

5 October Lesson: Sugar Sugar!

Goals:

- Students will be able to identify foods containing sugar
- Students will know the benefits of reducing added sugar intake
- Students will be able to make better choices to balance sugar intake as part of a balanced diet

Audience: 5th grade

Materials:

- Sugar Sugar Visual
- Sugar cubes (optional)
- Sugar Sugar Handout

Background: The average US child consumes around 22 teaspoons of added sugar each day, and a US teen consumes nearly 34 teaspoons! We will see how a diet high in refined (added) sugar can negatively impact one's health. The goal is not to tell children how much sugar they can or cannot have in a day; rather, the idea is to empower children with knowledge about how much sugar is in items (and how to read food labels) so that they can make better choices.

Common Core Standards Taught:

- English Language Arts: Speaking and Listening: 5.1
 - Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 5 topics and texts*, building on others' ideas and expressing their own clearly.
 - Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.
- English Language Arts: Reading Informational Text: 5.7
 - Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.
- Math: Number and Operations in Base Ten: 5.5
 - Fluently multiply multi-digit whole numbers using the standard algorithm.

Lesson:

We all know that sugar is a substance that makes things sweet. Raise your hand if you can think of a food that contains sugar.

(Candy, ice cream, cakes, soda etc.)

Did you know that 100% juice, apples, carrots, and milk also contain sugar?

Today we are going to learn about 3 types of sugar.

Table sugar is sucrose. (Slide #2) Sucrose is actually a combination of glucose and fructose, and is a man-made substance made from sugar cane and –guess what...beets!

Next, we have lactose. (Slide #3) Lactose is found in dairy products such as milk, yogurt, and cheese.

Finally, fructose is found in fruits and vegetables such as apples, strawberries, and carrots! (Slide #4)

As you can see, not all sugar is unhealthy. Lactose and fructose (in milk products and fresh fruits and vegetables) are naturally occurring sugars. Sucrose (or table sugar) is an added sugar. We want to limit our intake of added sugars.

The problem with sugar is not what it is, but how much we consume of it. (Show slide #5). Each one of these cubes is 1 teaspoon of sugar. One teaspoon of sugar is 4 grams. Can anyone guess how many teaspoons of added sugar (**not** counting what we get from fruits, vegetables and milk) the average US child consumes each day?
22 teaspoons!

Can anyone think of any reasons why this is not a good thing? Consuming too much sugar can lead to: increased risk of type 2 diabetes, weight gain, tooth decay, and suppressed immune system.

So how do we become “sugar smart”? We can read nutrition labels. The number of grams of sugar an item contains is posted on the nutrition label. Here is a nutrition label for a candy bar. (Show slide #6) There are 29 grams of sugar in this bar; how many teaspoons is that? 29 divided by four is around 7 teaspoons.

Let's take a look at another nutrition label, this time for 100% orange juice. (Show slide #7) There are 22 grams of sugar in one cup of juice. How many teaspoons is that?
5 ½ teaspoons

Wait a minute--- a glass of orange juice contains almost as much sugar as a snickers bar?! How can that be? Here is the tricky part: The nutrition label lists the **total** amount of sugar per serving, it does not tell you what type of sugar is in the product (it could be lactose, fructose, or sucrose). (Show slide #8) In this example, the sugar from the orange juice is naturally occurring (it comes from the natural fructose in the orange). The sugar in the Snicker's bar is made from sucrose (or table sugar). In order to determine what type of sugar is in your food or beverage, you have to read the

ingredient list. Words such as: corn syrup, sugar cane, high fructose corn syrup, and cane juice are all 'added' sugars.

Which type of sugar do you think your body is best equipped to handle? The natural sugar from the orange juice. However, look at what happens if we eat an entire orange instead of drinking orange juice. (Show slide #9) The amount of sugar in one orange is 14 grams or 3 ½ teaspoons. When possible, choose the whole fruit over 100% fruit juice. Whole fruit contains fiber, which helps our bodies regulate blood sugar levels.

What can we do to keep our sugar intake in a healthy range?

- (Eat a whole fruit instead of juice;
- have sweets/desserts in moderation and/or for special occasions;
- split the candy bar with friends;
- read nutritional labels and the ingredient lists).

(Optional). Let's have a contest! We are going to estimate how much sugar there is in a variety of foods and drinks. (Distribute Sugar Sugar Handout)

Once students are done, go over as a class. What products contain natural sugar (fructose)?

- strawberries
- carrots
- banana

The rest of the products contain added sugar.