



**Foods of the Month**  
**Fun, Experiential Activities**

# **Oils and Good Fats**

## **Grades 3-5**



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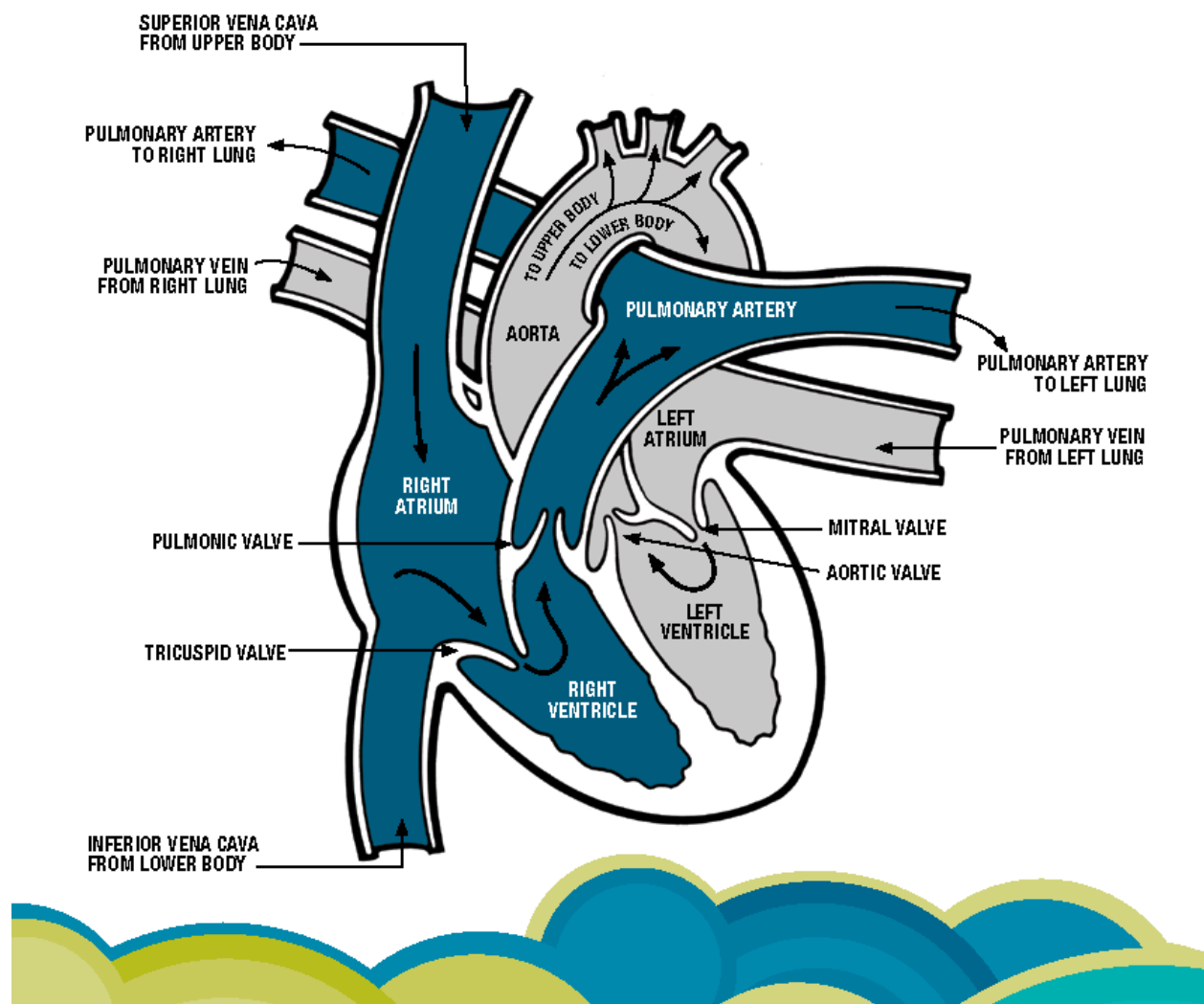
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February – American Heart Month!

Take some time to learn about your major pumper- the heart!



### Diagram of the Heart



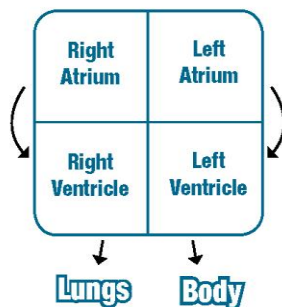
### Teaching How the Heart Functions

*This language can be used as a tool for teaching how the heart works and helping students visualize the progress of blood through the four chambers of the heart.*

The walls of the heart are made of thick muscle. When they contract, blood is pushed through tubes called blood vessels.

There are different types of blood vessels.

- Arteries are large, thick blood vessels that carry blood away from the heart. They bring oxygen and nutrients to the body. The aorta is the largest artery.
- Veins are large blood vessels that carry blood back to the heart. Veins carry carbon dioxide and other wastes from the body. Veins are thinner than arteries, are closer to the skin and have a bluish color.
- Capillaries are the smallest blood vessels. These tiny vessels ensure that every cell gets the nourishment it needs. Arteries eventually become capillaries. The capillaries deliver the oxygen and nutrients in the blood, then pick up wastes and feed into veins.



Blood constantly travels from the heart to the arteries, capillaries and veins. The heart and blood vessels are called the circulatory system because blood keeps circulating through this network of blood vessels.

You can think of the heart like two pumps side by side. The pump on the right side moves blood to your lungs, where the waste gas carbon dioxide is removed and oxygen is added. Freshly oxygenated blood returns to the pump on the left side, which moves it out into the rest of your body.

Your heart is similar to a two-story house with four rooms: two rooms on the top floor and two rooms on the bottom floor. Each room is called a chamber. The right atrium and left atrium are the upper chambers. The right ventricle and left ventricle are the lower chambers. Blood carrying carbon dioxide travels from the right atrium to the right ventricle, then into the lungs where carbon dioxide is exchanged for oxygen. Blood carrying oxygen travels from the left atrium to the left ventricle and onward to the rest of the body.

The heart has valves that control the direction of blood flow. Think of these valves as doors between the rooms that open and close to let the blood in or to stop it from entering.



**February – Oils & Good Fats!**

Learn some facts about avocados, then make a few lists about overall healthiness!

General Facts



1. English colonists nicknamed the avocado “alligator pears.”
2. More than 80 different varieties of avocados are grown in California. Hass avocados are the most common.
3. California ranks #1 in U.S. avocado production.
4. Dr. Thomas White of the California State Agricultural Society imported the first California avocado tree from Nicaragua to Los Angeles in 1856.
5. Avocados are grown mainly along the coastline of Southern California.
6. Avocado trees can grow as tall as 80 feet and produce as much as 400 fruits annually.

Make a List



Eating fruits and vegetables and being physically active every day helps your body stay healthy and energetic. Make a list of your favorite fruits and vegetables that you will try to eat this month to keep your body healthy.

My Fruit and Vegetable List

_____	_____
_____	_____
_____	_____
_____	_____

Make a list of physical activities you will do at home and at school to help keep your body fit and strong!

My Physical Activity List

Home activities: \_\_\_\_\_

\_\_\_\_\_

School activities: \_\_\_\_\_

\_\_\_\_\_

## February – Oils & Good Fats!

Introduce the children to good fats in the yummy **avocado**!!

- Show the children an avocado. Ask them:
  - Do you know what it is?
  - What food group does it belong in? **Fruit**
  - Has anyone ever tasted an avocado before?
  - How can you eat avocados?
    - Salsa, guacamole, salads, sandwiches, etc.
- Avocados grow on trees in warm climates, like California.
- An avocado tree can reach 80 feet in height (See picture on page 6).
- Discuss how avocados are harvested—picked by hand with the help of shears, clippers, ladders, and poles. The pickers place fruit in a large bag that is on their shoulder. Each bag holds about 30 to 50 pounds of fruit.
- Avocados have a rough, bumpy dark green/black skin. Cut the avocado in half (may also have the avocado pre-cut) and show them the inside. Take out the seed. Pass around avocado halves and the seed for them to touch and feel. When it is cut, a soft green smooth fruit and an inedible seed are inside. Explain that we do not eat the seed. The outside of avocados are bumpy and the inside is smooth...they are opposites.
- It is also called an Alligator Pear because of its pear-like shape and green skin.
- Avocados make your heart healthy.
- Perhaps share sliced avocado with a bit of salt, or guacamole, as a fun taste test!

Source: Utah State University Extension



## February – Oils & Good Fats!

What do you know about Avocados? Take the quiz to find out!

### California Avocado True/False Quiz

1. True or False? You can eat an avocado when it's hard.
2. True or False? Avocados are high in cholesterol.
3. True or False? Avocados contain vitamins A, C and E.
4. True or False? Most U.S. avocados are grown in Tennessee
5. True or False? An avocado seed has all the parts needed to grow a mature tree.
6. True or False? Avocados are high in sodium.
7. True or False? Bananas have more potassium than avocados.
8. True or False? A ripe California avocado is soft.
9. True or False? The outside of a ripe avocado is yellow.
10. True or False? Ripen an unripe avocado faster by putting it in a paper bag with an apple or banana.

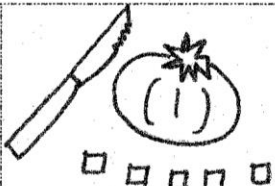
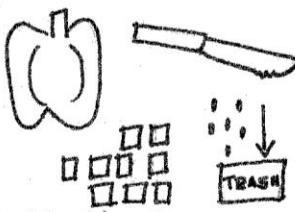
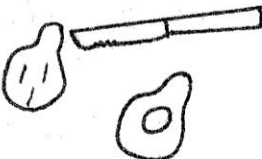
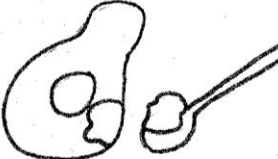
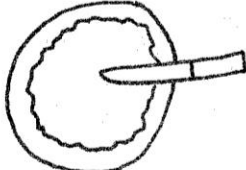
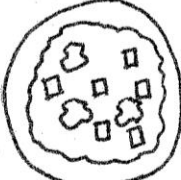
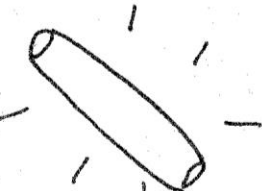
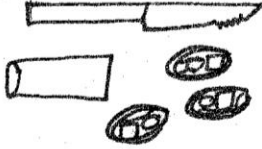
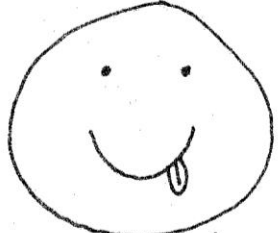


Answers: 1. False. You eat avocados when they are ripe and soft. 2. False. They have no cholesterol. 3. True. California produces up to 95% of the avocados grown in the U.S. 4. True. 5. True. 6. False. They are low in sodium. 7. False. An avocado has twice as much potassium as a banana. 8. True. 9. False. Hass avocados turn black or dark green. Other varieties remain light green. 10. True. These fruits release ethylene gas, speeding the ripening process.

February – Oils & Good Fats!

Try out these yummy, simple roll-ups as a small cooking lesson!

**Veggie Tortilla Roll-ups**

<p><u>Ingredients for 12 students</u></p> <p>4 whole wheat tortillas 8 tablespoons of nonfat or low fat cream cheese 2 cups of fresh spinach 2 medium tomatoes 1 yellow or orange bell pepper 2 avocados</p>	 <p>Cut the tomatoes into small pieces</p>	 <p>Cut the bell pepper into small pieces and throw out seeds</p>
 <p>Cut the avocado lengthwise around the seed</p>	 <p>scoop out the avocado, away from skin, with spoon</p>	 <p>spread the cream cheese on a tortilla</p>
 <p>lay some spinach and other veggies on the cream cheese</p>	 <p>roll up the tortilla nice and tight</p>	 <p>cut the tortilla in round shapes that look like a wheel</p>
 <p>enjoy!</p>		

## February – Oils & Good Fats!

Have some fun playing with cooking oils – make an *Ocean in a Bottle!*

Materials:

- water
- canola cooking oil
- blue food coloring
- large bottle (2 liter bottles or empty mouthwash bottle with a child-safe lid)
- funnel

Fill approximately 1/3 of your bottle with water.

Add several drops of food coloring.

Have the child shake the bottle to disperse the food coloring.

Then, simply top up the bottle with a bit of oil.

**LET THE FUN BEGIN!**

Tip the bottle upside down and watch your ocean come to life.

To see the big blobs of color swoosh and fall through the yellow oil is really fascinating.

The more you agitate the bottle, the more the bubbly the ocean becomes. Set your bottle down occasionally to let the bubbles settle, and then start all over again.



Source: <http://happyhooligans.ca/ocean-in-bottle/>





# Foods of the Month Fun, Experiential Activities

## February – Oils & Good Fats!

Now that you have learned about fats, review the two food labels below and see if you can figure out which popcorn is the healthiest!

**Microwave Popcorn # 1**

Nutrition Facts			
Serving Size 3 TBSP UNPOPPED			
Servings Per Container 18			
Amount Per Serving			
Calories 180		Calories from Fat 100	
<b>% Daily Value*</b>			
Total Fat	11g		18%
Saturated Fat	2.5g		12%
Trans Fat	5g		
Cholesterol	0mg		0%
Sodium	330mg		14%
Total Carbohydrate	17g		6%
Dietary Fiber	3g		14%
<b>Protein 3g</b>			
Vitamin A	0%	Vitamin C	0%
Calcium	0%	Iron	2%
Percent daily value reflects "as packaged" food.			
* 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
Dietary Fiber		25g	30g
Calories per gram:			
Fat	9	Carbohydrate	4
		Protein	4

**INGREDIENTS:** Whole Grain Popcorn, Partially Hydrogenated Soybean Oil, Salt, Natural and Artificial Flavor, Color Added, Nonfat Milk, Freshness Preserved by Propyl Gallate and Citric Acid.

**Microwave Popcorn # 2**

Nutrition Facts			
Serving Size 3.5 CUP			
Servings Per Container 3			
Amount Per Serving			
Calories 130		Calories from Fat 48	
<b>% Daily Value*</b>			
Total Fat	5g		8%
Saturated Fat	2g		10%
Trans Fat	0g		
Cholesterol	0mg		0%
Sodium	200mg		8%
Total Carbohydrate	18g		6%
Dietary Fiber	3g		12%
Sugars	0g		
<b>Protein 2g</b>			
Vitamin A	0%	Vitamin C	0%
Calcium	0%	Iron	4%
Percent daily value reflects "as packaged" food.			
* 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
Dietary Fiber		25g	30g
Calories per gram:			
Fat	9	Carbohydrate	4
		Protein	4

**INGREDIENTS:** All Natural Ingredients: Newman's Own Microwave Popcorn, Palm Oil, Salt, Soybean Oil, Natural Flavors, Vitamin E (for Freshness).

Source: President and Fellows of Harvard College and YMCA of the USA

## February – Oils & Good Fats!

Do you know which are healthy fats and which are unhealthy fats? Check out the two tables below for some hints on fats to avoid, and those that are healthy!

### **Snatch the Fat**

Leader Answer List for Food with Healthy and Unhealthy Fats

HEALTHY FAT	UNHEALTHY FAT
Olive Oil	Butter
Almonds	Cookies
Canola Oil	Milkshake
Whole Grain Bread	French Fries
Low Fat Milk	Chicken Nuggets
Sunflower Seeds	Whole Milk
Baked Fish	Pastries
Guacamole	Cheeseburger
Tuna Fish Sandwich	Hot Dog
Low Fat Yogurt	Donuts
Walnuts	Margarine



# Foods of the Month

## Fun, Experiential Activities

### Track the Trans Fat Comparison List

Food	Trans grams	Partially Hydrogenated Vegetable Oil?	Which is the Better Choice?
Peanut butter #1	0	No	✓
Peanut butter #2	0	Yes	
Microwave Popcorn #1	5	Yes	
Microwave Popcorn #2	0	No	✓
Margarine #1	0	No	✓
Margarine #2	2.5	Yes	
Tortilla Chips #1	0	No	✓
Tortilla Chips #2	0	Yes	
Crackers #1	0	Yes	
Crackers #2	0	No	✓
Chewy Granola Bar #1	1	Yes	
Chewy Granola Bar #2	0	No	✓
Chicken Nuggets #1	0	No	✓
Chicken Nuggets #2	1	Yes	
Chocolate Milk Drink #1	0	No	✓
Chocolate Milk Drink #2	0	Yes	

Source: President and Fellows of Harvard College and YMCA of the USA

February – Oils & Good Fats!



### Collect:

- Water
- Cooking oil
- 1-liter clear plastic bottle
- Food coloring
- Alka-Seltzer tablets

### Make the lamp.

1. Clean the bottle and remove the label and cap.
2. Fill the bottle 2/3 full of oil.
3. Fill up the rest of the bottle with water.

*What happens to the water? Why do you think the liquids act that way?*

Density is how much stuff is packed into a certain space. Water and oil do not mix because they have different densities. Water is denser (or has more stuff to it) than oil, so it sinks to the bottom.

### Make it groovy!

4. Add a couple drops of food coloring to the bottle. As the drops fall through the oil they will look like bubbles.

*Why did the food coloring not go to the bottom?*

When the food coloring is added, since it is only water-soluble, it will fall through the oil and sit on top of the barrier between the water and oil. Since the molecules of the food coloring can not mix with the oil, only the water will become colored.

### Add energy to the mix!

5. Break a piece of Alka-Seltzer into quarters. Drop one small piece in the bottle, but DO NOT cap the bottle! Pressure will build up inside and cause a lava rocket instead of a lamp.

*Where do the bubbles come from?*

Once you drop the Alka-Seltzer into the bottle, it will float through the oil, hit the water, and start to bubble. The gas bubbles produced are less dense than both the oil and the water, which means they will float to the surface. Alka-Seltzer contains citric acid (an acid) and sodium bicarbonate (a base) which are released as the tablet dissolves in water. These two chemicals react to produce bubbles of carbon dioxide gas which rise to the surface, pop, and then sink back down.

### Save it for later.

6. Once the reaction has finished, you may cap the bottle so that you can recreate the experiment later by adding more Alka-Seltzer.
7. Place a flashlight underneath the lamp for an extra-groovy glow!

### Results

How long does the reaction last? Does it last longer if you crush the Alka-Seltzer or put it in as one piece?





**Foods of the Month**  
**Fun, Experiential Activities**

# Water

## Grades 3-5



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[#CommitToHealth](https://twitter.com/CommitToHealth)



## Foods of the Month Experiential Activities

February – Water!!

### How Much Sugar is in Your Favorite Beverage?!!

Check out this PSA about how much sugar in a soda!

[https://www.youtube.com/watch?v=ronWuJsTWX0&feature=player\\_embedded](https://www.youtube.com/watch?v=ronWuJsTWX0&feature=player_embedded)

Then, carry out this event with your children that shows them how much sugar is in some of their favorite beverages!

Materials:

- Sandwich sized sealable baggies
- Sharpie marker
- Sugar
- Bowl (for sugar, if you want)
- Measuring teaspoon
- Variety of beverages selected from below (make sure you have water!):
  - Coke, 20 oz. bottle
  - Gatorade, Lemon-lime, 20 oz. bottle
  - Minute Maid 100% Orange Juice, 15.2 oz. bottle
  - Minute Maid 100% Apple Juice, 15.2 oz. bottle
  - Minute Maid Lemonade, 15.2 bottle
  - Nesquik Low-fat Chocolate Milk, 14 oz. bottle
  - Caprisun Fruit Punch drink pouch, 177 ml (6 oz)
  - Caprisun Roaring Waters, fruit punch, 177 ml (6 oz)
  - Sunny Delight original, 16 oz. bottle
  - Snapple Lemon Iced Tea, 20 oz. bottle
  - Water, any size!



## Foods of the Month Experiential Activities

### Instructions:

1. Discuss with children what they normally (and prefer to) drink (make a list on the board, if possible).
2. As a group, have children decide how to line up the drinks according to which they think has the least amount to most amount of sugar.
3. Put an empty baggie in front of each drink.
4. Using the “Rethink Your Drink” chart below, count out loud (with kids) and put in the correct number teaspoons of sugar into baggies in front of each drink.
5. Seal each bag as you go and write on it the number of teaspoons you put in it.
6. Discuss with children how they did in guessing which drinks had the most and least amounts of sugar.
7. Reorder the drinks (with bags of sugar) according to actual amounts of sugar in them.
8. Refer back to the drinks the children said they liked to drink and discuss their sugar content – remind them about making better drink choices.
9. Make copies of “Rethink Your Drink” chart below to send home with children.

### RETHINK YOUR DRINK!!

DRINK	SIZE	TEASPOONS OF SUGAR
Minute Maid Lemonade	15.2 oz	16.75
Coke	20 oz	16.25
Minute Maid 100% Apple Juice	15.2 oz	12
Minute Maid 100% Orange Juice	15.2 oz	11
Yoo-hoo Chocolate Drink	15.5 oz	11
Snapple Lemon Iced Tea	16 oz	9
Gatorade, Lemon-Lime	20 oz	9
Sunny Delight	16 oz	6.75
CapriSun 100% Juice Fruit Punch	6 oz	5
CapriSun Roaring Waters, Fruit Punch	6 oz	2
Water	Any size!	0



# Foods of the Month Experiential Activities

February – Heart Month



## Hey kids, what's that's you're drinking?

We all have our favorite drinks we get when we get thirsty. But, did you know that just like eating healthy food, we need to drink healthy drinks?

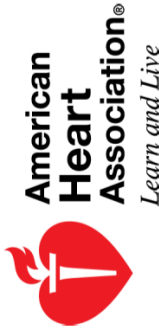
Look at this chart with your parent and check whether each drink is healthy, which are not, and which are okay to drink only sometimes. Post this chart on the refrigerator as a reminder and to encourage your whole family to switch to healthy drinks with you!

Type of Drink	What's in it?	How does it help my body?	Why should I be careful?	Should I drink it?	Is it healthy?
Regular soda	It has a lot of calories* but no nutrients** See the definition down below if you don't know what a calorie or nutrient is.)	Even though soda may taste good, it does not give any of the nutrients that your body needs.	Soda provides more sugar than your body needs, which can cause not only weight gain, but also tooth decay and cavities.*** Yikes!	The less soda you drink the better, try drinking water or fat-free (skim), 1 percent fat, or low-fat milk instead.	YES NO Sometimes
Diet soda	Diet soda doesn't have any calories, but it doesn't have any nutrients either.	Diet soda does not provide any of the nutrients your body needs.	Like regular soda, diet soda can lead to tooth decay and cavities too.	Diet soda is okay to drink occasionally, but be sure to drink enough water and fat-free (skim) milk to make sure you are getting all your nutrients	YES NO Sometimes
Fat-Free Milk (Skim Milk)	Many good nutrients your body needs, like calcium and protein. These help you build strong bones and muscles.	Calcium helps to keep your bones and teeth strong and protein helps you build strong muscles.	Not all milk is the same. Some milk contains a lot of extra fat (like in whole milk and 2 percent fat milk) that your body doesn't need. Make sure to grab ones that say fat-free (skim) or 1% fat.	To get enough calcium and protein, you will want to drink a few glasses of low-fat (1%) or fat-free (skim) milk every day. Try having a glass at breakfast, lunch, and dinner, or for a snack.	YES NO Sometimes



# COMMIT TO HEALTH

## Foods of the Month Experiential Activities



<p>Many good nutrients your body need, like calcium and protein. The chocolate and other flavors of milk are okay, but they have some extra calories from sugar, that regular milk doesn't have.</p> <p>Chocolate Milk</p>	<p>Calcium helps to keep your bones strong and teeth strong and protein helps you build strong muscles.</p> <p>Make sure to get low-fat (1%) or fat-free (skim) milk so that you aren't drinking too much fat!</p>	<p>To get enough calcium and protein, you will want to drink a few glasses of low-fat (1%) or fat-free (skim) milk every day. Try saving chocolate and other flavored milks for occasional treats or desserts a</p>	<p>YES</p> <p>NO</p> <p>Sometimes</p>
<p>There are no calories in water, but it is something that your body needs plenty of.</p> <p>Water Just water!</p>	<p>Water helps your body do its jobs like keeping your body temperature cool and helping you digest food. Also, water helps you control the number of calories you eat and maintain your weight.</p>	<p>It is important to drink water every day. Our bodies are mostly made of water; it is in all of our cells, tissues, muscles, everywhere! So be sure to get your fill to keep your body from getting thirsty.</p>	<p>YES</p> <p>NO</p> <p>Sometimes</p>
<p>Sugary drinks (Like flavored drinks and sports drinks)</p> <p>A lot more sugar than your body needs.</p>	<p>Some sugary drinks (like sweetened juice, fruit drink, fruit punch) may have some of the nutrients you need, like vitamins and minerals, but should not take the place of 100% juice or water.</p> <p>Sugary drinks provide more sugar than your body needs, which can cause not only weight gain, but also tooth decay a</p>	<p>The less you have of these sugary drinks, the better. Look for drinks that have fewer calories and get nutrients from drinks like fat-free (skim) milk.</p>	<p>YES</p> <p>NO</p> <p>Sometimes</p>
<p>Some energy drinks contain a lot of sugar or artificial sweeteners, caffeine and other chemicals that you can't even pronounce.</p> <p>Energy drinks</p>	<p>Even though energy drinks may wake your body up for a while, they often have a hard "crash" after the affects wear off.</p> <p>Having energy drinks may increase the chances of developing an abnormal heart rhythm and it increases you blood pressure. that can put a strain on your heart.</p>	<p>Try drinking a full glass of water if you feel tired, or lay down for a 20-minute cat-nap. Both of those things can help energize you during an afternoon slump.</p>	<p>YES</p> <p>NO</p> <p>Sometimes</p>

## Foods of the Month Experiential Activities

<p><b>100% Fruit juice</b></p> <p>The 100% juice label means that everything in the bottle came from a fruit or vegetable, but not necessarily the fruit or vegetable you think you're drinking.</p>	<p>Drinking juice isn't a substitute for eating fruit, but it can be healthier than some sugary drinks. Know what you're drinking!</p> <p>Calories from juices can add up quickly. For example: 4 oz of 100% grape juice has 76 calories!</p>	<p>Sometimes — and you can even eat it! Put 100% fruit juice in an ice tray and freeze it to make mini-popsicles.</p>	<p>YES</p> <p>NO</p> <p>Sometimes</p>
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**\*What is a calorie?** A calorie is a way to measure how much energy is in food. We can eat too many calories as well as not enough. Depending on your age, size, amount of physical activity and gender, you will need to eat a certain amount each day.

**\*\*What is a nutrient?** Nutrients are substances found in food that provide our bodies with important things to work and grow. Some nutrients are minerals, some are chemicals, and some are vitamins. Examples of nutrients are protein, calcium, Vitamin D , and fiber. By eating foods that have a lot of nutrients our bodies will feel and work better.

**\*\*\*What is tooth decay and what are cavities?** All of our teeth have hard coatings called enamel, that help to protect our teeth and keep them strong. Certain foods, like sugar and soda, can cause break down the enamel, making our teeth weak. When our teeth are weak things like cavities can form. Cavities are holes in the tooth where the enamel has gotten very weak.

**ANSWER KEY:** Regular soda: No, Diet soda: No, Fat-free milk (skim milk): Sometimes, Chocolate milk: Sometimes, Water, Just water!: Yes, Sugary drinks: No, Energy drinks: No, 100% Fruit Juice: Sometimes.