Health
5.NPA.2.2 Infer the benefits of limiting the consumption of foods and beverages high in fat and added sugar. 5.NPA.3.1 Contrast dieting and healthy weight management, including limiting high-fat and high-sugar foods.

Materials Needed:

2-3 empty drink or food containers (soft drink, juice, milk, or sweet snack - empty bag of cookies)
2-3 food items or food containers (peanut butter, bag of chips, fast food items such as fries or burger, sweet snack)
Measuring spoons – teaspoon and tablespoon
Ziploc bags
Sugar
Crisco
Paper plate
Smart Board/Promethean Board or LCD projector
Computers or tablets
Calculators
PowerPoint – Choosing Nutrient-Dense Foods
Copies of Nutrition Facts Label Comparison worksheet – found in Serving Up MyPlate: A Yummy curriculum, Level 3, Grades 5 – 6, Lesson 3 – Decisions! Decisions! (Download the curriculum.) https://www.fns.usda.gov/tn/serving-myplate-yummy-curriculum
Appendix 1 – copies of Sugar Detectives Worksheet or copies of Sugar Detectives Worksheet, American Heart Association, http://www.heart.org/idc/groups/heartpublic/@wcm/@global/documents/downloadable/ucm_447942.pdf
Appendix 2 – copies of Fat Detectives Worksheet
Interactive Nutrition Label: https://www.accessdata.fda.gov/scripts/InteractiveNutritionFactsLabel/#intro
Appendix 3 – Nutrition Research Websites

Focus:

Play the video: How much Sugar is in Soda? (1:00) https://www.youtube.com/watch?v=iP-haqmmXyY&t=4s
Ask:
How much soda did the little boy drink?
How much sugar would three soda a day end up in pounds for the year?
What is a better option to drink?

Statement of Objectives:

In today's lesson, we will examine the benefits of limiting the amount of sugar and fat in our diet and how it can contribute to healthy weight management.

Teacher Input:

Sugar Demonstration

Before class, measure the amount of sugar in these foods and drinks and put the sugar in a Ziploc bag. Use the measurement 1 teaspoon = 4 grams of sugar or 1 tablespoon = 12 grams. Examine the number of servings on the food label and multiply the amount of sugar on the food label by the number of servings. (Example: 16 ounce Mountain Dew (2 servings) 31 grams of sugar x (2) number of servings on food label = 62 grams of sugar). Be sure to mark the Ziploc bag with the amount of sugar that is in the bag so you will remember which drink corresponds with each bag.

Select one of the beverages or foods that have a moderate amount of sugar in it. Hold up the empty drink or food container.

Ask students:

- How much sugar do you think this (drink or food) has in it? (Examine the number of servings on the label.)
- Are you surprised that it has this much sugar in it?

[If the food or beverage used is more than one serving, tell the students how many servings the food label says is in that beverage.] Repeat this procedure with a beverage or food that is high in sugar.

Fat Demonstration

Before class, examine the number of servings on the food label and multiply the amount of fat by the number of servings. For this demonstration, use 1 tablespoon = 1 gram of fat. Set up the paper plates, Crisco, and the tablespoon for the next demonstration. Hold up a food item that has a moderate amount of fat in it.

Ask students:

- How much fat do you think this has in it? (Examine the number of servings on the label.)
- Are you surprised that it has this much fat in it?

If the food item used is more than one serving, tell the students how many servings the food label says is in that food. Repeat this procedure with a food that is high in fat.

When you are finished with both demonstrations, ask students:

- What surprised you the most with this activity?
- Did this make you think about the fat content in some of the foods you eat?

Give each student a copy of the Sugar Detectives Worksheet (Appendix 1) and the Fat Detectives Worksheet (Appendix 2). Students are going to fill out just the first column. They will finish these worksheets during the assessment step.

For the Sugar Detectives Worksheet, I want to write your 5 favorite sweet treats. Give students 3-5 minutes to complete the first column.

Now, on the Fat Detectives Worksheet, I want to write your 5 favorite foods or snacks. Include favorite foods; do not list all snacks. Give students 3-5 minutes to complete the first column.

Download and save Serving Up MyPlate: A Yummy Curriculum, (Level 3, Grades 5 – 6,) and use the discussion points on page 19-20 (lesson 3, Decisions! Decisions!), using #4 and #5, to discuss the importance of limiting the amount of fat and sugar we consume in our diet and use #8 and #9 to learn about the information found on the Nutrition Facts label found on foods. Give students a copy of the Nutrition Facts Label Comparison worksheet, (also found in lesson 3, Decisions! Decisions!).

Use the PowerPoint, Choosing Nutrient-Dense Foods, to display the Interactive Nutrition Label (it is hyperlinked in the PowerPoint, but the PowerPoint must be in display mode): https://www.accessdata.fda.gov/scripts/InteractiveNutritionFactsLabel/#intro

Explain what the following terms mean: serving size, calories, solid fats, vitamins and minerals, and sodium from the Decisions! Decisions! lesson. Scroll over the food label to what is listed on the Nutrition Facts label, which are nutrients and the things we should limit in our diet. Point out that the food label shows the nutrients for one serving of this food.

Continue this lesson with #9, and #10 helping students analyze the foods on the worksheet. Discuss aloud the questions at the bottom of the worksheet. Go over the Food for Thought on page 22.

Use the PowerPoint, Choosing Nutrient-Dense Foods, to define Empty Calories. On the next slide, emphasize that the calories of most candies and sodas are empty calories, (provide no nutrients). Tell students that there are foods that contain nutrients but also contain empty calories from added sugars and solid fats.

Use the PowerPoint, Choosing Nutrient-Dense Foods, to discuss the recommended daily limit of sugar is 40 grams. Remind students of the beverages discussed at the beginning of the lesson and how it would be easy to exceed our recommended daily amount of sugar.

Ask students:

- Do you think that you go over the recommended daily limit of sugar on most days?
- Do you think your diet is high in solid fats?

Use the PowerPoint, Choosing Nutrient-Dense Foods, to discuss next two questions:

- What could be the result of consuming too much solid fat in our diet?
- What could be the result of consuming too much added sugars in our diet?

Use the PowerPoint, Choosing Nutrient-Dense Foods to discuss the health effects of consuming too much sugar and fats and discuss how a person can decrease the solid fats and added sugars in their diet.

When we consume foods that are high in sugar, how can it affect our health immediately and over our lifetime? (tooth decay, weight gain/obesity, increased risk of developing Type 2 Diabetes, lower good cholesterol (HDL), higher bad cholesterol (LDL), slower immune system

When we consume foods that are high in total fat, how can it affect our health immediately and over our lifetime? (weight gain/obesity, high blood cholesterol, high blood pressure, heart disease (heart attack, stroke), and some types of cancer)

What are some actions we can take to decrease the amount of solid fats in our diet?
What are some behaviors we can do to decrease the amount of added sugars in our diet?

Assessment:

Prior to this lesson, practice using the websites that the students will be using to become more familiar with them in order to demonstrate how to use these in this class activity. Students will use the Nutrition Data website: (http://nutritiondata.self.com/facts/legumes-and-legume-products/4452/2) to find out the amount of sugar and fat in one serving of the food items they listed on the Sugar Detectives Worksheet (Appendix 1) and the Fat Detectives Worksheet(Appendix 2). Then they will search for similar foods that they could substitute for their foods that contain less sugar or fat and record those on their worksheets, writing down how much less sugar or fat (for one serving) this food has in it.

We are going to look at the list of foods/drinks you wrote on your Fat Detectives Worksheet and Sugar Detectives Worksheet. Today, we have learned about empty calories and added sugars and fat in foods and drinks. Now, you are going to be the detective and learn about your favorite foods and drinks.
Demonstrate how to use one of the following website(s). Show students how to search for a food and how to record it on the worksheet.

Nutrition Data: http://nutritiondata.self.com/facts/legumes-and-legume-products/4452/2. (Hint: for this website, keep the search simple, search "cookies" will bring up several pages for students to examine. If they cannot find the exact food they are looking for, help them find a similar food.) To search for a food, type the food into the search bar and hit search. The website brings up a food label for that food. Students will then select the amount they consumed from the drop-down menu. Students may have to do some math for some foods. For example, if a student eats five chocolate chip cookies for a snack and the closest amount is one cookie, the student will multiply the amount by five before recording it on their worksheet.

You are going to search for the foods and drinks that you enjoy eating and record the amount of fat or sugar in one serving of the food or drink. Be sure to record what amount is considered one serving. Remember, we learned at the beginning of this lesson that the food labels may list one serving to be a smaller amount than we actually eat.

Once students have finished this activity, ask students:

- What did you learn doing this activity? (Answers may vary, but hopefully they will be surprised that the foods/drinks they like have a lot of total fat or sugar in them)

Once students have analyzed their diets and found foods they could consume that contain less sugar and fats, students will write and type a two-page paper using technology and utilizing the Internet. The Nutrition Research Websites (Appendix 3) lists websites that students can use to gather information to write their two-page paper. The websites are hyperlinked in this Word

document. You may want to save this document to the student share drive so that students have quicker access the websites by using the hyperlinks.

Use the PowerPoint to discuss the information that students need to research and include in their papers:

- Explains the benefits and importance of a diet that is lower in fat.
- Explains the benefits and importance of a diet that is lower in sugar.
- Describes the changes they want to make to lower their intake of fat and sugar.
- Explain how intake of low-fat and low-sugar foods/drinks can help maintain a healthy weight.

Remind students not to copy and paste from these websites into their papers, but to take notes and put the information in their own words.

Closure:

You did a great job analyzing the amount of fat and sugar in the foods and drinks that you eat and selecting a food that you like that you could eat or drink instead that has less sugar and fat for better health and weight management.

Sugar Detectives Worksheet

Name _____

Directions: In the first column you will write your five favorite sweet foods or snacks. Then use the nutrition website to record the amount of sugar per serving for each of your favorite foods. Use the website to search for a similar food that would be a healthier choice (has less sugar in it). The food or drink needs to be something you would eat.

My 5 favorite sweet treats are:	The treat contains this much sugar per serving: (Write the serving size.)	A Healthy Alternative is:	It contains this much sugar per serving: (Write the serving size)	Healthy alternative has "x" less grams of sugar than my favorite food:
1.	_____ grams of total sugar for _____ (amount of one serving)	**1.**	_____ grams of total sugar for _____ (amount of one serving)	**X =**
2.	_____ grams of total sugar for _____ (amount of one serving)	**2.**	_____ grams of total sugar for _____ (amount of one serving)	**X =**
3.	_____ grams of total sugar for _____ (amount of one serving)	**3.**	_____ grams of total sugar for _____ (amount of one serving)	**X =**
4.	_____ grams of total sugar for _____ (amount of one serving)	**4.**	_____ grams of total sugar for _____ (amount of one serving)	**X =**
5.	_____ grams of total sugar for _____ (amount of one serving)	**5.**	_____ grams of total sugar for _____ (amount of one serving)	**X =**

Let's think about this: Write three new facts you learned doing the Sugar Detectives Worksheet.

1) _____ 3) _____

2) _____

http://www.heart.org/idc/groups/heart-public/@wcm/@global/documents/downloadable/ucm_447942.pdf

Fat Detectives Worksheet

Name _____

Directions: In the first column you will write you five favorite foods or snacks then use the Nutrition website to record the amount of fat per serving for each. Use the website to search for a similar food that would be a healthier choice (has less fat in it). This food or drink should be something you would eat.

My 5 favorite foods are:	It contains this much fat per serving: (Write the serving size.)	A Healthy Alternative is:	It contains this much fat per serving: (Write the serving size.)	Healthy alternative has "x" less grams of fat than my favorite food:
1.	_____ grams of total fat for _____ (amount of one serving)	**1.**	_____ grams of total fat for _____ (amount of one serving)	**X =**
2.	_____ grams of total fat for _____ (amount of one serving)	**2.**	_____ grams of total fat for _____ (amount of one serving)	**X =**
3.	_____ grams of total fat for _____ (amount of one serving)	**3.**	_____ grams of total fat for _____ (amount of one serving)	**X =**
4.	_____ grams of total fat for _____ (amount of one serving)	**4.**	_____ grams of total fat for _____ (amount of one serving)	**X =**
5.	_____ grams of total fat for _____ (amount of one serving)	**5.**	_____ grams of total fat for _____ (amount of one serving)	**X =**

Let's think about this: Write three new facts you learned doing the Fat Detectives Worksheet.

1) _____ 3) _____

2) _____

Nutrition Research Websites

For teachers:

Interactive Food Label: http://www.mayoclinic.com/health/nutrition-facts/NU00293/METHOD=print

http://district.schoolnutritionandfitness.com/simplifiedculinaryservices/files/Wellness/What_Are_Empty_Calories_ChooseMyplate.pdf - What are empty calories link that has information on oils, fats and added sugars

Empty Calories in Foods Chart http://www.choosemyplate.gov/food-groups/emptycalories_count_table.html

Dietary Fats: http://www.cdc.gov/nutrition/everyone/basics/fat/index.html

Dietary Guidelines for Americans – Executive Summary
https://www.dietaryguidelines.gov/sites/default/files/2019-05/DGA_Executive-Summary%20%281%29.pdf

Nutrition Fact Label and Materials – What is on the Label?
https://www.accessdata.fda.gov/scripts/interactivenutritionfactslabel/#intro

Sugar Stacks http://www.sugarstacks.com/

For students:

Nutrition Data:
http://nutritiondata.self.com/facts/legumes-and-legume-products/4452/2

Online Search Tool for Nutritional Information on Foods:
http://seprl.ars.usda.gov/Services/docs.htm?docid=17032 this can be downloaded

U.S. Food and Drug Administration 2010 Dietary Guidelines for Americans:
http://www.cnpp.usda.gov/DGAs2010-PolicyDocument.htm - Chapter 3: Foods and Food Components to Reduce; background information on fats and added sugar; reference tool for student research ****

The Right Tool to Balance Your Diet:
https://www.accessdata.fda.gov/scripts/interactivenutritionfactslabel/#intro

Eat For a Healthy Heart:
http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm199058.htm ***

Empty Calories link – has information on oils, fats and added sugars:
http://www.choosemyplate.gov/weight-management-calories/calories/empty-calories.html ***

U.S. Centers for Disease Control and Prevention
BAM (CDC's Body and Mind) Food and Nutrition link http://www.cdc.gov/bam/nutrition/index.html