drinks that quench thirst during and/or after working out.



Providing children with the  
knowledge and skills they need  
to make **healthy drink choices.**

→ Online Resources



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# Online Resources

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Visit the website [www.brightbites.ca](http://www.brightbites.ca) to download the entire Sip Smart!™ Ontario package including:

- Teacher Resource Guide
- Printable Student and Teacher Resources
- Posters:
  - How Much Sugar is in Your Drink?
  - What Size is Your Drink?
- Set of Drink Cut-outs
- Drink Diary Calculator to calculate the results of students' completed drink diaries.
- Materials for families:
  - Sip Smart!™ Ontario Factsheet: An information sheet about sugary drinks.
  - Sip Smart!™ Ontario Booklet: An information booklet with practical tips for families.
  - Sip Smart!™ Ontario PowerPoint™ Presentation: A ready-to-use presentation for parents who would like more information about Sip Smart!™ Ontario, or to use with School Council or Parent Information Councils.

## Additional Information

Visit the following organizations for more information about healthy living and/or sugary drinks:

- **EatRight Ontario** [www.eatrightontario.ca](http://www.eatrightontario.ca) offers answers to a variety of nutrition questions. Speak with a dietitian for free at 1-877-510-5102. Email a dietitian or visit the website for food and nutrition information and resources.
- **Dietitians of Canada** [www.dietitians.ca](http://www.dietitians.ca) is the national professional association for dietitians. It offers credible and reliable nutrition information as well as interactive programs such as EATracker ([www.eatracker.ca](http://www.eatracker.ca)).
- **Heart and Stroke Foundation of Canada** [www.heartandstroke.com](http://www.heartandstroke.com) is a national organization that works to prevent heart disease, save lives and promote recovery.
- **Childhood Obesity Foundation** [www.childhoodobesityfoundation.ca](http://www.childhoodobesityfoundation.ca) is a Canadian registered charity and a leading Canadian authority on issues related to childhood obesity.
- **Ontario Dental Association Online** provides dental health information and resources that are available from [www.oda.on.ca](http://www.oda.on.ca).
- **Quebec Coalition on Weight-Related Problems** <http://www.cqpp.qc.ca/en/priorities/sugar-sweetened-beverages> Search 'sugar-sweetened beverages' section for information on health effects and marketing of sugary drinks.
- **Health Canada** [www.hc-sc.gc.ca](http://www.hc-sc.gc.ca): Search for Eating Well with Canada's Food Guide, a resource designed to help Canadians make healthy food choices by integrating the science of nutrition and health into a practical pattern of eating.
- **Health Canada - Nutrition Labelling** [www.hc-sc.gc.ca/fn-an/label-etiquet/nutrition/cons/index-eng.php](http://www.hc-sc.gc.ca/fn-an/label-etiquet/nutrition/cons/index-eng.php).
- **Ontario Society of Nutrition Professionals in Public Health** [www.osnp-ph.on.ca](http://www.osnp-ph.on.ca) is the independent and official voice of Registered Dietitians working in Ontario public health units/departments.

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