

UNDERSTANDING LABELS & HIDDEN SUGARS

Objective: To help students become more aware of what is in the different foods they eat and identify hidden forms of sugar.

You Will Need:

- Printout: ***Plaque Chain***
- Printout: ***Eat Nutritionally for Healthy Teeth***
- Printout: ***Sugar & Sweeteners***
- Labels from food items (provided by students)

Procedure:

- 1) Discuss why it is important to know what is in the food we eat.
- 2) Discuss the ingredient list on various products. The items listed first are the greatest percentage of the item. The item that is the least in the food is listed last.
- 3) Using the “Plaque Chain” Printout as a reference, review the role sugar plays in causing dental decay.
- 4) Ask the students their favourite snacks and list on the board.
- 5) Explain to students that the sugar comes in many forms, and that there are “hidden sugars” in some of the foods we eat.
- 6) Poll the class to determine how many eat “favourite snacks” that contain sugar. What kinds of snacks could they eat instead?
- 7) Have students collect labels at home from three foods that they eat that contain sugar, and labels from three foods that they eat that they think do not contain sugar.
- 8) Ask students to share some of their chosen foods and read the list of ingredients. Be sure to identify all sugar forms. See ***Sugar & Sweeteners*** printout.
- 9) Discuss the amount of sugar and sugar-substitute in each product. What impact does this have on overall health? [tooth decay, high blood sugar, diabetes, weight gain etc.]

NOTE:

Sugars are carbohydrates that can affect blood glucose (sugar), weight and blood fats.

There are more than 100 sweet substances identified as sugars.

These include: 1) fructose (fruit sugar) 2) dextrose (made from corn starch and chemically identical to glucose) 3) lactose (the sugar in milk) 4) maltose (malt sugar, formed from starch by the action of yeast, and 5) sucrose (from sugar cane to sugar beets).

The word “sugar” is commonly used to refer to sucrose, which is a natural substance – it comes from a plant. Just because a bottle of apple juice has “unsweetened” or “no sugar added” on the label, does not necessarily mean that it is sugar-free. When looking at the list of ingredients for a product, the individual items are listed in descending order. If it is at the top of the list or near the top, it is one of the main ingredients of the product.

► **Curriculum Objective (Grade 4):** 1.1: examine the benefits of healthy eating and physical activity for a healthy lifestyle.

EAT NUTRITIONALLY FOR HEALTHY TEETH

A nutritional diet is important for your overall growth and development. Like the rest of the body, the teeth, bones and soft tissues of the mouth need a well-balanced diet.

FOODS FROM THE FIVE DIFFERENT FOOD GROUPS FOR STRONG TEETH:

- ❖ Fruits
- ❖ Vegetables
- ❖ Bread, cereals, and other whole-grain products
- ❖ Milk, cheese, and yogurt
- ❖ Meat, poultry, fish and alternates, such as dry beans, peas, eggs, and nuts

EATING HABITS THAT WEAKEN TEETH = DECAY:

- ❖ Snacking often
- ❖ Keeping food in mouth a long time (i.e. hard candy and breath mints)
- ❖ Eating foods with high sugar levels

SNACKS THAT ARE HEALTHY FOR TEETH*:

- ❖ Popcorn (not ideal for those with braces)
- ❖ Cheese
- ❖ Raw Vegetables
- ❖ Nuts
- ❖ Gelatin
- ❖ Unsweetened Yogurt
- ❖ Sugarless gum and Candy

***BE AWARE:** Even nutritious snacks and drinks will cause tooth decay if they are nibbled on or sipped frequently.*

PROTEIN POWER: For strong teeth that are resistant to decay, children need protein, vitamins, and minerals, especially calcium, phosphorus and proper amounts of fluoride.

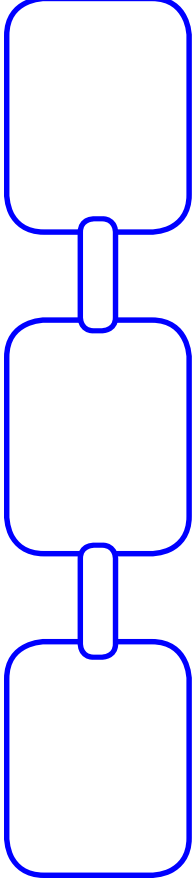
SUGAR & SWEETENERS

SWEETENER	FORMS & USES	OTHER THINGS YOU SHOULD KNOW...
Sugars (Some examples)		
<ul style="list-style-type: none"> • Brown sugar • Icing sugar • Invert sugar • White sugar • Dextrose • Maple syrup • Glucose • Lactose • Honey • Maltose • Sucrose 	<ul style="list-style-type: none"> • Maltodextrins • Agave syrup • Brown rice syrup • Corn syrup • High fructose corn syrup • Fructose • Fruit juice concentrates • Molasses • Barley malt 	<ul style="list-style-type: none"> • Used to sweeten foods and beverages • May be found in medications
Sugar Alcohols & Polydextrose		
<ul style="list-style-type: none"> • Lactitol • Xylitol • Maltitol • Mannitol • Isomalt • Polyols • Polyol syrups 	<ul style="list-style-type: none"> • Polydextrose • Palatinit • Sorbitol • Hydrogenated starch hydrolysates (HSH) 	<ul style="list-style-type: none"> • Used to sweeten foods labelled “sugar free” or “no added sugar” • May be found in cough and cold syrups and other liquid medications (e.g. antacids)
Other Sweeteners		
<ul style="list-style-type: none"> • Acesulfame Potassium (Ace-K) • Aspartame • Sucralose • Steviol glycosides 	<ul style="list-style-type: none"> • Used to sweeten foods and beverages • May be found in medications 	<ul style="list-style-type: none"> • The World Health Organization (WHO) recommends that sugars should make up less than 10% of total energy intake per day. They also propose that sugars should be less than 10% of total energy intake per day. This is equivalent to is equivalent to around 25 grams (around 6 teaspoons) of sugar per day for an adult of normal Body Mass Index (BMI). • The Canadian Heart and Stroke Association (CHSA) recommends limiting sugar intake so that an individual’s total intake of free sugars does not exceed 10% of total daily calorie (energy) intake, and ideally less than 5%.

Adapted from the 2013 Canadian Diabetes Association *Clinical Practice Guidelines* with information from Canadian Heart & Stroke *Position Statement on Sugar*, September 2014.

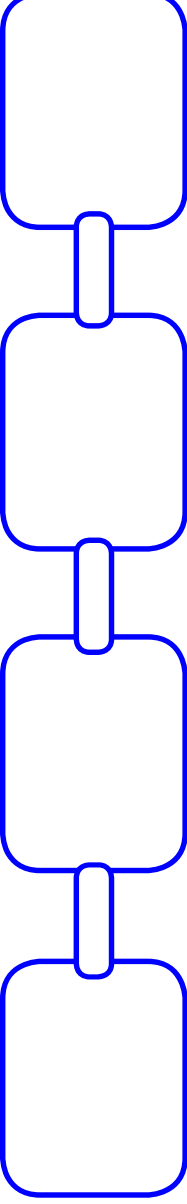
PLAQUE CHAIN

The tooth decay process can be called “The Plaque Chain” because, like a chain, it consists of individual links that are needed for the decay chain to hold together. If a “link” is missing, the chain does not work as it should, just as if one “link” in the decay process is missing, the process is stopped.



PLAQUE + **SUGAR** = **ACID**

Everyone has plaque (germs) on their teeth. Bacteria do not harm the teeth until something is eaten that contains sugar. The bacteria make a large amount of acid when sugar is in the mouth.

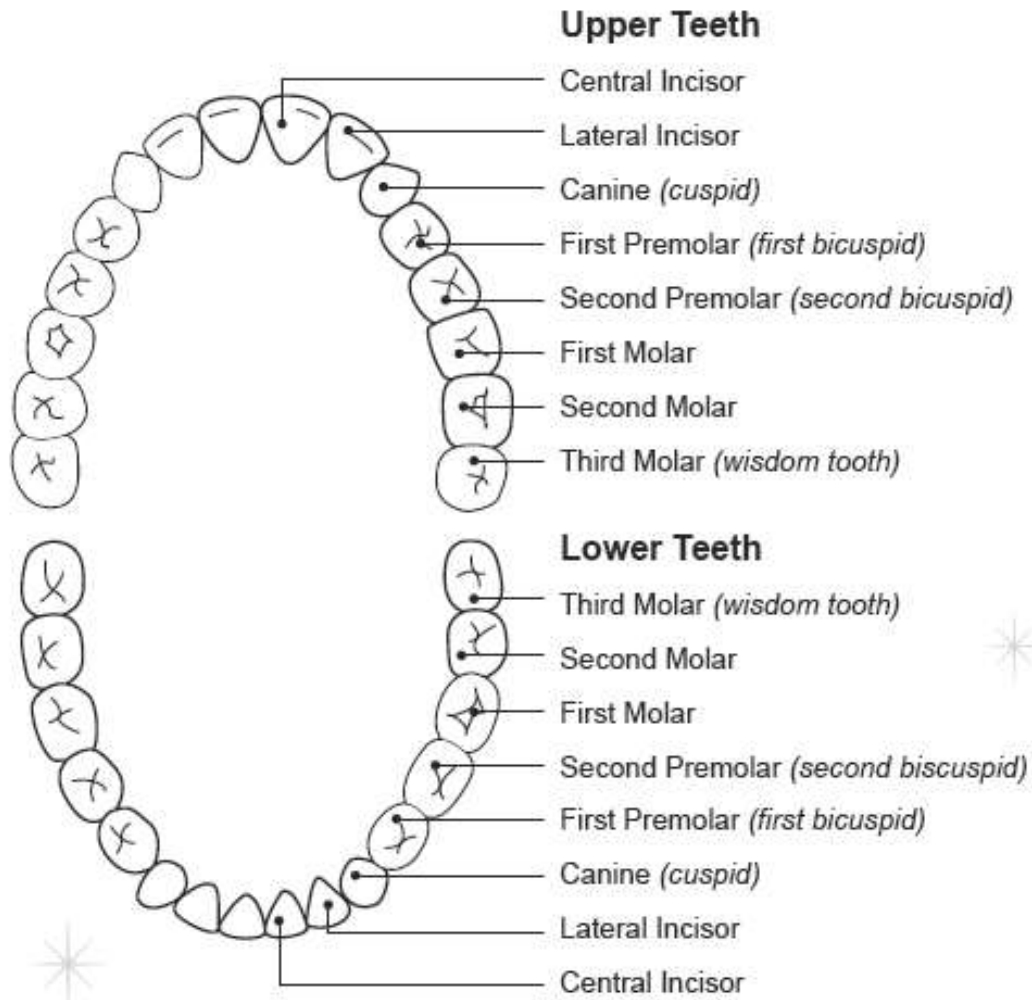


ACID + **WEAK TOOTH** + **TIME** = **TOOTH DECAY**

The acid is strong and harms the teeth. Acids attack the tooth causing dental or tooth decay. Each time you eat, chew, or drink, the teeth are attacked by the acid. Foods that are soft and sticky with sugar stay on the teeth longer and cause more harm than foods that are hard.

DISCUSS: What can you do to reduce the acid and tooth decay?

TOOTH CHART



When did I or will I get these teeth?

Tooth	Primary Dentition	Permanent Dentition
Central Incisor	6-12 months	6-8 years
Lateral Incisor	9-16 months	7-9 years
Canine/Cuspid	6-23 months	9-12 years
First Premolar	-	10-12 years
Second Premolar	-	10-12 years
First Molar	12-19 months	6-7 years
Second Molar	23-33 months	11-13 years
Third Molar/ Wisdom Tooth	-	17-25 years

BUYER BEWARE

Objective: To help students become aware that advertisement and media can affect their view of food and of oral-healthcare products.

You Will Need:

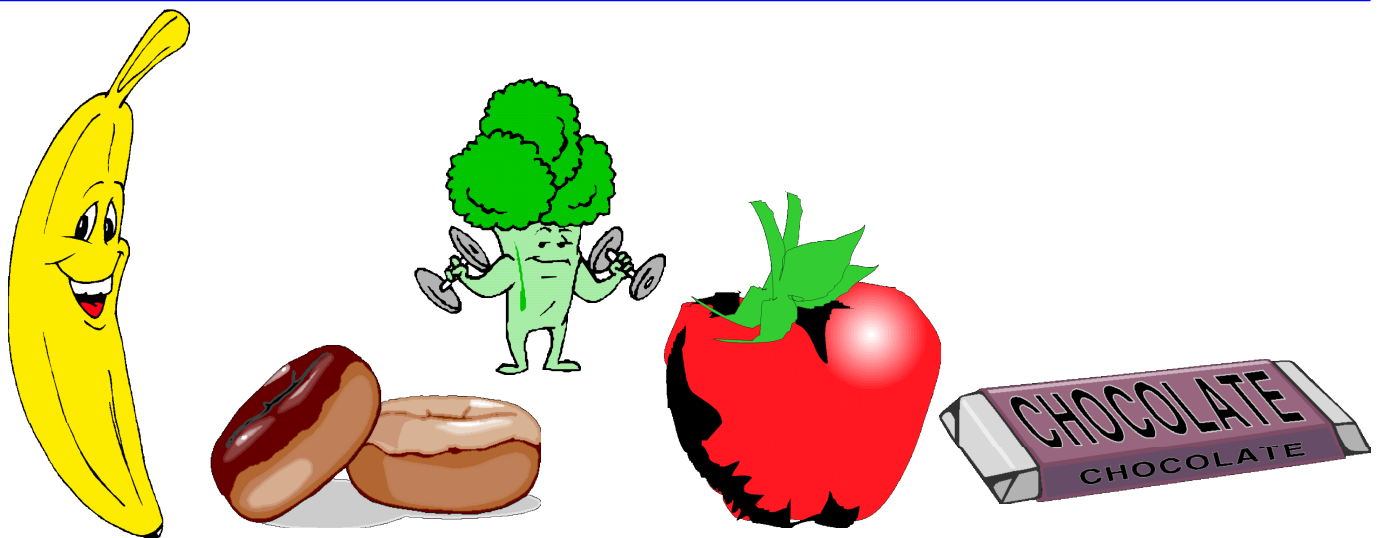
- Examples of advertisement for food products (some that are sugary).
- Examples of advertisement for oral-healthcare products.

Procedure:

1. Discuss with students the various ways in which commercials and advertisements are designed to appeal to their audience. For instance, advertisers trying to appeal to children often use cartoon characters, colourful product containers, special prizes in their products, movie stars, athletes and a catchy song or tune.
2. Have students observe various forms of advertising (TV, magazines, radio etc) and report on a product that caught their attention.
3. Have them write about the product, and why this commercial caught their attention.
4. Ask them decide whether or not they would like to try the product and what influenced their decision.

Module Extension

- ❖ Divide the class into small groups.
- ❖ Students can work to develop advertisements that could be used in magazines, on the radio, television or internet. The advertisement should be for a tooth-friendly product or practice.
- ❖ Invite groups to share their advertisements with the class and discuss.



► **Curriculum Objectives (Grade 5):** 1.5 “discuss the factors that may influence decision-making”.