



Lesson 1- Exercise

Primary Subject: Health

Objectives:

Students will learn why exercise is essential to staying healthy.

Materials:

Computer or projector in order to show short video.

Introduction:

- 1. Anticipatory Set
 - What are your favorite sports/ways to exercise? Go around the room and make a list on the smart board
 - Play short video about being active: http://www.youtube.com/watch?v=2lbc3cLkEY8

Major Instructional Sequence:

- Have one side of the room represent "agree" and the other side represent "disagree".
 Read the statements below and ask the kids to decide whether they agree or disagree
 with them and direct them accordingly to the side of the room when they make their
 guesses.
 - When you exercise the foods you eat are burned up faster which is good for your body (answer is agree)
 - Candy is a good snack to eat before you exercise (answer is disagree, mention that a better option would be a banana or an apple)
 - A good snack after you exercise is Chocolate Milk (answer is agree. Chocolate milk has both protein and calcium, nutrients that are good for you)
 - Exercise makes your heart and lungs stronger (answer is agree. Heart and lungs are two muscles that exercise helps build that you might not think about)
 - Exercise makes you happy and lifts moods (answer is agree. There is something called endorphins that exercise stimulates in your body that make you feel happy)
 - Exercise can help you think more clearly (answer is agree. Exercise sends oxygen to the brain)

Concluding Sequence:

- Ask students if they can think of any other benefits from exercise- some examples include:
 - o Being on a team and learning about teamwork and goal setting
 - Motivation! Going out and playing soccer is better than sitting in front of a TV and playing video games
 - Good break when you get older and have homework to do, taking a break to do some exercise can be very helpful for your concentration
 - Reduces stress if you're mad or upset, exercise can be a great way to help reduce those feelings

Background:

At this time in their lives most students view exercise as an enjoyable activity. This lesson plan will show them that exercise is both fun and also very important for living a healthy life.







Lesson 2-Aerobic Excercise

Primary Subject: Health

Objectives:

Students will learn how to take their pulse and why exercise is important for their hearts.

Materials:

A stop watch

Introduction:

- 1. Anticipatory Set
 - Ask students why exercise is important/ good for you?
 - Remind them what they learned in the last lesson about how exercise burns calories, makes your body stronger, and releases endorphins (hormones that are released into your body that make you feel good when you exercise).
 - In particular, remind students how exercising makes your heart stronger.

Major Instructional Sequence:

- o Ask students if they know what aerobic exercise is?
- o Review the definition with them.
 - Aerobic means "with air," so aerobic exercise is a kind of activity that requires oxygen. When you breathe, you take in oxygen. This makes your heart pump more quickly to move the oxygen. When this type of exercise is performed it makes your heart stronger.
 - Aerobic activity can get your heart pumping, make you sweat, and quicken your breathing.
 - When you give your heart this kind of workout on a regular basis, your heart will get even better at its main job — delivering oxygen (in the form of oxygen-carrying blood cells) to all parts of your body.
 - Ask students if they can come up with examples of Aerobic Exercise?
 - E.G. swimming, basketball, ice or roller hockey, jogging (or walking quickly), inline skating, soccer, cross-country skiing, biking, or rowing.
 And don't forget that skipping, jumping rope, and playing hopscotch are aerobic activities, too!
- Pulse Activity:
 - Take pulse sitting down at your desk
 - Use two fingers (NOT YOUR THUMB) and put them right below your wrist to find your pulse
 - Count the beats for 30 seconds
 - Multiply the number you get by two → this is your heart rate in beats per minute
 - Teach lots of different types of jumping jacks
 - o Take pulse again
 - Explain that their pulse was faster the second time because it was pumping faster to
 provide more oxygen. Emphasize that it is important for your heart to work hard like this
 so it can get stronger.

Concluding Sequence:

- Review the definition of Aerobic Exercise.
- Have each student comment on the type of exercise they are going to do to make their heart healthier.

Background:

Students will learn why exercise is particularly important for heart health.



Vocabulary:

Aerobic Exercise- is a kind of activity that requires oxygen. When you breathe, you take in oxygen. This makes your heart pump more quickly to move the oxygen. When this type of exercise is performed it makes your heart stronger.







Lesson 3- Stretching and Posture

Primary Subject: Health

Objectives:

 Students will learn why stretching is important for their overall muscle health and will perform some simple stretches

Materials:

Rubber bands (two for each student)

Introduction:

- 1. Anticipatory Set
 - Explain to the students that stretching is important because it improves flexibility therefore preventing injuring and helping athletic performance
 - Stretching provides energy to the muscles by creating better blood flow

Major Instructional Sequence:

- Explain to the students that while stretching has many benefits (injury prevention, and better range of motion) it should also be done safely
- Explain how our muscles are like rubber bands, when stretched too much, they become weak and can break, but when stretched a little they become strong(allow the students to try this with their own rubber bands, stretching and unstretching them)
- Explain that if a stretch hurts them, they should stop and do it again, but lighter
- Explain to the students that in addition to stretching, having good posture is important too (having good posture prevents back problems later in life and is good for the spine and whole body)
- Ask each student to check their own posture, making sure their shoulder are back and backs aligned in their chairs

Concluding Sequence:

- Have the students touch their toes ten times, do five circles with their arms, and roll their necks five times
- Ask the students if they have any favorite stretches, and if the students have any, let the student show the rest of the class
- Explain that if the students are tired or cannot focus, they should get up, move around, and touch their toes a few times
- Also explain that stretching regularly provides the best results (2-3 times a week)

Vocabulary:

Muscle- The tissues around our bones that expand and contract to allow us to move

Posture- The alignment and straightening of the back while sitting







Lesson 4-Hydration

Primary Subject: Health

Objectives:

Students will learn what hydrates their bodies and why hydration is so important

Materials:

- One bottle each of lemonade, soda, sports drink and water
- A roll of painter's tape

Introduction:

- 1. Anticipatory Set
 - Lay the drinks out on a table in front of the class
 - Point to each drink and ask each student to raise their hand if they think the drink dehydrates them (makes them feel thirsty) or hydrates them (makes them feel refreshed)
- 2. Purpose: To test the students' knowledge of hydration.

Major Instructional Sequence:

- Explain what hydrates you and what doesn't
 - Explain how lemonade, soda, and sports drinks dehydrate you because of their high sugar content
 - (high sugar makes the body devote more of its water supply to breaking down the sugars therefore the body is left depleted with a low water supply)
 - Because so much of our bodies are made of water, when we are dehydrated our muscles and organs do not function properly, and this can lead to sickness and other ailments
 - Then explain how water contains no sugar so it is the best way to hydrate the body
- Show them how important water is for the body
 - Ask the class to guess what percentage of their body is water. Call on individual students for his or her best guess.
 - o Then explain to the class that 60% of our bodies are water .
 - Get the roll of painter's tape and place a long piece above each student's midsection to represent just how much of the body is comprised of water.

Concluding Sequence:

 Ask each student what they learned from the exercise: hydration is key in maintaining a balanced body and a healthy lifestyle

Background:

Students must learn from an early age that in order to stay healthy, hydration is a must. Our bodies depend on water for survival. Every cell, tissue and organ requires water to function properly. Our bodies use water to maintain temperature, remove waste and lubricate joints. Water is essential for good health.

Vocabulary:

Hydration- Drinking and absorbing water

Dehydration- The body's loss of water. Occurs when the body loses more water than it takes in







Lesson-5 Digestive System

Primary Subject: Health

Objectives:

Students will learn how the digestive system works

Materials:

- Zip-lock freezer bags
- Lemon juice or vinegar
- Crackers
- Signs that say mouth, esophagus, stomach, and small intestine
- Picture of a carrot, picture of a potato chip
- Worksheet for digestive system

Introduction:

- 1. Anticipatory Set
 - Tell the students that as part of our exploration of digestion, we're going to do two activities today.
 - First we will demonstrate the way in which food is broken down "digested" in our stomachs so that we can use the nutrients from the foods we eat.
 - (FYI for this activity you will need the zip-top freezer bags, lemon juice or vinegar, and crackers
 - Second, four students will be asked to represent the four parts of the digestive system to show how the whole system works
 - (FYI for this second activity you will use the signs for labeling student roles (mouth, esophagus, stomach, small intestine) as well as a picture of a carrot and a picture of a potato chip)

Major Instructional Sequence for Model of Stomach:

- Pour some lemon juice into the plastic bag. The juice will be the "strong liquid" that breaks down the food. It is an acid that works like the acids we have in our real stomachs. You'll need enough to cover the cracker. About a half cup should do it.
- Break the cracker into a few pieces. This is sort of like chewing it.
- Put the cracker into the bag and zip it up, while pushing out excess air.
- Now shake the cracker in the lemon juice. You can use your hands to squeeze
 it, too. This is like the action of the muscles that cause our stomachs to
 squeeze food during digestion.
- Describe what's happening to the cracker as your "stomach" digests it.

Major Instructional Sequence for Role Play:

- 1. Designate 4 students to play the roles of the mouth, esophagus, stomach and small intestine and line them up starting with the mouth and ending with the small intestine.
- 2. Take the picture of a carrot and have the mouth hold it; ask students what role the mouth plays in digestion (breaks food up so we can swallow; releases enzymes that start to break down the food)
- 3. Ask the student representing the esophagus to take the picture from the student representing the mouth indicating that food travels from the mouth to the stomach via the esophagus.



- 4. Ask the student representing the stomach to take the carrot from the student representing the esophagus and then discuss the role the stomach plays (breaks down food further with acid/enzymes)
- 5. Ask the student representing the small intestine to take the carrot from the student representing the stomach. Ask students what role the small intestine plays (it absorbs nutrients so that our body can them use them for energy, growth and storage of energy).
- 6. You can repeat this with a potato chip and then ask the students about the nutritional value of a carrot versus a potato chip.

Concluding Sequence:

 Have students fill in the worksheet (attached to this lesson plan) with the names of the parts of the digestive system to reinforce the roll playing of the four parts of the digestive system conducted earlier in the lesson.

Background:

Although this lesson plan doesn't necessarily teach students to be healthier, it is important that they understand how their digestive system works. This lesson will allow them to contextualize the other information they learn about nutrition in future lesson plans.

Vocabulary:

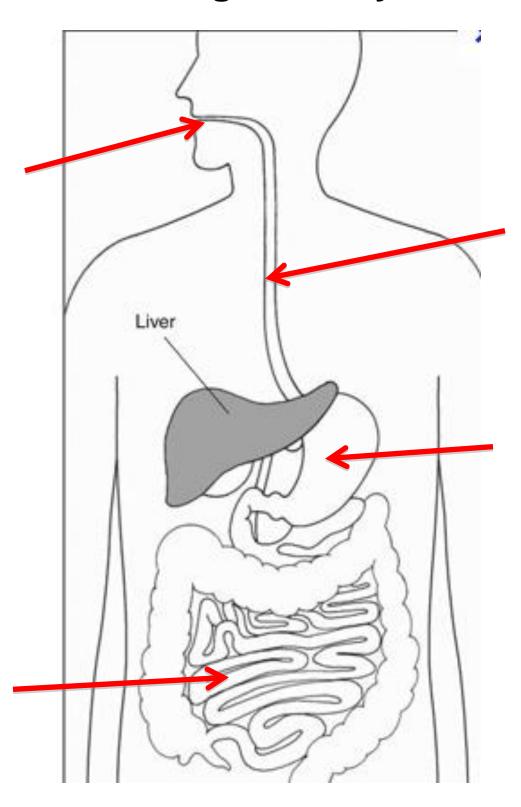
Esophagus- The tube that connects the throat to the stomach, carrying food to the stomach.

Stomach- A pear-shaped organ in which the first part of digestion occurs.

Small Intestine- A tube that connects the stomach to the large intestine, carrying food.



The Digestive System









Lesson 6- Natural vs. Processed Food

Primary Subject: Health

Objectives:

- Understand the difference between natural and processed foods
- Understand how certain foods effect our energy levels

Materials:

- Worksheet with two columns: one labeled "foods that give us energy", and the other "foods that zap our energy"
 - o need 2 copies of this worksheet for each student
- .Ziplock bags filled with pictures of different food items such as:

leafy greens, nuts, chicken, salmon, eggs, bananas, apples, low fat yogurt, hummus, beans, avocado, peanut butter, candy, lucky charms, white bread, fruit roll up, rice krispie treat, potato chips, soda, cupcakes, fruit juice

o one for every couple of students

Introduction:

Anticipatory Set:

- As a class, come up with definitions for natural and processed foods
- Have students write down one example of a natural food and one example of a processed food. Share as a class

NATURAL FOODS

- Come directly from an animal, tree or plant
- Not many ingredients
- · No chemicals or additives:
- No nutrients have been lost to processing.

PROCESSED FOODS

- Labeled with a long list of ingredients
- Often pre-cooked
- Contains additives and chemicals
- Hard to tell what the food is made of and where it comes from
- Frequently heavily advertised

Major Instructional Sequence:

- Procedure
- Give each student a bag filled with pictures of different food items, and a work sheet with two columns: one for foods that give us energy, and one for foods that zap our energy.
- Ask students to sort food items in the bag into these two categories, and write down results on the worksheet.
- Ask the students:
 - How did you make your decisions?



- Do you see any similarities among the items in each category
 - Foods that give you energy: leafy greens, nuts, chicken, salmon, eggs, whole grains, bananas, apple, low fat yogurt, hummus, beans, avocado, peanut butter
 - Foods that zap your energy: candy, lucky charms, white bread, fruit roll up, rice krispie treat, potato chips, soda, cupcakes, fruit juice

Concluding Sequence:

- 1. What do you do that you need energy for?
- 2. Does this mean you can never eat foods that zap your energy?
 - No, but you shouldn't JUST eat these foods. You should find a balance.

Background:

Students need to understand the difference between processed and natural foods. This lesson will show them that eating some processed foods is acceptable but a healthy diet should consist of mostly natural foods.

Vocabulary:

Processed: A series of chemical operations done to something in order to change or preserve it.

Natural: Existing in or caused by nature; not made or caused by humans.







Lesson 7-Blind Vegetable Tasting

Primary Subject: Health

Objectives:

 Students will experience the taste of fruits and vegetables and have the opportunity to blind taste-test certain types of these "good for you" foods.

Materials:

- Vegetables (carrots, peppers, celery, and cucumbers. Buy according to the number of students in each class)
- Fruits (apples, oranges, grapes)
- Blindfolds

Introduction:

- 1. Anticipatory Set
 - Explain to the students the difference between fruit (the sweet and fleshy product of a tree or plant that contains seed and can be eaten as food) and a vegetable (a plant that you can eat, usually green).
 - Cut up the fruits and vegetables and put small amounts of each on plates that number half the children in the class.

Major Instructional Sequence:

- Have the children work in pairs. One student will be blindfolded while the
 other offers the fruit or vegetables for tasting to the blindfolded student.
 The blindfolded student will be asked to identify the food as fruit or
 vegetable upon tasting and name the food item. Have the children rely on
 their sense of taste and smell and encourage them to talk about what
 they like and dislike about the fruits and vegetables they are tasting.
- Have the pairs switch roles and repeat the taste test.

Concluding Sequence:

- Poll the class as to the favorite fruit and the favorite vegetable tasted.
- Explain to them how the samples they tasted are examples of unprocessed (natural) foods as discussed in the last lesson
- Review the difference between Natural and Processed Foods

NATURAL FOODS

- Come directly from an animal, tree or plant
- Not many ingredients
- No chemicals or additives:
- No nutrients have been lost to processing.

PROCESSED FOODS

- Labeled with a long list of ingredients
- Often pre-cooked, canned or frozen



- Contains additives and chemicals
- Hard to tell what the food is made of and where it comes from
- Frequently heavily advertised
- Eating fruits and vegetables provides health benefits people who eat more of each as part of an overall healthy diet are likely to have a reduced risk for certain diseases. Fruits and vegetables provide nutrients vital for health and maintenance of your body.
- Go on to explain how our bodies function more efficiently when we eat unprocessed foods. They are more nutrient rich.

Background: This lesson plan will discuss the importance of fruits and vegetables. Eating a diet rich in each has many benefits. Fruits and vegetables are low in calories and fat and are essential to maintaining a healthy body.

Vocabulary:

Processed food- Foods treated with chemicals that are not found in nature

Natural/ Unprocessed food- Foods found in nature

Nutrients- Substances that provide nourishment essential for growth and maintenance of life.







Lesson 8-Good vs. Bad Fats

Primary Subject: Nutrition

Objectives:

 Students will learn that there are many types of fats; some that are healthy and some that are extremely unhealthy

Materials:

A picture of a large fish (trout or salmon for example) and a small fish (goldfish)
with the large fish representing the bad types of fat because they stick to arteries
and get stuck in our veins and the goldfish representing the good types of fat
because they are able to travel more freely in our veins and don't get stuck).

Introduction:

- 1. Anticipatory Set
 - Have the fish pictures at the front of the classroom
 - Tell the students that the picture of the larger fish represents a bad fat in foods because it sticks to our veins and has trouble moving through our bloodstream while the goldfish represents the good fat in foods we eat because it is smaller and more easily moves through our veins/bloodsteam.

Major Instructional Sequence:

- Explain what types of fat are good and what types of fat are bad
 - Explain how cholesterol is the fat that is in our bodies, it comes from many types of food and has two types
 - Explain how one type of cholesterol is bad while the other is good
 - Low-density Lipoprotein or LDL is bad cholesterol
 - Think of LDL's as large fish that can swim through the blood stream but often get stuck because their fins are too large or block the bloodstream so the other fish cannot get through
 - HDL is good cholesterol
 - Think of HDL's as fish that can swim through the blood stream easily because they are small and nimble (the goldfish)
- Explain what happens when we eat these different types of fats
 - Bad cholesterol (LDLs) come from foods high in fat such as ice cream,
 French fries, and butter
 - Good cholesterol (HDLs) come from healthy foods such as avocados, olive oil, and fish
- Divide half of the kids into LDLs (bad fats/the big fish) and the other half into HDLs (good fats/the little goldfish)
- Have the kids that are HDLs (good fats) walk in and around the desks in the room easily (through the "veins") like fish easily swimming in a stream
 - Explain how these students represent good fats like avocados, olive oil, and nuts that can move through veins easily



- Ask the kids that are LDLs (bad fats/big fish) to very slowly move through the
 desks in the classroom like bigger fish trying to swim in a small stream who can
 only do so fairly slowly because they are bigger than the stream is wide.
 - Explain that these students can't get through the vein easily because they represents bad fats that often get stuck or clog veins
 - Explain that this is what happens when you eat a lot of bad fats like potato chips, french fries and processed foods which clog your arteries, don't allow blood to flow, and can lead to heart disease, blood clots, and heart attacks.

Concluding Sequence:

• Ask each student to recall what foods contain bad fats and which contain good

Background:

Students must know that not all fats are bad. Although consuming large quantities of LDLs can be detrimental to a person's health, some other fats like HDLs are very healthy.

Vocabulary:

Cholesterol- Fat in our bodies

High Density Lipoproteins- Good fats that come from foods such as avocado and olive oil

Low Density Lipoproteins- Bad fats that come from foods such as butter and processed food

Plaque- The buildup of LDLs (bad fats) in our blood stream









Lesson 9-Building a Healthy Plate

Primary Subject: Health

Objectives:

 The goal of this lesson is to help students understand how different nutrients are derived from different food groups, the relationship between different nutrients and where they come from, and the process of building a plate (making smart food choices) so that students receive all necessary nutrients. This lesson is lengthy and may take extra time in the classroom and can be tailored for younger or older elementary students.

Materials:

- Nametags for students and teachers (and extra for activity)
- Signs for the 5 food groups (meat, vegetables, fruit, grains, dairy)
- Cut Outs of:
 - Meats- Chicken, fish, beef, pork, turkey,
 - Veggies- carrots, celery, potatoes, broccoli, lettuce, spinach, corn, squash, peanuts
 - o Fruit- apples, bananas, pineapple, watermelon, peach, berries,
 - o Dairy- Cheese, Yogurt, Milk, eggs, ice cream
 - o Grains- rice, pasta, oats, bread, crackers, cookies,
- Print out of the food plate (attached to this lesson plan)
- Survey for each student (attached to this lesson plan)

Introduction:

- 1. Anticipatory Set
 - Question Students about healthy snacks
 - What do they think is a good snack before any type of physical activity?
 Possible answers include:
 - Nuts (which will keep you full longer, give you the most energy), low fat cheese, apples, bananas, grapes, carrots and hummus and celery and peanut butter are all good options.
- 2. Purpose: Review last weeks lesson about natural and processed foods.

Major Instructional Sequence:

- 1. Using flip chart paper/chalkboard or whiteboard, ask students to define the following words one at a time; even have them just say words that come to mind when they hear the words.
 - Protein
 - Carbohydrate
 - Fat
 - Vitamin/Mineral
- After students offer their ideas on the definitions, go over the actual definition (see below) and ask if there are any questions about what each word means
- 2. Activity: Learning how to build a well-balanced meal;
 - Food Plate Shopping Activity (10-12 minutes)
 - Create an interactive food market where students will have the opportunity to create a plate for themselves. Each "teacher" will take up a vending station handing out different



food items. Allow the kids to freely select what food they want. The vendors include a butcher, a baker, fruit, vegetable and dairy sellers. Students pick five items from any stands of their choosing to create a plate of food. They will then answer a survey to analyze their selections. This will spark a conversation about the choices they made, and choices that allow for us to obtain necessary nutrients.

- Materials include cut outs of all of the foods including:
 - Meats- Chicken, fish, beef, pork, turkey,
 - Veggies- carrots, celery, potatoes, broccoli, lettuce, spinach, corn, squash, peanuts
 - Fruit- apples, bananas, pineapple, watermelon, peach, berries,
 - Dairy- Cheese, Yogurt, Milk, eggs, ice cream
 - Grains rice, pasta, oats, bread, crackers, cookies,

3. Procedure

- explain carefully to the class that they are going to go food shopping in the classroom market.
- They can pick any five items out of the market to create a plate of food for dinner.
- After they walk around and interact with the vendors around the classroom they are to return to their seats.

4. Introduce the food plate & Survey:

• Show students the food plate and have them fill out a short survey

Concluding Sequence:

- 1. Ultimately the goal of this lesson is to discuss/understand why we need to have a balanced diet/ eat many food groups. Use framing questions to push the conversation towards the food plate model, and that certain nutrients in certain proportions are necessary for your body to function properly.
- 2. Guiding questions-
 - Go over the survey
 - Why did you choose the food you did?
 - Is it necessary to gain nutrients from all types of food?
 - When building a plate how much variety should there be?
 - Do you need a food from every food/nutrient group? How much?
- 3. Throughout the discussion make sure to take some time to stop and provide facts about why each nutrient/ food group is important. Reference the food plate, to guide the discussion as a strong model for a healthy diet. It may also be important to mention that every individual's diet is different because all humans have different dietary needs. For example, exercise is a big factor in determining the amount of food one should consume.

Background:

After learning so much about healthy foods, it is important that students apply their knowledge. They will learn how to create a healthy meal using the "plate" guidelines provided by the federal government.



Vocabulary:

Protein: Compounds that help your body grow; required to build, maintain and replace the important tissues in your body (organs, bones, skin, etc.). Proteins are made up of AMINO ACIDS...in digestion, proteins are broken up into their different amino acids which perform different functions in your body; Often found in meats, beans, dairy products, seeds, nuts, etc.

Carbohydrate: Compounds the body breaks down into sugars to use for energy

Simple Carbohydrate: Body breaks down sugars in simple carbs (found in fruits/veggies, but also plain refined sugar) quickly, so you feel hungry soon after eating these

Complex Carbohydrate: Also referred to as starches; more complex structure that takes the body longer to break down and keeps you full for longer; examples include whole grain breads, oatmeal, etc.

Fat: Component found in food that is stored in our body for energy; need some amount of fat in our diet, but excess fat storage is not healthy; fat found in meats, nuts, oils, butter, etc.

Vitamins & Minerals: Substances that are found in foods that are required for our body to work properly and each play different roles; often found in fruits/vegetables/dairy. Examples include:

Vitamin D: Found in milk- helps your bones grow

Vitamin C: Found in orange fruits/vegetables helps your body heal Vitamin A: Found in veggies, especially carrots, help you to see at night B Vitamins: Found in dark green leafy veggies, help your body make protein



What nutrients do you have on your plate? Round 1

Circle the foods on your plate now:

Carbohydrates	Fats	Proteins	Vitamins & Minerals
Potatoes	Chicken	Chicken	Carrots
Rice	Beef	Beef	Celery
Pasta	Pork	Pork	Broccoli
Oats	Fish	Fish	Lettuce
Bread	Turkey	Turkey	Spinach
Crackers	Peanuts	Eggs	Corn
Cookies	Yogurt		Squash
Ice Cream	Cheese		Peanuts
	Milk		Apples
	Ice Cream		Bananas
	Cookies		Pineapple
			Watermelon
			Peach
			Berries

Are you missing any nutrients from your plate? If so, which ones?

If you are missing a nutrient, what food could provide that nutrient? What could you exchange off of your plate for it?

Which food group do you usually eat the most of?

Which food group do you usually eat the least of?

Do you think that it is important to eat all of these nutrients? Why?



What nutrients do you have on your plate? Round 2

After our discussion, circle the foods you would put on your new plate:

Carbohydrates	Fats	Proteins	Vitamins & Minerals
	Chicken	Chicken	Carrots
Potatoes	Beef	Beef	Celery
Rice	Pork	Pork	Broccoli
Pasta	Fish	Fish	Lettuce
Oats	Turkey	Turkey	Spinach
Bread	Peanuts	Eggs	Corn
Crackers	Yogurt		Squash
Cookies	Cheese		Peanuts
Ice Cream	Milk		Apples
	Ice Cream		Bananas
	Cookies		Pineapple
			Watermelon
			Peach
			Berries

Why did you make these new choices?

If you want some more information about the FoodPlate (fun games! Food plans!) go to www.choosemyfoodplate.gov!



