Cooking Club Lesson Plan

Healthy Beverages
Grades 6-12

I. Lesson Objectives:
A. Students will explain the terms empty calories and nutrient dense.
B. Students will identify healthier beverage choices.
C. Students will prepare and sample a healthy beverage.

II. Behavior Outcomes:
A. Drink water instead of sugary beverages.
B. Choose beverages and foods to moderate intake of sugars.

III. Pennsylvania Educational Standards:
A. 1.1 Learning to Read Independently
B. 11.3 Food Science and Nutrition
C. 11.4 Child Development
D. 10.1 Concepts of Health
E. 10.2 Healthful Living

IV. Materials
A. Handouts: *"Think Your Drink "or" Sugar Shockers"* handout from Learning ZoneXpress or other equivalent handout on healthy beverage options (preferably one with a sample food label), copies of the recipe
B. Additional Activities: *"Guess the Sugar Amount"* worksheet and *"Drinks Word Search"* (Grades 6-8); *"How Much Sugar is in My Drink?"* worksheet (Grades 9-12)
C. "Sugar Shockers" graphic poster may be used in place of a handout.
D. Any other necessary materials.
E. Reinforcement that conveys the appropriate nutrition message
F. Hand wipes, gloves, hairnets/head coverings, aprons, tablecloth
G. Food and cooking supplies needed for recipe
H. Paper products needed for preparing and serving recipe (i.e. plates, bowls, forks, spoons, serving utensils, etc.)
I. Ten Tips Sheet: "*Make Better Beverage Choices"*

V. Procedure: *Text in italics are instructions for the presenter, non-italicized text is the suggested script.*
A. **Introductory**

1. Lesson Introduction
    a. *Introduce yourself and the nutrition education program/organization presenting the lesson.*
    b. *Review previous lesson.*
    c. *Briefly introduce the lesson topic and the recipe that will be prepared. Explain that in this lesson, students will learn the importance of making healthy beverage choices as part of a healthy eating pattern.*

B. **Developmental**
1. Discussion of lesson topic
    a. MyPlate tells us: everything you eat and drink matters. Choosing a variety of foods and beverages from each food group, and making sure that each choice is limited in saturated fat, sodium, and added sugars is important. Today we are going to look at how to choose beverages wisely and how to make a nutritious beverage.
    b. *Ask students to list their favorite beverage choices. Responses may be written on the board if able. Discuss which beverages they think are healthy choices and why.*
    c. *Tell the students:* If not chosen wisely, beverages can provide excess calories and sugar, which can lead to weight gain, cavities and other health problems. MyPlate encourages us to choose the right types of beverages to keep our bodies healthy.

2. *Distribute "Think Your Drink" or "Sugar Shockers" handout. May use the "Sugar Shockers" graphic poster instead of a handout.*
    a. Many beverages contain added sugars that provide the body with calories, but few or no nutrients. These are called "Empty Calories."
    b. *Ask the students*: Looking at the handout, what are some types of beverages that might have these "empty calories?" *Discuss reasonable responses and review*: Examples of drinks with "empty calories" are: soda, sweetened iced tea, fruit punch and other drinks with added sugar.
    c. On the other hand, some drinks are "nutrient dense". These are beverages that are generally lower in calories and also have high nutritional value. Looking at the handout, which beverages do you think would be considered "Nutrient dense?" *Review with students that 100% fruit or vegetable juice and low-fat or fat-free milk are nutrient dense beverage choices.*
    d. Water is a beverage choice that has no calories and it is needed by the body every day.
    e. Water is important to the body in several ways:
        i. The body is made up of 60-70% water, so replenishing every day is vital to avoid dehydration. Dehydration is the loss of body fluids. Drinking water throughout the day is the best way to stay adequately hydrated.
        ii. Water also:
            (a) Regulates body temperature

(b) Cushions and protect the joints
(c) Helps to flush waste from the body
(d) Carries nutrients to body cells
(e) Protects organs

f. *Ask the students:* What should we do if we want to learn about what is in our favorite beverages? *Solicit responses.* We should read the food label and use it as a guide to understand what we are drinking.
   i. *Using the Think Your Drink handout, briefly review the following label reading points:*
      (a) *Ask students:* What is the first thing you look at on a food label? *Answer:* The Serving Size. The label is based on one serving, so you should start by checking the serving size and servings per container. For some drink bottles, the serving size may be one bottle, but many beverage containers might contain more than one serving. If you drink more than one serving, you have to multiply everything on the label to find out what you are actually consuming.
      (b) Next you look at the number of Calories per serving. If you drink more than one serving, the number of calories must be multiplied by the number of servings you are consuming.
      (c) Fat – *Ask students:*
         (i) What type of fat do we need to limit in our diet? *Answer:* Saturated and trans-fat.
         (ii) Why do we want to limit these types of fat? *Answer:* They contribute to an increased risk of heart disease.
         (iii) What is another concern about the amount of fat in a beverage? *Answer:* Excess fat intake can increase caloric intake which can lead to weight gain.
         (iv) Generally beverages that contain fat are milk or dairy based drinks. When you choose milk or milk alternatives, select low-fat or fat-free milk or fortified soymilk.
      (d) Added Sugars – *Ask students:*
         (i) Which beverages on the handout have added sugars?
         (ii) Many beverages contain sugar, but we need to be mindful of the source of the sugar; is it natural or added? 100% fruit juice and milk (un-flavored) are examples of beverages with natural sugars. Added sugars contribute calories but no essential nutrients. We want to limit our added sugar intake to less than 10% of total calories. On a 2,000 calorie diet, that is about 12 teaspoons of sugar a day.

g. *Ask students:* Looking at your favorite drinks that you mentioned at the beginning of class, do you still think the ones you said were healthy are actually healthy? *Discuss their answers. May also ask students to list types of beverages that they think are healthier and ones that we might want to limit.*

3. Discussion of Using a Blender and Safety Tips

a. *Show the students the blender that will be used and explain how to put it together properly and use it.*
    i. *Before assembling the blender, make sure that it is off.*
    ii. *Choose a flat, dry surface on which to operate your blender.*
    iii. *Put the blender together. Make certain that the rubber gasket is on top of the blade before screwing the blade assembly onto the pitcher. Tell the students that without the rubber gasket, the pitcher will likely leak.*
    iv. *Set the pitcher onto the base and secure it in place. Plug the blender in.*
    v. *After putting the recipe ingredients in the pitcher, be sure to secure the lid firmly before turning the blender on.*
    vi. *When adding ingredients to pitcher, use the secondary lid while the blender is running or turn the blender off, remove the lid, add the ingredients, then re-secure the lid before turning the blender back on.*
    vii. *Clean the pitcher after each use.*

4. Cooking Activity
    a. *Distribute copies of recipe to students. Suggested recipes are provided but may be altered as needed. When selecting a recipe, choose recipes that do not have added sugars or high fat and can be prepared within the allotted time.*
    b. *Review the ingredients and instructions for preparing the recipe.*
    c. *Remind students of food safety guidelines and proper cooking equipment use.*
    d. *Involve students in food preparation and cooking. Choose volunteers and assign each student a task or have groups of students take turns assisting.*
    e. *Discuss the following points while cooking:*
        i. *Have students identify in which food group each ingredient belongs.*
        ii. *Grades 9-12: Discuss the nutrients that are found in the ingredients.*
    f. *Provide each student with a sample sized portion of the recipe to taste.*

5. Additional activities: *may be used with students who are not participating in cooking or as a follow-up activity*
    a. *"Guess the Sugar Amount"* worksheet (Grades 6-8)
        i. *Students may work alone or in groups to complete the worksheet by matching each beverage with the correct number of teaspoons of sugar.*
        ii. *When students are finished, review their answers and discuss their thoughts on the amount of sugar in some of the beverages.*
    b. "Drinks Word Search" (Grades 6-8)
        i. *Students may work alone or in groups to complete the word search.*
        ii. *When students are finished, review the healthy beverage options listed on the worksheet and ask students if they can think of other healthy beverage options.*
    c. *"How Much Sugar is in My Drink?"* worksheet (Grades 9-12)
        i. *Students may work alone or in groups to complete the worksheet by answering the questions for the two beverage labels shown.*

ii. *When students are finished, review their answers and ask if they think either beverage is a healthy option.*
iii. *Ask students to guess what beverage each label is from. (Beverage A is 100% orange juice, Beverage B is a 20-ounce soda)*

C. **Conclusion**

1. Review take-away messages from lesson.
   a. *Ask students to explain the terms empty calories and nutrient dense.*
   b. *Have students give examples of healthier beverage choices.*
   c. *Observe and guide students in preparation of the food based activity.*
2. Distribute the reinforcement, read the message and/or explain the reason why they are receiving the reinforcement.
3. Distribute Ten Tips Fact Sheet (or other appropriate fact sheet) and encourage students to share it with their families.
4. Thank the students for their participation and answer any question they may have.

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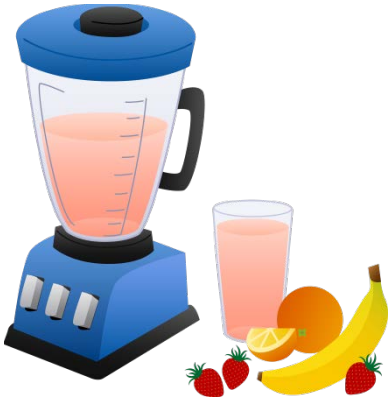
Out of This Whirled Shake



Serving Size: 1 cup
Yield: 4 servings
Time: 5 minutes

Ingredients:
1 medium banana, peeled and sliced
1½ cups unsweetened frozen strawberries
¾ cup low-fat vanilla yogurt
¾ cup 100% orange juice

Instructions:
1. Place all ingredients in a blender. Cover tightly. Blend until smooth.
2. Pour into glasses and serve.

Nutrition information per serving:
Calories: 118
Protein: 3.25 g
Carbohydrates: 28 g
Fiber: 2.5 g
Total fat: 0.3 g

Source:
Produce for Better Health Foundation

Adapted from:
Your plan to eating MORE
www.fruitsandveggiesmorematters.org

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Tropical Smoothies

Yield: 3 servings

Ingredients:

1 medium banana
1 cup frozen mango chunks
1 cup canned pineapple chunks
½ cup fat free plain yogurt

Instructions:

1. In a blender or food processor, combine banana, mango, pineapple, and yogurt.
2. Puree until thick and smooth.
3. Pour into glasses and enjoy!

Notes:

Fresh mango can be used instead in frozen.
If using fresh mango, add ½ cup of ice cubes.
If smoothie is too thick, add some juice from canned pineapple.

Source:

Adapted from http://www.fruitsandveggiesmorematters.org/recipe?iRID=827

Nutrition Facts

Serving Size 1/3 of recipe 196g (195 g)

Amount Per Serving	
Calories 130	Calories from Fat 4
	% Daily Value*
Total Fat 0g	1%
Saturated Fat 0g	1%
Trans Fat	
Cholesterol 1mg	0%
Sodium 34mg	1%
Total Carbohydrate 31g	10%
Dietary Fiber 3g	11%
Sugars 25g	
Protein 3g	

Vitamin A	10%	• Vitamin C	41%
Calcium	10%	• Iron	2%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Fiber		25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

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Pumpkin Smoothie

Serving Size: ½ cup
Yield: 5 servings
Time: 20 minutes

Ingredients:

½ cup canned pumpkin, frozen
2 cups low-fat vanilla yogurt
¼ teaspoon cinnamon
1/8 teaspoon nutmeg
4 teaspoons brown sugar

Instructions:

1. Combine ingredients in blender and puree until smooth.
2. Pour smoothies into small glasses and serve.

Nutrition Facts

Serving Size 1/2 cup (124 g)
Servings per container 5

Amount Per Serving	
Calories 101	Calories from Fat 12
	% Daily Value*
Total Fat 1g	2%
Saturated Fat 1g	4%
Trans Fat 0g	
Cholesterol 5mg	2%
Sodium 67mg	3%
Total Carbohydrate 18g	6%
Dietary Fiber 1g	3%
Sugars 17g	
Protein 5g	
Vitamin A 77% • Vitamin C	3%
Calcium 18% • Iron	2%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Fiber		25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

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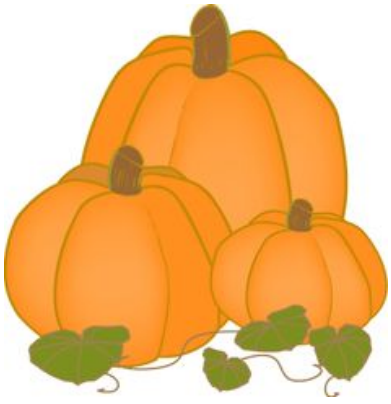
Source:
http://familyfun.go.com/recipes/family/recipe/famf0900pumsmooth/



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Guess the Sugar Amount

Directions: Draw a line from the drink to the amount of sugar you think it contains.

Flavored Soda
24 oz bottle

8 teaspoons

Milk
16 oz bottle

13 teaspoons

Cola
20 oz bottle

0 teaspoons

Water
16 oz bottle

24 teaspoons

Energy Drink
16 oz can

17 teaspoons

Vitamin Water
20 oz bottle

6 teaspoons

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Guess the Sugar Amount KEY

Directions: Draw a line from the drink to the amount of sugar you think it contains.

Flavored Soda
24 oz bottle

24 tsp

Milk
16 oz bottle

6 tsp

Cola
20 oz bottle

17 tsp

Water
16 oz bottle

0 tsp

Energy Drink
16 oz can

13 tsp

Vitamin Water
20 oz bottle

8 tsp

8 teaspoons

13 teaspoons

0 teaspoons

24 teaspoons

17 teaspoons

6 teaspoons

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Drinks Word Search

A W N Y H C C A L C I U M
R A C C C L O S M H C E N
A T I E T O L E T O C I C
N E M E H H J U I C E I V
O R A N G E A O V O R S T
M L O W F A T M I L K A C
I S A P P L E I T A L L P
T E T C A T M N A T O A E
M I H F N H M E M E M A E
H R P C I Y A R I M T E L
O O O C M W A A N I K R N
E R T R T T A L S L L E I
M C K A V M K S A K L I E

Juice
Low fat milk
Orange
Minerals
Vitamins
Calcium
Healthy
Apple
Water
Chocolate milk

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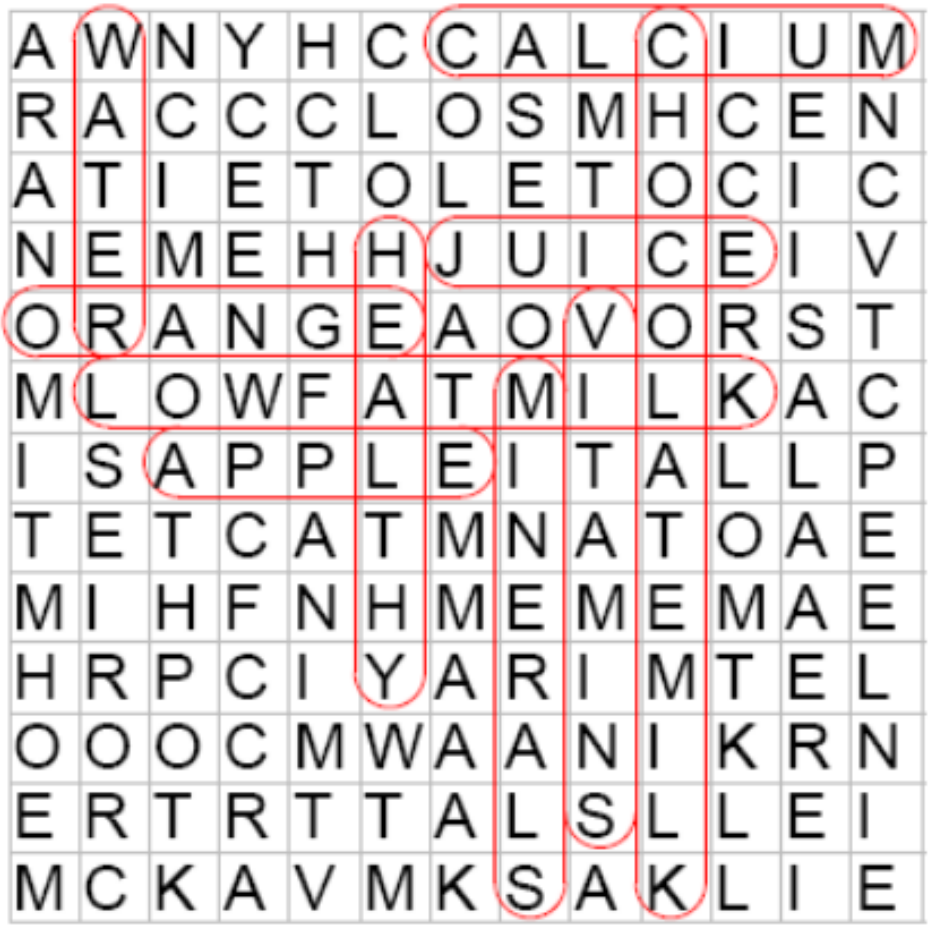
Drinks Word Search
ANSWERS



Juice
Low fat milk
Orange
Minerals
Vitamins
Calcium
Healthy
Apple
Water
Chocolate milk

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How Much Sugar Is in My Drink?

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Directions: Answer the following questions using the food labels below.

Beverage A

Nutrition Facts
Serving Size 8 fl oz (240mL)
Servings Per Container: 2

Amount Per Serving	
Calories 110	Calories from fat 0
	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 0mg	0%
Potassium 500mg	14%
Total Carbohydrate 25g	8%
Dietary Fiber 0g	0%
Sugars 21g	
Protein 2g	

Vitamin A	0%	• Vitamin C	140%
Calcium	2%	• Iron	2%
Thiamin	15%	• Niacin	4%
Vitamin B6	4%	• Folate	20%

*Percent Daily Values are based on a 2,000 calorie diet.

Questions	Beverage A	Beverage B
1. What is the serving size?		
2. How many servings are in the entire package?		
3. How many calories are in a serving?		
4. How many calories are in the entire container?		
5. How many grams of sugar are in one serving?		
6. How many teaspoons of sugar are in one serving of the beverage? **(Hint: 1 teaspoon = 4 grams of sugar**)		
7. How many grams of sugar are in the entire container?		
8. How many teaspoons of sugar are in the entire container?		
9. What vitamins and minerals are in this beverage?		
10. Is this beverage **nutrient dense**?		
11. Is this beverage a healthy option? **YES or NO**		

Beverage B

Nutrition Facts
Serving Size: large (20 oz)

Amount Per Serving		
Calories 210	Calories from Fat 0	
		% Daily Value*
Total Fat 0 g		**0%**
Saturated Fat 0 g		**0%**
Trans Fat 0 g		
Cholesterol 0 mg		**0%**
Sodium 135 mg		**6%**
Potassium		
Total Carbohydrate 57 g		**19%**
Dietary Fiber 0 g		**0%**
Sugars 56 g		
Sugar Alcohols		
Protein 0 g		
Vitamin A 0 IU		0%
Vitamin C 0 mg		0%
Calcium 0 mg		0%
Iron 0 mg		0%

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How Much Sugar Is in My Drink? ANSWERS

Directions: Answer the following questions using the food labels below.

Questions	Beverage A	Beverage B
1. What is the serving size?	8 oz	20 oz
2. How many servings are in the entire package?	2	1
3. How many calories are in a serving?	110	210
4. How many calories are in the entire container?	220	210
5. How many grams of sugar are in one serving?	21	56
6. How many teaspoons of sugar are in one serving of the beverage? **(Hint: 1 teaspoon = 4 grams of sugar**)	5	14
7. How many grams of sugar are in the entire container?	42	56
8. How many teaspoons of sugar are in the entire container?	10.5	14
9. What vitamins and minerals are in this beverage?	Calcium, Thiamin, Vitamin B6, Vitamin C, Iron, Niacin, Folate	None
10. Is this beverage **nutrient dense**?	Yes	No
11. Is this beverage a healthy option?	Yes	No