



SESSION 2: WHAT'S IN MY CUP?

Investigating sugar-sweetened beverages

Making delicious drinks

KEY MESSAGES :

- Companies spend a fortune marketing sodas to young people.
- Athletes don't become great by drinking soda (even though it looks that way in the commercials).
- Soda slows you down!
- Sugar gives you a big burst of energy but then makes you crash.
- When you drink sugar, your brain can't tell you that you're getting full.
- Sugar-sweetened beverages are the largest contributor to childhood obesity in the USA.
- In addition to weight gain, too much sugar can cause diabetes and tooth decay.
- Eating or drinking too much sugar makes it difficult to concentrate at school.
- There's a difference between natural sugars (found in fruits and vegetables) and added sugar. Natural sugar is combined with fiber and nutrients your body needs. Added sugars have ZERO benefit.
- Food with zero benefits (no nutrients) are called **EMPTY CALORIES**.
- A calorie is a measurement of energy and a young person should consume 1600 to 1800 calories a day.
- A Super Big Gulp has 572 calories—more than a meal should have!

- It's OK to have a sugar-sweetened beverage sometimes, but think of it as a dessert, not a drink.
- It's great to hydrate with water.

PREPARATION :

- Buy ingredients for Superstar Smoothies.
- Make copies of the recipe for each student.
- Make copies of the Sugar Calculations worksheet for each student (on the Food Explorers website).
- Review the following websites:

Kick the Can campaign
www.kickthecan.info/soda-facts

Sugar Stacks
www.sugarstacks.com/

Added Sugars Fact Sheet
www.ruddrootsparents.org/resources/pdf/AddedSugars-FactSheet.pdf

Food Day
www.foodday.org/how_much_sugar_are_you_drinking?utm_campaign=how_much_sugar&utm_medium=email&utm_source=foodday

Rev Your Bev from the Virginia Foundation for Healthy Youth
revyourbev.com/ and revyourbev.com/facts/

Different names of added sugars
www.choosemyplate.gov/weight-management-calories/calories/added-sugars.html

Drink Up Campaign
www.youarewhatyoudrink.org

Videos to show students if there is time:

Sell Outs (celebrities promoting soda)
www.youtube.com/watch?v=0zP3NOs_xOQ

EQUIPMENT NEEDED

- Session #2 Bin
- 10 to 15 sugar-sweetened beverages: Coke, Mountain Dew, Fanta, Vitamin Water, Gatorade, orange juice, apple juice, chocolate milk, etc.
- Super Big Gulp, Big Gulp, and Gulp cups
- Granulated sugar in tupperware container
- Snickers candy bars
- Sugar calculations worksheets
- Rethink Your Drink Cards
- Sugar Shocker Cards
- Plastic cups
- Teaspoons for measuring
- Rev Your Bev posters
- 95210 handouts
- 3 Blenders
- Measuring cups and measuring spoons
- Cutting board
- Juicer
- Knives
- small sample cups for smoothies

SET UP:

- Hang Rev Your Bev posters around the classroom
- Set up 3 investigations stations on long tables.
Each station should have:
 - Three to five different sugar-sweetened beverages
 - Three 7-11 cups (Super Big Gulp, Big Gulp, and Gulp)
 - Granulated sugar in tupperware container
 - Teaspoons

- Plastic cups to put sugar in
- Snickers candy bar
- Magnifying glass
- Sugar calculations worksheets
- Pens

DISCUSSION



? *Who are your favorite heroes? Athletes? Movie stars? Have you ever seen them on a commercial advertising soda?*

WATCH SELL OUTS video
www.youtube.com/watch?v=0zP3NOs_xOQ

? *Why do you think soda companies pay famous people large amounts of money to sell their products?*

? *Why do companies spend so much money on marketing soda to young people?*

Coke spends about 3 BILLION dollars a year on marketing.

? *Besides TV, where else do you see ads for soda?*

Movies, internet, Facebook, schools, sporting games, etc.

? *What's the problem with drinking too much soda?*

They are loaded with sugar!

? *What's wrong with drinking too much sugar?*

- Causes hyperactivity and makes it difficult for you to focus.
- Leads to weight gain—sodas are the largest contributor to childhood obesity in the USA
- Can create a sugar crash—after a brief spike of energy, you then feel tired and run down for a much longer time
- Causes tooth decay
- When you drink sugar-sweetened beverages, your brain doesn't tell you that your body is getting full—even though you've consumed a lot of calories. Sugar-sweetened beverages don't satisfy hunger the way solid foods can. So it's easy to drink way too much sugar.
- Weakens the immune system—when you have too much sugar in your body, you can't fight off germs as well
- Causes diabetes

Background information on diabetes to share with students if time allows.

Diabetes

Diabetes is a chronic disease marked by higher-than-normal levels of glucose (sugar) in the blood. It is caused by the body's inability to produce or use insulin, a hormone that acts to move glucose out of the blood and into cells to be used as energy.

One in three children born today, including half of Latino and African-American children, are expected to develop diabetes in their lifetime.

A growing body of research shows that sugary beverages—because they provide all of their calories from sugar in liquid form—are uniquely harmful. We absorb liquid sugar in as little as 30 minutes, much faster than a candy bar, leading to a spike in blood sugar that the body is not well-equipped to handle, particularly in repetition. These spikes in blood sugar can overwhelm the body and lead to the transformation of sugar into fat in the liver, which contributes directly to the development of diabetes.

Complications of diabetes include: heart disease, nerve damage, gum infections, kidney disease, hearing impairment, blindness, amputation of toes, feet or legs, and increased risk of Alzheimer's Disease.

 **Explain:** There are two types of sugar:

1. Natural sugar: found in fruits and vegetables and always combined with fiber and nutrients the body needs

2. Added sugar: added by food companies to food and drinks in large quantities and has zero nutritional value.

Calories are a measure of energy in a food.

Added sugars are **EMPTY CALORIES**, because they have no nutritional value.

To stay healthy, it is recommended that youth between the ages of 9 and 13 consume 1600 to 1800 calories a day.

Sugar-sweetened beverages can use up **A LOT** of those valuable calories.

Sugar has lots of names! Sometimes food companies try to hide the high amounts of sugar in a product by listing it as different names in the ingredients.

Names for added sugars on food labels include:

www.choosemyplate.gov/weight-management-calories/calories/added-sugars.html

- Anhydrous dextrose
- Brown sugar
- Confectioner's powdered sugar
- Corn syrup
- Corn syrup solids

- Dextrose
- Fructose
- High-fructose corn syrup (HFCS)
- Honey
- Invert sugar
- Lactose
- Malt syrup
- Maltose
- Maple syrup
- Molasses
- Nectars (e.g., peach nectar, pear nectar)
- Pancake syrup
- Raw sugar
- Sucrose
- Sugar
- White granulated sugar

You may also see other names used for added sugars, but these are not recognized by the FDA as an ingredient name. These include cane juice, evaporated corn sweetener, fruit juice concentrate, crystal dextrose, glucose, liquid fructose, sugar cane juice, and fruit nectar.


Large amounts of sugar hides in a lot of other places too—not just in drinks.

 **Where else might you find added sugar?**

Breakfast cereals, yogurts, granola bars, fruit snacks, peanut butters, spaghetti sauce, etc.

 **Look at the Sugar Shocker Cards.**

Now that you know how to look at labels, check to see how much added sugar a food item has before you choose to eat it.

 **INVESTIGATION**

Sugar is measured by weight and the term **GRAMS** is used. About 4 grams of sugar are in 1 teaspoon.

Have students break into three groups and go to the investigation stations. They should each have a calculations worksheet.

Once students have made these calculations, measure out the number of teaspoons into a plastic cup to display how much sugar the drink has.

For an interesting comparison, have each group measure the amount of sugar in a Snickers candy bar.

Have each group set up their displays on their table.



How Much Sugar Am I Drinking?

To find out how much sugar is in your drink, read the label and do some math:

1. How many grams of sugar are in a serving? _____
2. How many servings are in the container? _____
3. Times the number of grams per serving by the number of servings in the container: _____

** 4 grams of sugar = 1 teaspoon of sugar **

4. Divide the total grams of sugar by 4 to get the number of teaspoons of sugar in the drink:

5. Measure out that many teaspoons of sugar into a cup!



Encourage the groups to walk around all three tables to look at all of the displays, and then bring the group back together for a discussion.

Sugar Calculations

Super Big Gulp

44 oz of Coke
143 grams of sugar
572 calories
36 teaspoons of sugar

Big Gulp

32 oz Coke
104 grams sugar
416 calories
26 teaspoons of sugar

Gulp

24 oz Coke
78 grams of sugar
312 calories
20 teaspoons of sugar

Coca Cola

12 oz can
39 grams of sugar
156 calories
10 tsp of sugar

Snickers

1 Regular Size bar (59g)
30 grams of sugar
120 calories
7 to 8 teaspoons of sugar

? *Which drinks have the most sugar?
Were there any surprises?*

Discuss the “halo” effect—drinks that are supposed to look healthy, but may have just as much as, or even more sugar than soda.

? *Do you know how many teaspoons of added sugar a young person should have a day?*

Between 5 and 8 teaspoons!

? *What did you learn through that investigation?*

- Some fruit drinks have even more sugar than sodas.
- Sodas have more sugar than a candy bar.
- Drinks that look like they’d be healthy—such as Vitamin Water—have lots of sugar.
- A Super Big Gulp has 1/3 of the calories a young person should consume in an entire day!

! *It’s alright to have sugary-drinks sometimes, but you should think of them as a dessert, not a drink!*

? *What are some healthier drink options?*

- Water (spend a few minutes talking about the importance of hydration)
- Low-fat plain milk
- Home-made flavored water (made with cucumbers, mint, lemon, basil, oranges, etc)
- Herbal teas with no sweeteners
- Smoothies



COOKING

We’re going to make Superstar Smoothies. Smoothies can have a large amount of natural sugars, but they also have important nutrients and fiber for your body.

Divide the class into three groups. Each group makes one smoothie recipe. Pour the smoothies into small sample cups and have a taste test at the end.

COOKING SKILLS THIS SESSION USING ELECTRIC APPLIANCES :

- Take caution when using electric appliances.
- Make sure no one trips over the cord.
- Never put your hands or fingers into appliances.
- Ask an adult to help you if necessary.

EXPLORATION AT HOME

Pass out a 95210 card and discuss each number.

Every day:

- Get 9 hours of sleep
- Eat at least 5 servings of fruits and vegetables
- Don’t have more than 2 hours of screen time
- Get 1 hour of physical activity
- Have 0 sugary drinks

Encourage students to count how many sugar-sweetened beverages they drink in a day and in a week. Challenge students to drink as much water as possible!

