

Lesson 3: Sugar: Master of Disguise

TEKS: Prekindergarten

Language and Communication Domain:

II.A.2 Child shows understanding by following two-step oral directions and usually follows three-step directions

II.D.2 Child demonstrates understanding of terms used in the instructional language of the classroom.

Emergent Literacy Reading Domain:

III.D.1 Child retells or re-enacts a story after it is read aloud.

II.D.2 Child uses information learned from books by describing, relating, categorizing, or comparing and contrasting.

Math Domain:

V.E.1 Child sorts objects that are the same and different into groups and uses language to describe how the groups are similar and different.

V.E. 2 Child collects data and organizes it in graphic representation.

Science Domain:

VI.A.1 Child observes, investigates describes, and discusses properties and characteristics of common objects.

Social Studies Domain:

VII.A.3 Child connects his or her life to events, time and routines.

Physical Development Domain:

IX.C.2 Child practices good habits of personal health and hygiene.

Ix.C.3 Child demonstrates an understanding that foods can be grouped as healthy or unhealthy.

Objectives:

- Students will learn that many drinks contain added sugar.
- Students will learn to read nutritional labels on beverages and other foods.
- Students will gather data on an item's sugar content based on its nutritional label.
- Students will draw conclusions based on the gathered data

Activities:

1. Introduce the Video (5 minutes) – The “*Sugar: Master of Disguise*” video and discussion.

2. Shared Reading (15-20 minutes) – Explore a book, Chocolatina, that provides an example of a child eating too much sugar. (Author: Eric Kraft)
3. Circle Time: Counting Sugar Cubes (15 minutes) - Demonstration of sugar content in drinks.
4. Circle Time: I Am a Kid. What Choices Can I Make? (15 minutes) – Explore the power that children have when they apply knowledge of healthy food choices.
5. Points to Ponder (5 minutes) - Options for further discussion.
6. Extension Activities (15 to 20 minutes) – Further exploration of concept.
7. Family Activity: Beverages Jane Drinks (20 minutes)- Families will examine the sugar content in common drinks. They will work together to identify healthier alternatives for beverages they are served and drink.

Materials:

Introduction- Video: *Sugar: Master of Disguise*

Shared Reading: Chocolatina by Erik Kraft

Counting Sugar Cubes: website: sugarstacks.com, poster with nutrition label for five common drinks to demonstrate sugar content in each

I Am a Kid. What Choices Can I Make? - list of prepared statements, sentence strips, markers

Extension Activities:

Sugar Cubes: sugar or sugar cubes, measuring cups and spoons, clear containers that are marked, assorted containers with nutrition labels

Make Every Drink Count: T-chart, prepared sentence strips with popular drink choices, sentence strips, markers

The Favorite Fruit: chart and markers

Create a Healthy Plate: collection of real food containers, plastic food, “My Plate” model, plastic plates

Family Activity – “Beverages Jane Drinks” handout

Pedagogy:

Remember to use Bloom’s Taxonomy and Gardner’s Theory of Multiple Intelligences. In this lesson, ask students to **show** how they can reduce the amount of sugar they drink each day (Bloom’s). Alternatively, for a musical style of learner (Gardner), you might suggest the student co-create a song about the dangers of sugar.

Did You Know?

The American Heart Association recommends no more than 3 teaspoons of added sugar (12 grams) per day for children ages 4 – 8.¹

Children, age 4 – 8, eat an average of 21 teaspoons of sugar each day!²

Most kids' cereals have so much sugar in them, that just one bowl is more than the 3 teaspoons recommended for the whole day. Added sugars are sugars, syrups and other caloric sweeteners that are added to foods during processing, preparation, or consumed separately. Added sugars do not include naturally occurring sugars such as those in fruit or milk. Names for added sugars include: brown sugar, corn sweetener, corn syrup, dextrose, fructose, fruit juice concentrates, glucose, high-fructose corn syrup, honey, invert sugar, lactose, maltose, malt syrup, molasses, raw sugar, turbinado, sugar, trehalose, and sucrose.

Brain Builder Vocabulary:

gram
label
compare
least
greatest
least to greatest
order
data (information)

Other Resources:

Bread and Jam for Frances by Russel Hoban

The Berenstain Bears and Too Much Junk Food by Jan and Stan Berenstain

Pancakes for Breakfast by Tomie de Paola

The Popcorn Book by Tomie dePaola

The Very Hungry Caterpillar by Eric Carle

<http://www.healslo.com/wp-content/uploads/2010/09/sugar-shockers.pdf>

<https://2rdnmg1qbg403gumla1v9i2h-wpengine.netdna-ssl.com/wp-content/uploads/sites/3/2013/07/Sugar-Shockers-Infographic.pdf>

<https://www.cdc.gov/nchs/data/databriefs/db87.htm>

<https://www.fda.gov/food/guidanceregulation/guidancedocumentsregulatoryinformation/abelingnutrition/ucm385663.htm#dates>

¹ <https://www.familyeducation.com/life/sugar/are-we-too-sweet-our-kids-addiction-sugar>

² <https://www.familyeducation.com/life/sugar/are-we-too-sweet-our-kids-addiction-sugar>

Sugar: Master of Disguise Activities

Introduction (5 minutes)

1. Watch the *Sugar: Master of Disguise* video.
2. In the classroom, post the words to *Sugar: Master of Disguise* on a chart.
3. Chant the words together as a class.
4. Key Discussion Questions:

After you co-view the video, ask:

- What new character was introduced in the video?
- Does anyone know what the word “disguise” means?
- What does “The Master of Disguise” want the potatoes to do?
- What happens when the potatoes eat sugary foods?
- What can happen to your body when you eat sugary foods?
- What does the potato suggest at the end of the video?

Shared Reading (15-20 minutes)

Materials: Chocolatina by Erik Kraft

1. Do a “picture walk” as you share the cover, title, author and illustrator and browse through a few pictures with the children. Ask them to share their thoughts about what they think the story might be about.

Encourage the children to make observations about the book.

2. Read the book Chocolatina by Erik Kraft.
3. Encourage the children to make observations about what the book was about and to talk about the characters.
4. Ask the students confirm or rebuff what their predictions were.
5. What did we understand from the reading and the video?

Talk about Chocolatina, and *Sugar, Master of Disguise*. In each, the characters ate sugary foods. Explore as a class as you share ideas about sugary foods and ways to practice healthy choices.

Ask the children to find a partner. You will read a statement or question and the partners will talk about what they think of each. You will ask for volunteers to share what they spoke about in the pairs.

- Recess and exercise give me extra energy. I like to play...
- I can make healthy food choices. Healthy foods I like to eat are...
- Are sugary foods good for you?
- I can help my friend to make healthy choices. I can...

Circle Time Activities

Counting Sugar Cubes (20 minutes)

Materials: website: sugarstacks.com, poster with nutrition label for five common drinks to demonstrate sugar content in each

1. Explore with the students the amount of sugar in beverages they might drink. Information can be found at: sugarstacks.com. Pre-make a poster for students to view samples; include a picture of the drink, the name of the drink, and how much sugar is found in each.
2. Ask a student to select a beverage on the poster and to share how many sugar cubes are found in a serving size. Explain to the class that the serving size and the number of grams of sugar indicated on the label are per serving. Talk with the students about reading nutrition labels and how the labels have important information.

I am a Kid...What Choices Can I Make? (20 minutes)

Materials: list of prepared statements, sentence strips, markers

1. Talk with the students about the food that Sugar Baddie gives to Yukon and Russet. Ask the students, "Can you think of a healthy snack they could eat instead of the cake?" Talk about how resisting the temptation of refined sugar can be hard- even if you know that refined sugar is an unhealthy choice. Ask, "How can we remind ourselves to choose healthy snacks first?"
2. As a class, explore ways to make sure we make healthy choices about sugar. You will read aloud some statements to the students and they must think about each statement.

Statements:

- A child should eat less than 3 teaspoons of sugar each day.
- A child should eat fresh fruit more often than eating sugary desserts.
- A child should eat super-sized servings.
- A child should eat sugary foods at breakfast time.

Students will decide if the statement is a healthy or unhealthy food choice.

Points to Ponder (5 minutes)

1. Plain, pure water is a healthy choice. It does not have added sugar or chemicals.
2. Drinking water is the healthiest way to keep your body hydrated. Most sports drinks have a lot of sugar and other unhealthy ingredients.
3. Drinking too many sugary drinks can lead to obesity, and the single biggest source of sugar is soda.³
4. Drinking two 20 ounce colas per day results in consuming 243 cups of sugar per year.⁴

³ <http://www.kingcounty.gov/depts/health/nutrition/sugary-drinks.aspx>

⁴ http://www.kingcounty.gov/depts/health/nutrition/~/_media/health/publichealth/documents/sugarydrinks/10thingsParents.ashx

Extension Activities:

Sensory Center: Sugar Cubes (20 minutes)

Materials: sugar or sugar cubes, measuring cups and spoons, clear containers that are marked, empty popular drink containers with nutrition labels

1. Show the nutrition label of a popular drink. Find the serving size and the sugar content on it. Talk with the students about the purpose of a nutrition label. Highlight these points: one container may have more than one serving size so you need to count the sugar in the container and not in the serving and it is important to limit the added sugars that you drink and eat.
2. Show the students the drink containers at the sensory table and the measuring tools. Explain how they can use the cups and spoons to measure.
3. Explain again the nutrition label found on each container. Model how 4 grams of sugar is equal to 1 teaspoon. (You can also substitute sugar cubes for teaspoons: 1 sugar cube equals 4 grams of sugar.) You can mark the containers by teaspoons to avoid mistakes as children measure. Preschool children may not be able to do this alone, but you can demonstrate this for the class in large and small groups.
4. Model how to fill the container with the amount of sugar in that drink.
5. Talk with the children about their experience and observations as they measured the sugar in each beverage? Ask, "Do you know how much sugar you are supposed to have during the day to try to stay healthy?" Answer: three teaspoons. "Let's measure 3 teaspoons of sugar together."

Science Center: Make Every Drink Count (15 minutes)

Materials: T-chart, prepared sentence strips with popular drink choices, sentence strips, markers

1. Talk with the students about how they can make healthy beverage choices. When choosing drinks, encourage them to ask themselves the following questions:
 - "How can I make every sip count?" Drinking natural beverages like water is the best choice.
 - "Am I thirsty?" Choose water to drink instead of sugary beverages.
 - "Should I drink a large soda at the restaurant?" People can choose to drink milk, water, or share the drink with another person.
2. Make a T-Chart and label one column, "Choose Most Often" and the second column, "Choose Less Often".
Ask your students to name beverages that they drink. Write their responses on separate sentence strips. Include the following if they aren't mentioned.

low-fat or fat-free milk
water
juice with added sugars
soy-based drinks
unsweetened drinks

soda
sports drinks, energy drinks
fruit drinks
sweet tea
lemonade

Working in small groups, ask the students to help identify which drinks they should “choose most often” and which they should “choose less often.” In each column of the t-chart, place their responses and talk about the rationale.

3. Encourage the students to make a commitment as they rethink the beverages they drink.

I will drink more:

I will drink less:

Math Center: The Favorite Fruit (20 minutes)

Materials: chart paper, markers

Share with the students that you will take a poll. You would like to know what the class’ favorite fruit is. Ask five children, at random, to name their favorite fruit. Make a list, with each fruit on a separate line, and explain that this information will help you to gather data. Ask the students to raise their hand if their favorite fruit has been mentioned. If a child does not raise his/her hand, ask him/her what their favorite fruit is. Include this in the list.

Next, announce each fruit choice, one by one. Ask the students to raise their hand when their favorite fruit is called. You will write a tally mark for each student who raised their hand for each. (i.e. strawberries: 6 tally marks) Count the numbers of tally marks out loud for each fruit and write the corresponding number on that line.

Then you will talk about the information on the chart. Which was the favorite fruit? Which one had the fewest tallies? Work together and identify fruits from the least popular to the most popular.

Dramatic Center: Create A Healthy Plate (20 minutes)

Materials: collection of plastic meats, fruits, and vegetables, “My Plate” model, plastic plates

Include a collection of plastic meats, fruits and vegetables in the kitchen area. In the center, have placemats that include the “My Plate” model. This tool will help children explore how to create a balanced meal. Explain to the children that they can recreate a healthy plate with the items in the kitchen. They can work together to share the materials and to inspire their classmates. How many different combinations can they create? Encourage them that if they are unsure about their plate, they can ask a peer or they can ask you for help.

Family Activity: (20 minutes)

The family activity will allow the child and their family to explore the amount of sugar in different drinks and to identify healthier alternatives than presented in the first scenario. Encourage the child to share what they learned at school. Also, ask them to share what their family learned as they explored at home.

Print this letter to share the activity for the families to explore at home.

Dear Families,

In our class, we introduced the children to The Healthy Kids Project, brought to you by KLRN Public Television and Gottalook Productions. We explored the video, ***Sugar Master of Disguise***. (View it at: www.klrn.org/healthy-kids.)

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The family activity will allow you to explore the amount of sugar in different drinks and to identify healthier drink alternatives. Encourage your child to share what they learned at school. Also, your child will be asked to share what your family learned at home.

Jane is a preschool student in our classroom. She has been trying to make different choices so she can be healthy and feel great. Jane wrote down a list of drinks that she had yesterday. Use **www.sugarstacks.com** to find the amount of sugar in each drink. Write the amount of sugar next to each drink.

Jane's Drink Record for Yesterday

Breakfast:	1 cup 2% milk	___ grams of sugar
Snack	1 Capri Sun	___ grams of sugar
Lunch	1 Capri Sun	___ grams of sugar
Afternoon Snack	1 Orange Soda	___ grams of sugar
Dinner	2 Glasses of Soda	___ grams of sugar

Next, work together to help Jane make changes to limit the sugary beverages she drinks. Talk about what Jane and her family could do in order to limit added sugar in her drinks to meet daily recommendations. Make a new drink record for Jane. Send the drink menu to school with your child; the children will share it with their classmates.

Jane's New Drink Menu

Breakfast:	_____	___ grams of sugar
Snack	_____	___ grams of sugar
Lunch	_____	___ grams of sugar
Afternoon Snack	_____	___ grams of sugar
Dinner	_____	___ grams of sugar

Choose health. It feels great!