

Introduction to Health

Objectives

1. Students will understand that health is not simply the absence of disease.
2. Students will understand that emotional (mental), physical and social health are defined differently.
3. Students will understand that there is a cause and effect relationship between our actions and our health.

Materials needed for this lesson

1. True and False signs (provided)
2. Construction paper (various colors)
3. Glue
4. Scissors
5. Magazines, newspapers, or other materials that have pictures students can cut out.
6. Poster board or over-sized paper
7. Chalkboard or transparency

Background information and notes

Health is typically defined differently from person to person. Children normally think that if you are not sick, you're healthy. It is important for children to understand all the aspects of health and to realize how our *actions* can be unhealthy. This lesson will help students look at some of the myths about health and hopefully change the way they define health.

After the content of the lesson has been presented, there are three activities. The first two activities, *What is health?* and *Stairway to Health* are relatively simple to conduct. The ***Learning Activity Extension, Health Concept Map***, is slightly more difficult to facilitate. The decision to implement this activity should be left to the discretion of the program provider(s).

Presenting the Lesson

This lesson is supposed to get kids thinking about health. To get their minds going in the right direction, they have to know the correct definition of health. Our overall health is comprised of physical, mental and social health. The definitions for all three of these are provided below. These definitions are meant for the program provider. A definition for the students is also below.

Definitions for the program provider:

Physical Health: the absence of disease and disability; functioning adequately from the perspective of physical and physiological abilities; the biological integrity of the individual.

Mental Health: May include emotional health; may make explicit reference to intellectual capabilities; the subjective sense of well-being

Social Health: the ability to interact effectively with other people and the social environment; satisfying interpersonal relationships; role fulfillment

Definition for the students:

Health: when a person is in a state of complete physical (bodily), mental (the mind and feelings) and social (interactions with other people) well-being. Health is not simply the absence of disease.

In other words, a person is *physically healthy* if they are able to perform tasks that people their age can generally do. For example, children should be able to play on the playground for thirty minutes without having difficulty breathing. Another way to determine one's physical health is to look at the food and drink that the person puts into their body. Do they eat from all the food groups? Do they limit sweets and sugary drinks? Do they limit fattening foods like french fries and potato chips?

When a person is *mentally healthy* they are able to cope with the situation around them. In general they are happy (Everyone has a bad day!). They are able to function at the cognitive level expected of someone their age.

Children who are *socially healthy* are able to interact effectively with their peers. The child has friends and does not shy away from social situations. It's certainly ok to have a shy personality, but one's shyness should not interfere with his or her ability to communicate effectively.

After going over these concepts with the students, use the following game to get children moving and thinking about health.

Learning Activity: What is Health?

Explanation of Activity:

This game looks at various myths about health and helps the students clarify their definition of health.

Directions:

1. Have all the students stand in the middle of the center of the gym/classroom, moving all tables out of the way if necessary. On one side of the room, hang a sign that states “TRUE” on the wall. On the opposite side of the room, hang a sign that states “FALSE” on the wall.
2. Read the students a statement about health from the list provided. They will decide whether they think the statement is true or false. They will have to quickly line up in front of the correct sign.
3. Read the correct answer and give the reasoning behind the answer.
4. Students will return to the center of the room and repeat the process for each question.

Questions for “Is that Health?”:

1. **Being healthy just means not being sick.**
FALSE! There are many areas of health. Just because you do not have a cold or the flu or some other illness, does not necessarily mean you are totally healthy.
2. **You have to be thin to be healthy.**
FALSE! Health is about much more than just weight. Some very healthy people are not thin and some thin people are not very healthy. What matters is what you eat and how much physical activity you get.
3. **The only way to get a good workout and be physically active is by playing sports or doing exercises.**
FALSE! You do not have to play sports or do exercises to be physically active and improve your health. You can also do everyday things in order to be physically active. For example, doing your chores or playing with your friends count.
4. **You have to be good at sports to be healthy.**
FALSE! You do not have to be an athlete or even like sports to be healthy.
5. **What you drink affects your health.**
TRUE! What you drink is just as important as what you eat.
6. **If you want to be healthy, you never eat “junk foods” or snacks.**
FALSE! Foods with minimal nutritional value, often referred to as junk food, should be eaten in moderation. The important thing is that you make sure you eat foods that have many nutrients the majority of the time and that you are physically active.
7. **You need a gym membership or expensive exercise equipment to get the best workout.**
FALSE! You do not need anything except your body to get the best workout! If you prefer to use equipment, you can use everyday household items instead of buying expensive equipment.
8. **It is easier to develop healthy habits now as a kid rather than as an adult.**

TRUE! It is much easier to start healthy habits when you are young than to try to break unhealthy habits when you are older.

9. Being healthy will help you reach your goals.

TRUE! Any goal that you have is easier to achieve when you are healthy. For example, when you are healthy, it is easier to get good grades, go to college, get better at sports, play an instrument well, become an artist and make more friends. When you are healthy, you can achieve your dreams. The sky is the limit!

10. You can always tell by looking at someone whether or not they are healthy.

FALSE! You can't tell by looking at someone whether or not they are healthy. (Don't judge a book by its cover!) Health is usually something going on inside our bodies and is not visible.

11. Everyone can improve their health.

TRUE! Everyone can dramatically improve their health by making healthier choices, such as eating from the five food groups, getting plenty of physical activity and not using tobacco products.

12. If other people do something, you should too.

FALSE! You should think about what other people are doing and decide for yourself if it is healthy or not. Not everyone makes good decisions.

Learning Activity: Stairway to Health

Explanation of Activity:

Building a *Stairway to Health* will teach students about how to go about achieving health. They will choose five **actions** they think are the most important for reaching the top stair (the goal: Health).

Preparation:

You will need colored construction paper, markers, glue, scissors, old magazines, newspapers, or other materials with pictures that students can cut and use, poster board or a large sheet of construction paper. You may want to pre-cut steps for the stairway. You or the student will need rectangles that get progressively longer (or shorter).

Directions:

1. Be sure each student places the word health along with a definition of health at the top of the stairway. The definition should be one that you provide or that the class has determined collectively to ensure that the students have grasped the concept of health.
2. To make this activity more creative and enjoyable, have the students cut out pictures from magazines or old newspapers of people doing healthy things (drinking milk, riding a bike, etc.). They can glue the pictures around their stairway.
3. The students can then present their stairway to the class. Have each student discuss why they think their pictures and concepts are healthy. See the sample stairway for more assistance.

Sample Stairway to Health



Health

When a person is in a state of complete physical (bodily), mental (the mind and feelings), and social (interactions with other people) well-being and is not just the absence of sickness or disease.



Learning Activity Extension: Health Concept Map

Explanation of Activity:

The purpose of the concept is to help students define health.

Directions:

1. See what students already know about health. Write down all the suggestions and/or comments made by the students. Strive to touch on all areas of health (physical, mental, social).
2. Students should give examples of actions and feelings (moods) that may relate to health. Refer to the list of prompts and concepts if the students have difficulty brainstorming.
3. Ask the students if their responses are directly related to health. Are there any misconceptions that need to be addressed? (*Students should not associate health with weight or being thin. At this age, it is inappropriate for students to consider weight as a factor of health.*) What concepts need to be clarified? Example: A student might say: “being able to lift heavy weights.” It is important that students recognize that they can lift heavy weights because they have built strong muscles. So, clarify his or her statement by saying: “You are able to lift heavy weights because you worked hard to develop strong muscles.”
4. Draw lines from the center of the concept map to those concepts/actions that relate directly to health. See the model concept map for more clarification.

Activity Debrief:

These questions will help to summarize the activity:

1. Does health include your physical, mental and social well-being?
2. How do our actions affect our health both in the short-term and the long-term?
3. Can you determine how healthy someone is by looking at him/her?

Health concepts and prompts for the concept map:

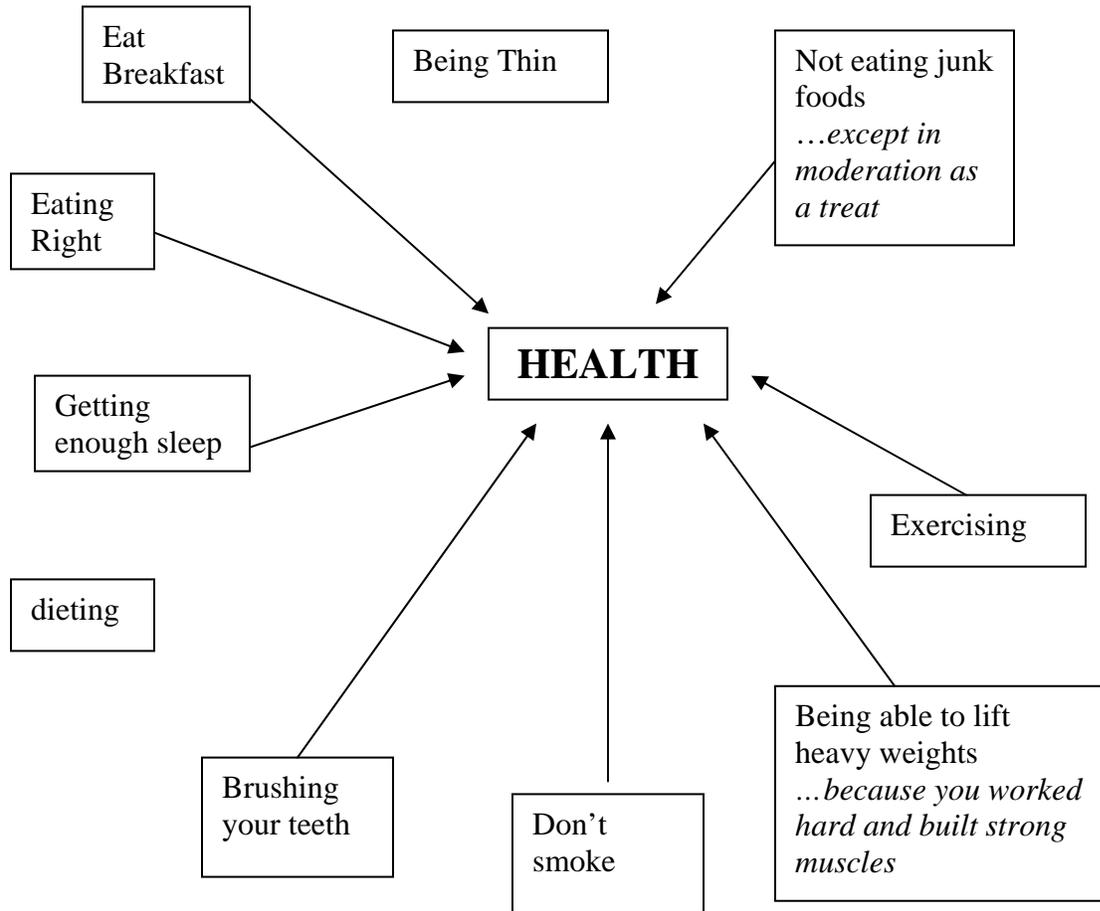
Prompts:

1. What does a healthy person do?
2. How does a healthy person feel?
3. What **doesn't** a healthy person do?
4. What do healthy people eat?

Concepts:

1. Don't smoke
2. Eat foods with many nutrients
3. Limit "junk foods" or foods with minimal nutritional value. It is okay to have special treats every once in a while.
4. Able to focus on schoolwork and give their best effort to everything that they do
5. Drink water
6. Be physically active every day
7. Feel energetic
8. Get plenty of rest (10 to 12 hours per night is recommended for children ages 5 to 12)
9. Eat 5 to 9 servings of fruits and vegetables
10. Limit drinking pop
11. Good Hygiene (bathing/showering/brushing your teeth)
12. Have a good self-image/have high self-esteem

Sample Concept Map



Community Physical Activity Options

Objectives

1. Students will understand that there are a variety of places in their community where they can be physically active.
2. Students will understand that although some activity locations cost money, there is always at least one place where they can be active at no cost.
3. Students will understand how to contact a community organization (via letter or phone call) in order to obtain information.
4. Students will understand how to present information to other people.
5. Students will understand how to conduct research and summarize research results.
6. Students will appreciate the benefits of the community in which they live.

Materials/Resources needed for this lesson

1. Phone books, local parks and recreation newsletters, the internet, school library
2. Paper for the business letters and resource guides the students will create
3. Binders or lamination and binding for the resource guides

Background information and notes

Regardless of where you live, there are places for your family to be active. You and your family can be active practically anywhere. The sidewalk in front of your home provides a good place for physical activity, but you can also venture far away to be active. You could go skiing as a family. There are always going to be options that are available at no cost and options that will cost money. Depending on the area in which you teach, your students will have different barriers to accessing safe and affordable places to be physically active. Some students may have no barriers at all, while others may not even be able to safely play in their yard or may not have a sidewalk. In all cases, it is important for students to research the options available to them. While some places, like the YMCA, may charge money, they also offer scholarship programs for low-income families. There are also community centers that sometimes offer services at no charge.

Presenting the Lesson

Begin with a group discussion regarding places in the community where students can be physically active. There are locations that are free (hiking trails, bike paths, parks) and community centers, facilities or activities that cost money (swimming pools, sports leagues, dance studios). A list is provided for more ideas (see *Additional Resources*). Write down all the suggestions made by the students. Be sure to include schools as locations where students can be active at no charge.

Once the students have come up with a sufficient list assign one location to each student/pair of students. This lesson will be divided into three parts: research, composing a business letter and creating a resource guide.

Learning Activity: Research

Explanation of the activity:

This activity will help students to become more aware of places they can go to be physically active. They will do research on different places where they can be physically active.

Preparation:

You will need phone books, local parks and recreation newsletters, the internet and use of the school library for the students to conduct research. You may want to locate print materials for the students ahead of time.

Directions:

After they have their assigned location, students, they will begin their research. They should use phone books, local parks and recreation newsletters, the internet, the school library and any other resources that you have collected for them. The research may be conducted in class or as homework, depending on the amount of time and home resources available. Students should obtain the following information:

- Facility location, telephone number and website (if applicable)
- Activities that are offered for their age group
- Costs (if any)
- Event/promotional schedule
- They should make a request to have materials sent to them (flyers, brochures, newsletters)

Learning Activity: Compose a Business Letter

In order to obtain the above information, students should compose a business letter. This letter should be in correct business letter format. Students should have their letters approved before they are mailed out. (See sample letter). They should make a first draft and submit it to a classmate to be peer edited. Once a second draft has been composed, both drafts should be turned into the teacher. The final draft should be mailed.

Sample Business Letter

35 E. Gay Street, Suite 509
Columbus, Ohio 43215

6 September 2006

Bradley Community Center
350 York Avenue
Bradley, Ohio 12345

Dear Sir or Madam:

My 4th grade class is creating a resource guide that includes all the places where we can be physically active in our community. I have chosen to find out about the Bradley Community Center. I would like to know what activities your facility offers and how much each activity or service costs. Please include activities that are free and sports leagues or camps that the community center provides.

I need to have all of the brochures and flyers that you have available. If your brochure does not have your telephone number or website listed, please include them in your response. I would also like an event schedule.

Thank you for helping my class stay physically active.

Sincerely,

Nolan Smith

Learning Activity: Creating a Resource Guide:

Step 1: While students are waiting for a response to their letters, they should design the layout for the Resource Guide. Each student's page can have a different layout.

Step 2: A cover can be designed together as a class, or each student can draw a cover and the class can vote on which one to use as the Official Resource Guide cover.

Step 3: Once students receive their responses, have them create an entry page for their organization. There may be students who do not receive a response to their letter. Those students who do not receive a response can create an entry page for another organization using information readily available from other sources (the internet, talking to someone on the phone, etc.).

Step 4: Assemble the entry pages into a binder or laminate and bind them into a book format. Make sure that all brochures, flyers and newsletters are included as well. If you have the resources, it is best to make sure that each student receives a photocopy of the resource guide to take home to their parents or guardians. This will help promote physical activity within families.

Step 5: Students should give a brief presentation (approximately 2 minutes) about their community location activity. They will summarize how their research process was carried out, what they learned and whether or not they recommend their location/activity.

Sample Resource Guide Entry Page

Bradley Community Center

Where having fun is just the beginning!



The Bradley Community Center
350 York Avenue
Bradley, Ohio 12345
(321) 555-8786
www.bradleycommunity.org

Youth Activities Offered at the Bradley Community Center

- Basketball (team and open gym)
- Swimming (open swimming and swim lessons)
- Summer Camp
- Ballet
- Fit 4 Life Kids
- Baseball league
- Family fun days

Membership fees

- Family memberships are offered on a sliding scale fee based on income. Memberships are all-inclusive. There is no additional charge for any activities listed above.
- Bradley Community residents can participate in all activities for a small fee if they do not have a membership.

The hours of operation for The Bradley Community Center are:

7:00am-9:00pm Monday-Friday
8:00am-8:00pm Saturday
12pm-5pm Sunday

For more information, contact Laura Quinn at (321) 555-8789

Healthy Community

Objectives

1. Students will understand that a variety of components contribute to a healthy community.
2. Students will understand that every community has something good to offer.
3. Students will understand how to make a map of a model community.
4. Students will understand how to determine the best place to buy healthy foods, particularly fruits and vegetables, and where to be active.

Materials needed for this lesson

1. Transparency or chalkboard
2. Graph or plain paper
3. Writing utensils
4. Red and blue markers, crayons or pens

Background information and notes

A community's health status can be determined in part by the physical community itself. A community can be a group of people with something in common or people who share a common interest. For the purpose of this lesson, a community will be defined as **the city or area in which we live**. Depending on where your program is taking place, your students might be at an advantage because of their community. There may be several large, clean supermarkets nearby or plenty of places to be physically active (parks, fields, sidewalks, recreation centers, etc.). Other students may only have access to convenient stores, fast food restaurants or other facilities that are less likely to provide foods that are high in nutritional value. The basic understanding should be that no community is perfect, yet every community has something to offer.

Another reason for this lesson is to encourage students to find out where they can buy and eat healthy foods and be physically active. As the lessons in this program progress, they will learn much more about the importance of nutrition, physical activity and not using tobacco or exposing themselves to secondhand smoke. You may want to familiarize yourself with the neighborhood before presenting this lesson. Have a good idea where kids can be physically active and what their sources of food are.

Presenting the Lesson

Ask students to define community in their own words. Make sure that the students come to a definition similar to the one given in the background. After students understand the definition of community, they should be asked to name things in their community that are related to their health or that affect their health. Use the chalkboard or a transparency to make categories for their ideas. The categories should include *nutrition, physical activity and “other.”* The students’ responses should fit into those categories. The “other” category may include places where they are exposed to secondhand smoke, school (where they interact with others, affecting their social health) and areas that are unsafe and/or should be avoided. The other category can also include places where they feel safe and where they can make healthy choices. For instance, school may also be placed under physical activity because they can be active during recess or physical education, and they can come back after school to play on the playground. Use a Venn diagram to show students that some categories will overlap.

When a variety of places have been named discuss each response. Star the places that positively affect one’s health. For instance, star all the places where they can purchase fresh fruits and vegetables, eat balanced meals, be physically active, maintain healthy relationships, etc.

After discussing the responses, have the group answer the following questions:

1. What makes your community great?
2. What are the three most important places in your community to promote good health?
3. What can you do if you do not live close to healthy places?

Sample List of Responses

Nutrition

Gas Station (store)
 Fast Food
 School
 Home
 Smoky Pub
 Carry out
 Grocery Store
 Farmer’s market
 Sit-down restaurant

Physical Activity

Neighborhood Sidewalk
 Basketball courts
 School
 Home
 Community Center
 Empty Field
 YMCA
 Park

Other

Power plant
 Smoky pub
 School
 Home
 Community Center
 Downtown

Learning Activity: Mapping a Model Community

Explanation of Activity:

This activity will help students understand where to get nutritious foods and places to go to be physically active within their communities.

Preparation:

You will need graph or plain paper, a writing utensil, and a red and blue marker, crayon or pen for the *Mapping a Model Community* activity.

Directions:

1. Each person or group needs a piece of paper, preferably graph paper.
2. Students will create a model community. By now, they should know what a model community would have (i.e. school, places to be physically active, places to buy nutritious food, smoke-free environment, etc.). The students can put whatever they want in their community as long as they have places to be active and places to get nutritious food. Students may put as many other places as they want such as a library, shopping mall, movie theatre, etc. Remember, this is *their* model community.
3. If using graph paper, 1 graph square should equal 2-3 blocks.
4. Once all the places are mapped, students should outline their places to get nutritious food in **red**. They should outline their places to be physically active in **blue**.

Activity Debrief:

Students should present their model community to the group.

The following questions will help to summarize the activity:

1. Where are some healthy places in your community?
2. Why did you choose the places you did for your community?

Introduction to Media Influence

Objectives

1. Students will understand that media has three purposes: Educational, Entertainment and Advertisement.
2. Students will understand that not all media sources are credible.
3. Students will understand that there are different types of media: print, TV, Internet and movies.
4. Students will understand how to recognize the effects media has on their thoughts, feelings and behaviors.

Materials needed for this lesson

1. Newspapers or magazines
2. Scissors
3. 20 print examples of the three types of media (advertisements, entertainment, educational) that are age appropriate.
4. Masking tape
5. Labels (provided)
6. Blank video, VCR, TV (optional)

Background information and notes

Media has a huge impact on people of all ages, but especially on children. The amount of time children are spending in front of the television or on the internet is consistently on the rise. More time watching TV means children are spending less time engaged in physical activity. In addition, media of all forms are influencing the way children think, feel and behave. It is important to strive for media literacy for all children. They must learn to distinguish fact from opinion and fiction from reality. Things are not always what they seem, and students will be able to make healthier decisions if they go to reliable sources to have their questions answered.

Presenting the Lesson

See what the students know about media. Ask if anyone can define the term *media*. Do any of the students know what different forms of media are? Can they name another source besides television? Generate enough ideas and come to the following definition:

Media = any device that is intended to communicate a message to an audience.

Here are the words of the definition broken down:

-**Device** = mechanism, method

-**Communicate** = to express, deliver

-**Audience** = group of people or a person to which your message is directed

In other words, *media* is any method used to deliver a message to a group of people. We may be receiving messages without even knowing it. There are many different forms of media that surround us:

-Print media (newspaper, magazines, posters, billboards)

-The internet (also sometimes considered print media)

-Television

-Movies

There are many forms of media and even more messages. Each message has a purpose. The 3 purposes include:

1. **Entertainment** = just for fun
2. **Educational** = to teach something or inform you of something
3. **Advertisement** = an attempt to get you to buy or do something. This is the most persuasive type of media.

Glossary of terms from this lesson:

- **Media** = any device intended to communicate a message to an audience
- **Device** = method, mechanism
- **Intended** = with a goal of
- **Communicate** = express, deliver
- **Audience** = group of people your message is directed toward
- **Purpose** = goal
- **Entertainment** = just for fun
- **Educational** = to teach you something or inform you of something
- **Advertisement** (also called marketing) = when a company tries to get you to buy or do something
- **Persuade** = to convince someone of something you want them to believe or do

Learning Activity: Print Media

Explanation of Activity:

This activity will allow the students to demonstrate their knowledge of the three purposes of media: Entertainment, Advertisement, and Educational.

Preparation:

You will need newspapers, magazines and scissors for this activity.

Directions:

1. Give each student or small group of students a stack of newspapers and magazines and a pair of scissors.
2. Have the students look through the newspapers and magazines to find examples of the three purposes of media: Entertainment, Advertisement, and Educational.
3. The students should cut the examples out.
4. Make sure the students find at least one example for each purpose of media.
5. When all students have at least 3 examples, have them present their examples to the class and clearly explain why they chose them.

Learning Activity: Media Matching Game

Explanation of the activity:

This activity will allow the students to demonstrate their knowledge of the three types of media (advertisements, entertainment, educational).

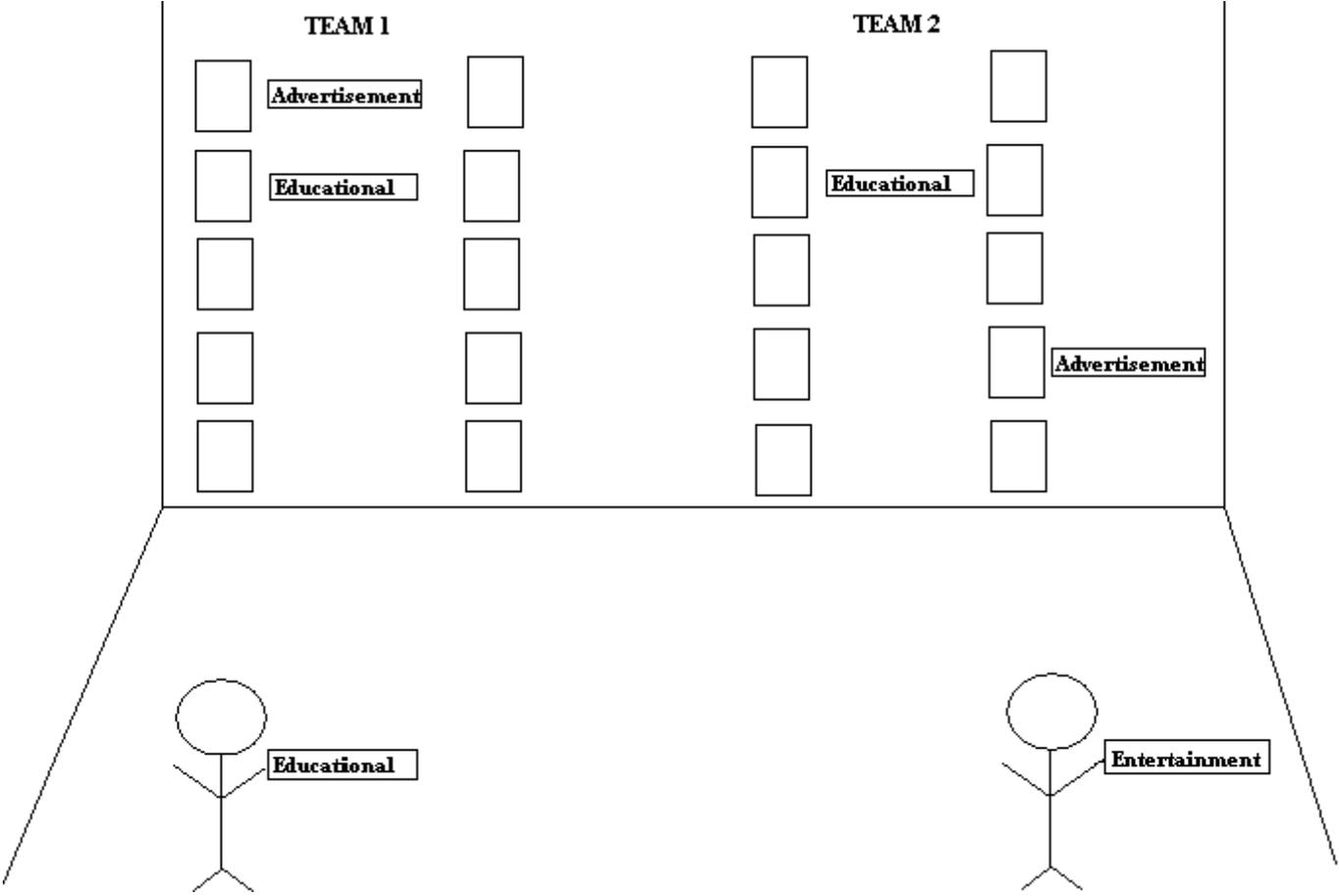
Preparation:

1. For this game, you will need 20 examples of the three types of media, in print. Be sure the examples come from children's magazines or newspapers and are age-appropriate and relevant for children. (Advertisements = advertisements from newspapers and children's magazines or a picture of a product's mascot; Entertainment = comics, sports stories; Educational = articles from kids' magazines and newspapers). You will also need labels and masking tape.
2. Also, post examples of the three types of media on a wall, and students will have to label those examples. Gather real-world examples from children's magazines and newspapers. Ten examples equal one set, and you will need two sets per game.
3. Cut the word labels into strips so that there is only one word per strip.
4. Post each set of pictures in a line on a wall. Be sure that the sets are distinguishable from each other. See below for illustration of set-up.

Directions:

1. Line students up on the other side of the room. Designate one member of the team to be the Team Leader.
2. Give each Team Leader a stack of word labels.
3. The Team Leader will hand the first student in their team's line a label. The student will take that label and run to the other wall where they will place the label next to the correct corresponding example. Then, they will run back to their team and go to the back of the line.
4. When a student gets to the back of the line, the Team Leader can then give the new first student in line a label and he or she will run down and match it to an example.
5. Students are allowed to move a label after it is posted, but they must skip their turn of posting a new label if they choose to rearrange already posted labels.
6. This continues for three minutes (vary the time limit depending on how far students will be running to the pictures and the ability levels of your students. Make the time limit constrained enough that they must rush, but long enough that they can get through all the word labels.)
7. The team gets one point for each correct match. The team with the most points wins.

**Illustration of game set-up:*



Learning Activity Extension: Media on TV

Explanation of the activity:

This is an additional activity that can be used if you have the resources to conduct it.

Preparation:

You will need a blank video, VCR and TV for this activity. You will need to record commercials for food and products for children, clips from news or educational shows and clips from cartoons or other entertainment shows.

Directions:

1. Show the video clip by clip. Stop the video after each clip.
2. When you stop the video for each clip, ask the students the following questions:
 - Did you recognize any of the characters?
 - Did you learn any new facts?
 - Were there any cartoons or music?
 - Was most of the time spent on one toy, game or song?
 - What was the purpose of this clip? Was it for entertainment, an advertisement or educational?

Labels for the Media Matching Game

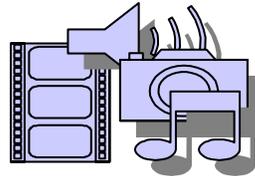
Advertisement



Educational



Entertainment



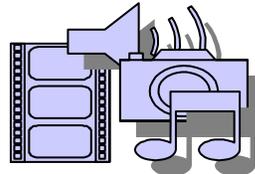
Advertisement



Educational



Entertainment



Advertising Food and Drink

Objectives

1. Students will understand how to define and distinguish between facts and opinions.
2. Students will understand how to define persuasion.
3. Students will understand the four techniques that are commonly used in advertisements.
4. Students will understand how to identify the nutrition label as a source of factual information regarding food and drink.

Materials needed for this lesson

1. Product description sheets (provided)
2. Empty cereal package with no labels or labels that are covered by blank paper
3. Empty soda pop bottle or can with the label covered
4. Candy bar without a wrapper (some have foil underneath) or a candy bar with the label covered
5. Potato chip bag with the label covered
6. Art supplies
7. Fact and Opinion signs (provided)

Background information and notes

This lesson is meant to show the techniques that advertisers use to sell their products. Kids are heavily influenced by commercials and other advertisements. A large portion of the advertising market is kid-centered. Executives have realized how much influence a child has on what is purchased by the parent or guardian. This lesson will help show kids that a commercial is not a source of factual information. Advertisements often express opinions and leave out important information about a product, especially when it's a food or a drink. By the end of this lesson, students will recognize the need to seek out additional information about food or drink that they see in an advertisement before deciding if it is healthy to consume.

Presenting the Lesson

Begin by seeing what students already know about commercials and why they are made. Commercials are a form of advertisement that is meant to persuade a person to buy a product or service. From this, students should be asked to define the word *persuade*.

Explain that to *persuade* means to try to convince someone of something

For example, a fast-food restaurant will try to convince you their food tastes great, it is something you want to eat and it is better than other restaurants' food.

This is done for any sort of product. Products do not have to be foods; they can be any type of general merchandise such as food, clothes, movies, etc. Ask the students to recall a commercial that they have seen recently. Ask what happened in the commercial and what product was being sold. Ask the students if the commercial made them buy the product. Explain that commercials use a variety of techniques to get people's attention and to persuade them to buy the product that they are selling. These techniques can include:

- A spokesperson: A real person, a celebrity, an actor or a cartoon character that appears in ads. The spokesperson says good things about the product or is shown using the product.
- Music: Many commercials use music in the background. Some have a catchy song made just for the commercial. This is sometimes called a jingle.
- Slogans: A sentence or phrase that is made just for the commercial. Slogans can be funny or serious.
- Repetition: Commercials are replayed over and over. Within a commercial, the name of the product will be repeated or a slogan will be repeated so that people remember it.
- Excitement and Fun: Commercials will show people using their products and doing fun or exciting things, like surfing, skateboarding or having fun with family and friends.
- Popularity and Coolness: Commercials will have people dressed in popular or trendy clothing doing things that the majority of people would consider cool. These people are using the product or they become popular or cool after they have the product.

Revisit the commercial(s) that was described by the students. See which of the above techniques were used for the commercial. Acknowledge that the above-referenced techniques may be used in print advertisements as well. Ask the students if some commercials are used to persuade certain groups of people, and who those people or cultures are. It would be beneficial to show sample advertisements that are aimed at kids. (For example, the "got milk?" ads) Ask the kids if the products they see on TV are the same products they have in their homes.

Get the students thinking about who makes the commercials and advertisements. Discuss advertising agencies with your students. Advertising agencies work for the product manufacturers. Their job is to convince or persuade people to buy their product(s). They are educated in the subject of advertising and selling. They know how to aim a commercial or advertisement at a specific group of people. Children are particularly at

risk for believing what is presented in commercials, especially if they cannot distinguish between **facts** and **opinions**.

Fact = information based on proof or evidence

Opinion = a personal attitude or a belief that cannot be proven

Express the importance of making choices based on factual information that is presented to you. Students must first find out truthful information about food and drink product before consuming them.

Learning Activity: Making a Commercial

Explanation of the activity:

This activity will allow the students to learn about how advertisements make products seem appealing.

Preparation:

For this activity, you will need product description sheets, an empty cereal package with no labels or labels covered by blank paper, an empty soda pop bottle or can with the label covered, a candy bar without a wrapper (some foil underneath) or a candy bar with the label covered, a potato chip bag with the label covered and art supplies.

Directions:

1. Divide the students into four groups.
2. Each group is an advertising agency that has been hired by their product's manufacturer to sell their product. They are going to make a 30-60 second commercial.
3. Give each group a different Product Description sheet.
4. Explain that due to limited time, they will only be able to use some of the information on the Product Description Sheet. They have to decide which information will make the product seem appealing. That information is what should be told in the commercial.

*This activity may be split up over the course of a few days.

Part 1: Brainstorming

1. In their groups, the students should decide which items on the Product Description Sheet they want to highlight in their commercial.
2. Students should also decide which advertising techniques they want to use. Display the advertising techniques on the board or elsewhere to remind the students what they are.

Part 2: Scripting

1. Have each group create a script for their commercial. They should rehearse their scripts to make sure that they fit the time limit.
2. The students should also use this time to design the labels for their products.

Part 3: Performing

1. Have each group present their commercial to the class.
2. Once every group has presented their commercial, use either a written ballot or have the students raise their hands to vote on the product that they would like to buy the most based on the commercial, without voting for the group they were in.

- Begin with the group that received the most votes. Have the students that voted for the product that received the most votes, raise their hands. Tell them to keep their hand raised until they hear something about the product that would make them **not** want to buy (or eat) the product anymore. Explain that this could be anything, including something that makes the product seem unhealthy.
- Have one student from the winning group read the items on the Product Description Sheet one by one. Do this for each group/product.
- Ask the students to tell the class why they left out the information that they did. Hopefully, students will be able to explain that presenting the health information may not make the product appeal to people. Reinforce the fact vs. opinion. What was a fact in their commercial? Which statements were opinions?
- Discuss resources that can be used for children to find out facts about food and drink after they see a commercial for it.
- **The nutrition label is the best source for information.** This will give the sugar content and show other nutrients that the product provides. (A nutrition label lesson is provided later in the curriculum and there are two lessons on nutrients.) Most fast food restaurants will provide nutrition information for their menu upon request.
- Parents are another good source. Tell students that it is a good idea for students and parents to learn together about the products that they are consuming.
- Teachers and doctors are also an excellent source of factual information about food and drink products.

Learning Activity: Fact vs. Opinion

Explanation of the activity:

This activity will help the students to determine which statements regarding nutrition, physical activity and tobacco prevention are facts or opinions.

Directions:

1. Have the students gather in the center of the room. Move all desks/tables out of the way so that there is an open area. On one side of the room post the “FACT” sign. On the other side of the room post the “OPINION” sign.
2. Read a statement from the list provided. Give the students 5-10 seconds to determine whether the statement was a fact or an opinion. Giving them a quick time limit will create a sense of urgency and get the kids moving. Further, it will show you what their immediate reaction is to statements heard in commercials.
3. Tell them the correct answer and explain why it is either a fact or an opinion.
4. Have the students return to the center of the room and repeat steps 2&3 until you’ve gone through the entire list.

List of statements

1. A balanced diet means eating from all five food groups. (Fact)
2. Fruit tastes better than vegetables. (Opinion)
3. Smoking makes you look cool. (Opinion)
4. A serving size is the amount of food suggested for one person at one time. (Fact)
5. Fruit is the seed-bearing part of a plant. (Fact)
6. Pretty woman wear make up. (Opinion)
7. The best physical activity is jump rope. (Opinion)
8. Exposure to secondhand smoke is dangerous. (Fact)
9. Winter has the best sports. (Opinion)
10. Eating breakfast is very important. (Fact)
11. Boys are better at sports than girls. (Opinion)
12. Video games are the best way to spend free time. (Opinion)
13. Eating 5 to 9 fruits and vegetables will help you improve your health. (Fact)
14. Physical activity will improve your cardiovascular health. (Fact)
15. Being healthy is easy. (Opinion)

Product Description Sheet: O'Cola!

O'Cola!

1. Has the most fizz of any soda pop
2. Contains no nutrients
3. Contains a lot of sugar
4. Has a lot of caffeine
5. Inexpensive
6. Kids prefer it over Crazy Cola
7. Comes in 3 flavors: Regular, Cherry, and Vanilla
8. Popular kids choose to drink O'Cola over any other drink
9. If you drink O'Cola, you will look more popular, too
10. Made by the same company that makes Gooey Goodness Candy Bars

Product Description Sheet: Mrs. Crunch's Chips

Mrs. Crunch's Chips

1. Contains no nutrients
2. Contains a lot of oil and grease
3. Comes in 3 different flavors: Regular, Barbecue, and Cheesy
4. Made from the Crunch family recipe
5. Eating Mrs. Crunch chips will make you feel like part of the loving Crunch family
6. You can really taste the difference between Mrs. Crunch's Chips from Cheery
Chips
7. Now also comes in snack size bags
8. New design makes them the crunchiest chip ever
9. Tastes best when eaten with Mrs. Crunch's Chip Dip
10. Mrs. Crunch is a really nice lady and you should help her by buying her chips

Product Description Sheet: Goey Goodness Candy Bar

Goey Goodness Candy Bar

1. A chocolate candy bar with caramel and nuts inside
2. Contains a lot of sugar
3. Only brave and tough kids can eat a whole Goey bar
4. Contains no nutrients
5. Kids who like extreme sports love Goey bars
6. Makes you feel full for hours after eating one
7. Once you eat a Goey bar, you will never want a different kind of candy bar ever again
8. Dentists say because Goey bars have so much sugar in them, they may cause cavities
9. Inexpensive
10. Favorite candy bar of the rock band “The Rockers”

Product Description Sheet: Rise and Shine! Cereal

Rise and Shine! Cereal

1. Crunchy
2. Has the most dazzling colors of any cereal
3. Can be eaten dry or with milk
4. Contains a lot of sugar
5. Families who eat Rise and Shine! Cereal together every morning are better than families that do not
6. Sensational Cereal, which is made by a different company, has more nutrients
7. Sensational Cereal has less sugar
8. Second best-selling cereal last year
9. Favorite cereal of 5 to 8-year-old kids
10. The best way to wake up in the morning is to eat Rise and Shine! Cereal

OPINION

FACT

Personal Goal Setting

Objectives

1. Students will understand how to define motivation and goal.
2. Students will understand how to reach a goal by breaking it down into smaller steps or parts.
3. Students will understand that making a contract is a good way to hold themselves accountable for reaching their goals.

Materials needed for this lesson

1. Building blocks or any other stackable objects that are *not* interlocking. Any mixture of sizes will work.
2. Masking tape
3. A small “prize” for the winning group in Activity 1

Background information and notes

Setting a goal is an important life skill. When a person sets a goal, it is even more important that they take steps toward accomplishing their goal. Many people set goals that are unreachable. They become frustrated and quit before the goal has been met. This lesson is intended to show kids how to make an attainable goal for themselves and how to track progress toward its accomplishment.

Presenting the Lesson

Students should be given the opportunity to define the term *goal* in their own words. They should also brainstorm sample goals (e.g. Spend more time with family members, do something nice for someone each week, walk to school instead of getting a ride, etc.) Some goals are harder to reach than others. An example is as follows:

- More difficult*: raising my math grade from a C to a B
- Easier*: helping my mom around the house more

A good goal is very specific. For example, students should say “raise my grade from a C to a B” rather than “get better grades”. When students are working toward a difficult goal, it is important that they learn to take small steps toward achieving something big. Have your students imagine taking a road trip without a map or winning a basketball championship without a game strategy. To further emphasize this point, do the following exercise.

Learning Activity: Moving Forward

Explanation of the activity:

This activity teaches the students about importance of motivation when reaching a goal.

Preparation:

You will need building blocks or any other stackable objects that are *not* interlocking. (Any mixture of sizes will work). You will also need masking tape.

Directions:

1. Divide the students up into groups and spread the groups out in the classroom.
2. Give each group a set of 10 to 20 stackable objects.
3. Tell the students to build something with their objects. It must be free-standing. They cannot use anything to hold the objects together.
4. When each group has completed a structure, go around and place a piece of masking tape a few feet in front of each structure.
5. Tell the students that their goal is to move the structure across the line of tape, but only one person can be touching it at a time. When the structure is moved across the line, it should look the same as when the students created it.
6. The group that finishes the fastest will get a prize.

•After the students have completed the exercise, have a class discussion about the following:

•Did anyone try moving the whole structure at once? If so, what happened?

The students are most likely to say that the structure fell over or they weren't able to move it with just one person holding on to it.

•How did you succeed in moving your structure?

The students are supposed to have figured out that they could move the structure by breaking it into smaller pieces and then rebuilding the structure on the other side of the line.

•Begin to discuss motivation with the students. Have them define *motivation* in their own words. *Motivation* is how interested and excited you are about reaching your goal. It is also a driving force that encourages you to continue working on a goal. Explain that sometimes it is hard to stay motivated when trying to reach your goals. To stay motivated, it can sometimes help to set rewards for yourself at each step that you complete. When you have completed a step and you are able to move on to the next step, you can reward yourself with a new book, a CD, a new shirt, etc. This may help to keep you motivated to reach your goal.

•Break down the following goals as an example:

•Eat five fruits and vegetables a day.

1. Eat fruit with breakfast every day.
2. Have a fruit or vegetable as a snack every day after school.
3. Eat a salad or side vegetables with dinner.
4. Pack fruits and veggies in your lunch bag.

- Do 50 push-ups a day
 1. Do 10 push-ups every morning for a week.
 2. Try to increase the number of push-ups by 5 per week.
 3. Do 10 push-ups after school every day for a week.
 4. Try to increase the number of push-ups you do by five a week until you have reached fifty.

Learning Activity: Personal Contract

Explanation of the activity:

This activity, writing a personal contract, will help the students hold themselves accountable when trying to reach a goal. After the lesson, students should fully understand how to make a personal goal and break the goal down into smaller steps.

Directions:

1. Have the students fill out the **personal contract**, which is documentation that they have made a goal for themselves and that they are going to work hard to accomplish it.
2. Review each student's goal. Make sure that the goal is attainable. Likewise, make sure that each student's goal is challenging.
3. It is also important to make sure that the students' goals are *positive*, no one should have a goal of losing weight or anything else that would be considered negative. If a student does have a goal that is negative, work with them to redefine their goal to make it positive, or completely change the goal. Here is an example:

Goal: To lose ten pounds

Revised Goal: to begin eating a balanced diet and walking my dog every day to get more exercise.

Personal Contract

I, _____, have decided to reach a personal goal.

My goal is:

To reach my goal, I will break it into smaller steps. (Note: All goals may not require 10 steps) These steps are:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

The reward for reaching each smaller step will be:

The reward for reaching my goal will be:

I have set a goal that is possible for me to reach. I promise to work hard and keep track of my progress toward this goal.

Signature

Date

Goal Tracking Worksheet

Name:

Goal:

STEP 	DATE STARTED 	DATE ACCOMPLISHED 	REWARD 

Personal Image

Objectives

1. Students will understand how to define attribute.
2. Students will understand how to define personal hygiene
3. Students will understand how to identify how peers' comments and actions can influence healthy and unhealthy behavior.
4. Students will understand that their behaviors affect the self-esteem of their peers as well as their own self-esteem.

Materials needed for this lesson

1. Piece of paper or paper plate for each person
2. Construction paper
3. Markers (washable)

Background information and notes

Personal image and self-esteem are important at any age. The younger children learn how to have a positive self-esteem, the more likely they will be to believe in themselves as they age. Personal hygiene increases self esteem and is an important way to maintain health. This curriculum is full of ways for children to learn how to be healthy. However, if they do not believe they can implement the skills they learn in this curriculum, they will not practice healthy habits on their own.

Presenting the Lesson

Students should understand the definition of *attribute*. Give students a chance to describe an *attribute* in their own words or by giving an example. Define an *attribute* as **a quality, trait or characteristic of something or someone**. Examples of attributes include: **smart, funny, kind, creative**. Attributes are adjectives that can be used to describe someone or something.

Students should understand that everyone has different attributes. People look different from each other, are good at different things and like different things. It should be emphasized that everyone is different in many ways.

Go around the room and have the students name one positive attribute about them. This will model behavior for the “Things to like about myself” activity.

Students should also understand the definition of *personal hygiene*. As above, give students a chance to describe *personal hygiene* in their own words or by giving an example. Define *personal hygiene* as **the ways you keep your body clean and healthy**. Examples of personal hygiene practices include: brushing your teeth, and washing your hands.

Learning Activity: Reading and Responding to Scenarios

Explanation of the activity:

This activity will help students to understand that friends and the media can contribute to their self-esteem.

Directions:

Choose whether students will work together as partners or together as class to read the following scenarios and the questions that follow.

Scenario 1

Anna and Olivia are eating lunch together. Anna asks, “Did you watch *The Lindsay Ruff Show* last night?” Olivia says she missed it. “Oh, it was so great,” Anna gushes. “Her hair was super straight and she put blue streaks in her bangs. I wish my hair could do that.” Olivia thinks Anna’s curly hair is pretty but she agrees with her friend and doesn’t say so. Instead, Olivia says, “I wish I could dye my hair, too. It would be easier to dye if it were blond.”

Questions:

1. Who do Anna and Olivia compare themselves to?
2. Is it realistic to compare yourself to someone you see on television or in a magazine? Explain.
3. What could Olivia have said to Anna that was positive?

Be sure to make sure students realize that in this scenario, Olivia contributed to Anna’s negative thoughts about herself AND put herself down. Discuss that people on television and in magazines have access to professionals whose job is to make them look “cool and attractive.” You should never compare yourself to anyone.

Scenario 2

Mark and Diego want to play baseball after school. They are deciding who to ask to play with them. Diego says, "I think we should ask the new kid from the class next door." Mark disagrees. He says, "Justin? I saw him try to catch a ball in gym class. He was terrible. If you want to ask him, he's on your team." Diego asks Justin to play with them. Justin admits that he is not a great athlete, but he'll try. Justin strikes out during the game and misses a fly ball in the outfield. "I told you so," Mark whispers to Diego. After the game, Justin uses his math skills to tell everyone what their batting percentages were. He thanks Diego and says, "I love baseball, but I never got asked to play at my old school." Mark is impressed with Justin's math skills and offers to help him with baseball in exchange for some math tutoring.

Questions:

1. Why did Mark not want Justin to play?
2. Was Mark right or wrong about Justin?
3. Would Mark have seen any positive attributes in Justin if Diego hadn't asked Justin to play?

Make sure that the students note that it is important to give people a chance. Justin can get better at baseball with the help of his friends and practice. Mark will also improve at math with Justin's help. Helping your friends is an excellent way to help them have positive self-esteem.

Learning Activity: Personal Hygiene Word Search

Explanation of the activity:

This activity will help students to learn ways they can increase their self esteem by keeping themselves clean.

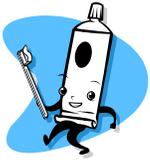
Directions:

Discuss with students the importance of hygiene. Define each hygienic practice, discuss the purpose of each, and describe the appropriate way to accomplish each task.

- **Brush teeth** –Using a toothbrush and toothpaste, move the brush along the top, bottom, front and back of your teeth for at least two minutes. Brush your teeth two times a day. Brushing your teeth helps remove food and germs that stick to your teeth after eating. It also freshens your breath.
- **Take bath-** Fill your bathtub with warm water. Sit in the tub with your washcloth and soap and scrub your whole body, then rinse off the soap. Take a bath or shower at least every other day. Taking a bath washes the germs off your skin keeping you clean and smelling nice.
- **Brush hair-** Using a hairbrush or comb place the brush in your hand and pull gently down. Repeat this on all of your hair. Brushing your hair keeps it clean and free of knots and tangles.
- **Take shower-** Using warm water, soap, and a washcloth, scrub and soap your whole body, then rinse off. Take a shower or bath at least every other day. Taking a shower washes the germs off your skin and keeps you clean and smelling nice.
- **Change clothes** – Put on a new clean set of clothes including socks and underwear every day. Changing your clothing keeps you smelling nice.
- **Wear deodorant-** Using a stick or spray deodorant, put a little under each arm. Do this every morning and before you play sports. Wearing deodorant keeps you from sweating and makes you smell nice.
- **Clean ears** – To clean your ears put some soap and warm water on a washcloth. Gently rub the washcloth on the outside of your ears. Do NOT stick the washcloth inside your ear. Also wash behind your ears. Do this once a day. This helps keep germs out of your ears.
- **Wash face** – Using a washcloth, soap, and warm water scrub your face. Do this every day. Washing your face takes the oil and dirt off it so your skin is soft.
- **Floss** - Wrap a few inches of floss around your pointer fingers. Place the floss between each of your teeth and gently rub it against your teeth. You should floss once a day. Flossing removes the plaque and germs from between your teeth that brushing misses.
- **Wash feet** –Using a washcloth, soap, and warm water scrub the tops and bottoms of your feet and in between your toes. Wash your feet once a day during your bath or shower. Cleaning your feet keeps them smelling nice and germ free.
- **Wash hair** – Using shampoo and warm water lather and scrub your hair. Rinse the shampoo out with warm water. Do this at least twice a week. Washing your hair keeps it clean and not greasy.

- **Wash hands** – Using soap and warm water lather your hands by rubbing them together. Rub them together under the warm water for at least 15 seconds (the time it takes to sing “Happy Birthday”). Washing your hands removes germs and helps you to stay healthy.

Have students circle typical personal hygiene practices in the word find below.



Personal Hygiene Word Find

Directions: Find the list of hygiene words in the puzzle below. The words can be across, down, horizontal, or backwards.

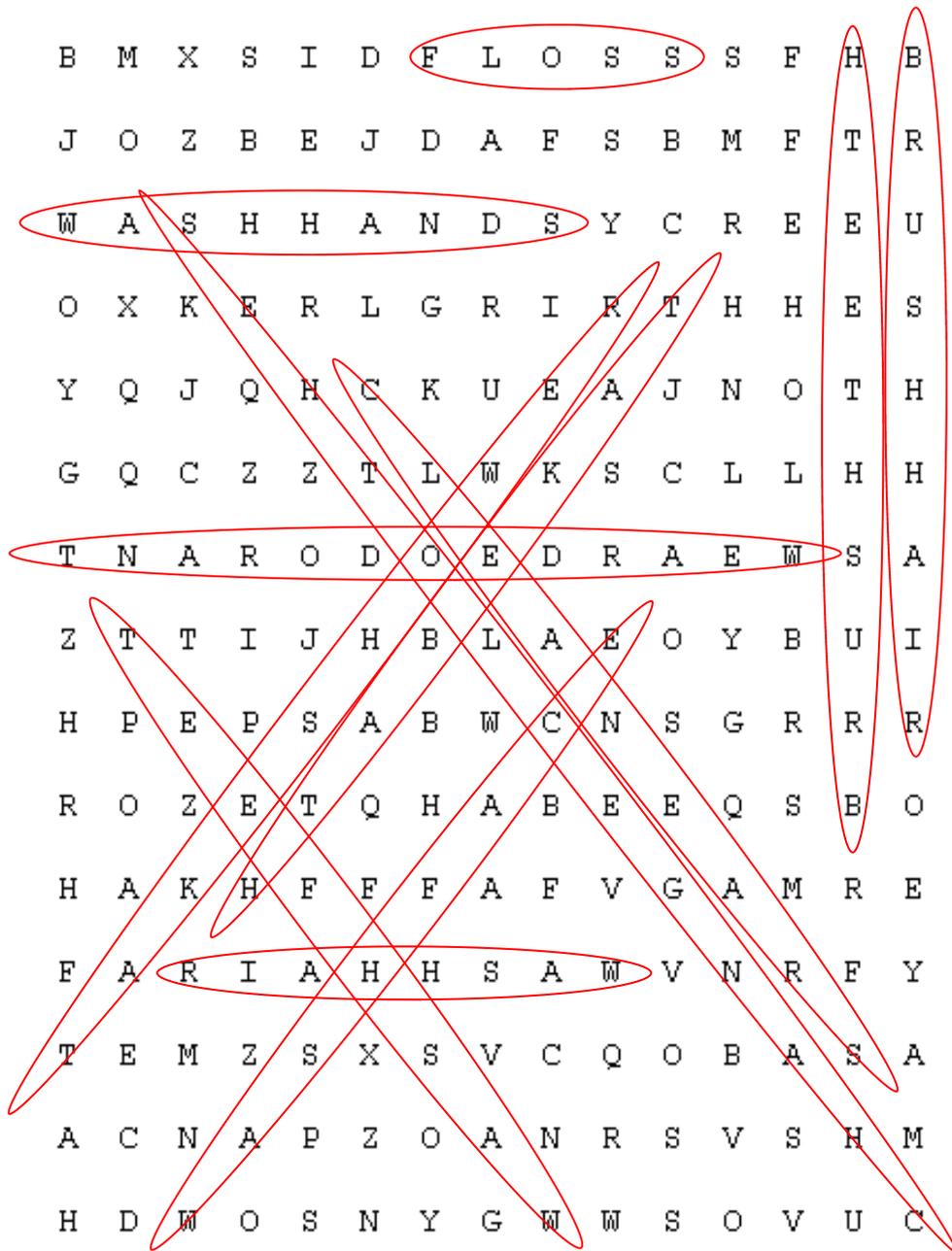
B M X S I D F L O S S S F H B
 J O Z B E J D A F S B M F T R
 W A S H H A N D S Y C R E E U
 O X K E R L G R I R T H H E S
 Y Q J Q H C K U E A J N O T H
 G Q C Z Z T L W K S C L L H H
 T N A R O D O E D R A E W S A
 Z T T I J H B L A E O Y B U I
 H P E P S A B W C N S G R R R
 R O Z E T Q H A B E E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

Brush teeth
 Brush hair
 Change clothes
 Clean ears
 Floss
 Wash hair

Take bath
 Take shower
 Wear deodorant
 Wash face
 Wash feet
 Wash hands

Personal Hygiene Word Find

Answer Key



Learning Activity: Things to Like About Me

Explanation of the activity:

This activity will help to build students' self-esteem. The students will write positive comments to their classmates in order to build self-esteem.

Preparation:

You will need one worksheet for each student, a marker (non-permanent) and masking tape.

Directions:

1. Pass out a piece of paper or paper plate with "Things to like about me" written or typed at the top to each student. Tell the students to write their name on the worksheet.
2. Give the students a piece of masking tape. Have the students help each other tape the worksheet to their backs.
3. Have the students go around the room and put a POSITIVE comment on the worksheet.
4. Once students have made a comment on every student's worksheet, debrief.

Sample comments: you're nice, funny, smart, caring, kind, hard-working, etc., you make me laugh; you're a good friend, etc.

Learning Activity: Name Cards

Explanation of the activity:

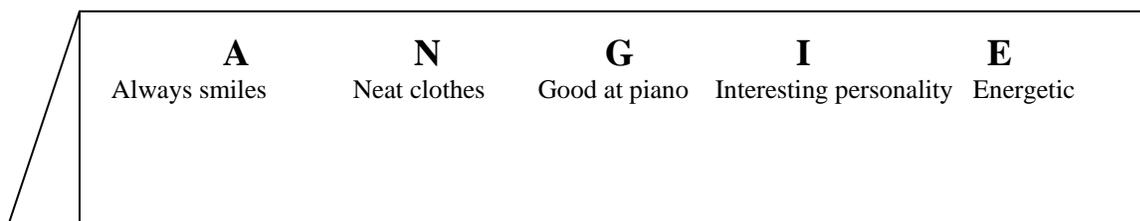
Students will develop better self-esteem by writing positive things about themselves.

Preparation:

You will need construction paper and markers for this activity.

Directions:

1. Give each student a piece of construction paper.
2. Give each student a variety of markers.
3. Have the students fold their construction paper in half so that it stands up.
4. Each student will write their name in large block letters, leaving room below or next to each letter. They will write one good thing about themselves for each letter. See the example below.



Presenting the Lesson

Explain to students that just about everything we do in a given day can be classified into one of four categories. The four categories are below:

Screen Time: Time spent playing video games, watching TV and using the internet for non-school purposes. Screen time should be limited.

Active Time: Time spent playing (including recess and gym class), exercising, walking and doing household chores. High-energy activities fit into this category. Aim for at least 30-60 minutes a day.

School Time: Time spent in classes or doing homework.

Down Time: Time spent reading, relaxing, sleeping and doing low-energy activities. According to the National Sleep Foundation, children ages 5-12 usually need 10-11 of sleep per night.

To help get the students used to the above-mentioned terms, do the following activity. The narratives are designed to give students examples of a normal child's day and help them classify each of their activities into one of the four categories.

Learning Activity: Time Management Scenarios

Explanation of the activity:

This activity will help students incorporate physical activity into their daily schedules.

Preparation:

You will need narratives, a scheduling worksheet (one for each narrative, three worksheets per student or per group) and pencils.

Directions:

1. Students can do this activity individually, in pairs, or in small groups.
2. Students will read a narrative and then fill out the scheduling worksheet for the narrative which will depict what activities the character did, how long they spent doing those activities, and what category that activity fits into.
3. Once all three narratives are read and their Scheduling Worksheets are complete, do the activity debrief.

Activity Debrief:

The following questions will help to summarize the activity:

1. Who had the most Screen Time? Who had the least?
2. Who had the most Active Time? Who had the least?
3. What are some of the ways that children with the most Active Time made time for physical activity?
4. What are some things the children with the least amount of Active Time could do to make more time for being active?

Just like it is important to balance your diet and physical activity, it is important to have a healthy balance in how you spend your time. There is one category or way to spend time that is not necessary. That category is screen time. It does not make you healthier and it takes time away from your day that you could be using to be physically active.

Narratives

Anne is an 11 year-old girl in the fourth grade. She lives in a house in the country with her grandparents, older brother, and dog.

Anne's alarm went off today at 7:00AM. She watched cartoons while she ate breakfast and got ready for school. She got on the bus around 8:45AM.

That bell means it is 9:00AM! Time for school to begin! Anne has math, science and spelling for 45 minutes each. At 11:15 it is time for recess. Anne goes outside for recess, and she stands along the play equipment talking with her friends.

It's 12:30PM and that bell means lunchtime is over. Anne has gym class next. She does not play hard during gym class. She just stands around while the other kids play kickball for 45 minutes. After gym class, Anne has reading, writing and art for 45 minutes each.

It's 3:30PM and school is out! Anne gets home 15 minutes later and turns on the TV. She does her homework while watching TV until dinner. At 5:30PM she eats dinner. After dinner, Anne helps clean up the dishes. Then, she plays a video game with her brother from 6:20PM to 8:10PM. Then, Anne gets on the computer and surfs the Internet for about twenty minutes. At 8:30PM, Anne's favorite TV show comes on. She watches it for half an hour. At 9:00PM, Anne gets ready for bed. By 9:45PM, Anne is in bed, drifting off to sleep.

Pablo is an 11 year-old boy who lives with his mother in an apartment in a city.

"Pablo, it is 7:30AM! Time to wake up!" calls Pablo's mom.

Pablo rolls out of bed. YAY! It is Monday! Pablo loves Mondays!

Pablo eats breakfast and gets ready for school. At 9:00AM, school begins. Pablo learns a lot of different things at school. His favorite subject is writing. He has writing class every day from 1:00PM to 2:00PM. Pablo is very good at writing funny stories.

BRRING! The bell rang! It is 3:00PM and school is over! Pablo has waited all day for school to be over! On Mondays, he gets to do his favorite activity after school!

Pablo's mom picks him up from school. She takes him to karate class! Pablo loves karate! He learns new karate moves from 3:30PM until 5:00PM. After karate, Pablo goes home and helps his mom make dinner. They eat dinner from 6:00PM to 7:00PM. Then, Pablo starts his homework. Not much homework today! He is finished with his homework at 7:30PM.

Pablo's favorite TV show comes on at 8:00PM. He has 30 minutes to wait for the show to begin. Pablo does stretches and exercises he learned at karate class. Pablo stretches during the commercials, too.

Pablo's favorite show lasts one hour. Then he gets ready for bed. 45 minutes later, he is in bed. Soon Pablo is dreaming about karate!

Kevin is 10 years old. He lives with his mom and dad in a house 10 minutes away from a city.

The alarm goes off at 7 a.m. Kevin hits the snooze button. He stayed up late last night playing a video game. His mom tells him he will be late for school if he doesn't get up soon. Kevin gets out of bed and starts getting ready. He eats cold cereal and a plum for breakfast.

Kevin leaves for school at 7:45. His house is 15 minutes away from the school. He must get to school early on Mondays. Band practice starts at 8:00. Kevin is in school from 8:45 to 3:15. He has a 45 minute break for lunch and recess at 12:25.

Kevin gets home at 3:30. His mom fixes him a snack. Kevin decides to play a video game. His father comes home at 5:30. He asks Kevin to do his chores before dinner. Kevin takes out the trash and starts to rake the leaves outside. Halfway through, he finds his favorite basketball and shoots hoops until dinner. Dinner is at 6:30 and lasts an hour. Kevin finishes raking the leaves. He sits down to do his homework at 8:00. He works on it for 15 minutes and takes a break. He starts to watch TV and loses track of time. Its 9:30 and he hasn't finished his homework! Kevin stays up until 10:30. He's going to have a hard time getting out of bed tomorrow.

Learning Activity: Making my own Schedule

Explanation of the activity:

This activity will allow students to note how they spend their time in an effort to improve their time management skills.

Preparation:

Each student will need a “My Schedule” worksheet and a Bar Graph sheet or blank graph paper, and crayons if making bar graphs of personal schedules.

Directions:

1. Have students make lists of things they like to do and must do for each of the four time categories.
2. Have students rank the individual items in each category in order of importance.
3. Next, have them rank each list in order of importance. (i.e. Screen Time is the least important of all time categories)
4. Using their “My Schedule” worksheet, students will make a schedule for themselves for the next day using their lists and following the guide. You can post this guide on the chalkboard, transparency or butcher paper:
 1. When do you wake up in the morning? When do you go to sleep?
 2. What time does school start? What time does it end?
 3. What time do you usually eat breakfast, lunch and dinner?
 4. Do you have any classes, lessons or activities that you must go to? When do they start and how long are they?
 5. Do you have any chores to do? How long do they take? When do you want to do them?
 6. How much time do you spend on homework? When do you want to do homework?
 7. How much time is left? Cross off the activities from your list that are already on your schedule. Using the rankings, pick activities to fill the rest of the time on your schedule.

Presenting the Lesson

You will need an illustration of the Food Guide Pyramid (the larger the better). If you do not have an updated illustration of the Food Guide Pyramid, please visit www.mypyramid.gov to print a copy. There is a special Food Guide Pyramid designed for kids. This is suitable for students through 11 years of age.

Descriptions of the five food groups (below)

Students should be given the opportunity to name the five food groups. Go over the correct definitions as a class and write the definition on the board. All definitions are from the Random House Webster's Dictionary.

Grains

Description: Grains come from grassy plants called cereal grains. The grains are the seeds of the plants. Some examples of cereal grains are wheat, barley, oats and rice. Foods in this group are made from the grains and include bread, pastas, tortillas, breakfast cereal and oatmeal. It is important to strive to eat whole grains. Whole grains provide fiber and carbohydrates.

***Definition:** A small, hard seed of a food plant, especially a cereal plant such as wheat or rye

Vegetables

Description: Any vegetable or 100% vegetable juice counts as a member of the vegetable group. Vegetables may be raw or cooked; fresh, frozen, canned or dried; and may be whole, cut-up, or mashed. Some commonly eaten vegetables are: green beans, broccoli, carrots, corn, peas, potatoes and spinach. Vegetables provide essential vitamins and minerals.

***Definition:** A plant whose fruit, seeds, roots, tubers, bulbs, stems, or leaf parts are used for food.

Fruits

Descriptions: Any fruit or 100% fruit juice counts as part of the fruit group. Fruits may be fresh, canned, frozen or dried. Additionally, fruits may be whole, cut-up or pureed. Some commonly eaten fruits are: apples, bananas, strawberries, oranges, grapes, peaches and raisins. Fruits contain a wide variety of vitamins and minerals.

***Definition:** The edible part of a plant developed from a flower.

*The difference between what is a fruit and what is a vegetable is often confusing and sometimes controversial. Here are some hints to distinguishing a fruit from a vegetable:

- Fruits bear the seeds of plants. Therefore, foods with seeds are considered a fruit.
- Fruits are naturally higher in fructose (sugar) and therefore tend to be sweeter. This is where you have to use the note above. Foods with seeds that are not very sweet are the exception to the rule; these include tomatoes, peppers, etc.

- Vegetables are any other part of the plant that does not bear the seeds. For example, carrots are actually the root of a plant.
- Fruit is the ripened ovary of a plant. Hence, the fruit carries the seeds and is the key to reproduction for the plant, very similar to humans.

Dairy

Description: The milk group contains milk and other foods that are made from milk. Milk and products made from milk are often called dairy products. In the United States, most milk and dairy products come from cows. Foods in this group include milk, yogurt and cheeses. This group can be an important source of nutrients that build strong bones and teeth. They provide calcium and protein.

***Definition:** A white liquid secreted by the mammary glands of female mammals and serving to nourish their young.

Meat and Beans (also includes eggs)

Description: Meats provide important nutrients that help build strong muscles. Some people choose not to eat meat or have very little meat in their diet. These people can choose to eat beans or nuts that have some of the same nutrients as meats in order to get the nutrients they need from this group. This group includes meat, poultry, fish, dry beans and nuts. Foods in the meat and beans group provide essential nutrients such as protein, fiber and iron.

***Definitions:** Meat = the flesh of animals used for food
Bean= the edible seed or pod of various plants of the legume family
Egg= the ovum of a chicken

*Note: A few foods are in the vegetable group **and** the meat and beans group. Some examples of foods that are in both of these groups are: peas and dry beans. Explain to the students that some foods are in more than one group because they provide the same nutrients. For example, some foods contain the same nutrients as meats. Foods in the vegetable group (i.e. beans) that provide the same nutrients as meats are important for people who choose not to eat meat, as they allow them to get the nutrients they need to be strong and healthy.*

** The food guide pyramid includes oils even though they are not considered a food group. There are healthy sources for oil, and there are unhealthy sources for oil. Oils should be limited. Therefore, they are represented by a small slice on the pyramid. Students should try to get their oils from fish and nuts rather than potato chips.*

We will only refer to the Oils group for a short explanation of why it is on the Pyramid. We want students to understand that the Pyramid outlines what someone's total diet should look like and that the nutrient-rich foods found on the Pyramid should be eaten more than those not found on the Pyramid.

Oils

Oils are fats that are liquid at room temperature, like the vegetable oils used in cooking. Oils come from many different plants and from fish. Some examples of oils are: canola oil, corn oil, olive oil and soybean oil.

•Discussion:

1. Introduce the students to the illustration of the Food Guide Pyramid.
2. Explain that the purpose of the Food Guide Pyramid is to help people choose healthy foods to eat and achieve balance in their diet. Point out that there are five main sections that make up the Pyramid. These sections are the Five Food Groups that were just reviewed.
3. The Food Guide Pyramid stresses *variety* in your diet. Ask the students to define variety. Use the following example:
 - Which meal has variety?

Group 1: baked potato, toast, rice

Group 2: chicken, broccoli, mashed potatoes

Group 2 has “variety”. Each food is from a different food group. Each food group has something special to offer our bodies. We need to eat from all groups in order to be healthy.

4. Explain to students that each group represents foods that have important kinds of nutrients.
5. Brainstorm definitions of a nutrient to see what kids already know.
6. A nutrient is a part of a food that gives your body energy and keeps your body working and healthy. Explain that it is important to eat a wide variety of different foods from all of the five food groups because different foods offer different types of nutrients. If students ask for examples of nutrients, below are a few they may be familiar with.
 - Calcium is found in dairy foods and leafy vegetables. It helps build strong bones and teeth.
 - Protein is found in meat and dry beans. It helps build muscles.
 - Vitamin C, which is found in citrus fruits and broccoli, is needed to maintain a healthy immune system.

Read aloud to the students or have them take turns reading aloud the brief descriptions from the board or have them take notes.

7. Go through each of the food groups. Call on a student to name a food that would belong in each of the particular food groups.
8. Display the Food Guide Pyramid again, and have students count the different sections on it. Some students may have already realized that there is an extra section that is not one of the Five Food Groups.
9. Explain that there is very small section called the Oils group. Read the Oils description.
10. There are healthy and unhealthy sources of oils. The Five Food Groups contain foods that have many nutrients. Oils are used to cook and prepare many foods, so it is almost impossible to avoid oils completely. Therefore, health experts felt that oils should have a designated spot on the Food Guide Pyramid so that people will pay attention to their oil intake. Oils should be consumed in a limited amount.

11. Discuss which food group a candy bar or chocolate chip cookie would belong to. Explain that foods primarily made of sugar are foods that don't contain many nutrients other than sugar, so they are not included on the Pyramid. It is recommended that foods made primarily of sugar be eaten in limited quantities. If students ask for an example of how these foods can be bad for one's health, you can discuss the following:
- Foods high in sugar give us a quick burst of energy, but the energy is not enough to sustain us for a long period of time. We will "crash" after a short period of time because we need more sugar.
 - Because sugar gets used up quicker than other nutrients, we will eat more food than is recommended over the course of the day.
 - A food that only provides us with sugar and no other nutrients does not contribute to a balanced diet and should be eaten in limited quantities. It is best to eat foods that offer us more of a variety of nutrients. Fruit is an excellent example. Fruits contain natural sugars, but they also offer many vitamins and minerals that help us strengthen our immune system and fight disease.

Learning Activity: Bag-the-Food Game

Explanation of the activity:

This activity will help students determine which foods belong in which food groups.

Preparation:

You will need 10 paper grocery bags (lunch-sized or large), markers and index cards. Use index cards to make the game cards. Write the name of several foods (at least 5) from each food group on the cards. Write only one food per card. Make two sets of the cards, one set for each group. Take five of the paper bags and write the name of one of the five food groups on each bag. Repeat this with the other five bags. You will have bags per team. Line the bags up at the end of the room or hallway with the food group label facing the teams. Leave a little space between each bag.

Directions:

1. Divide the students into two teams.
2. Line the teams up on the opposite side of the classroom/hallway. The members of each team should be in a single-file line and facing the bags.
3. Designate a team leader for each team. This person will hand out the cards to the team members; he/she will not be “playing” the game.
4. When you say “Go”, the team leader will hand the top card in their stack of food cards to the person in their team’s line. That student must then run to the correct corresponding bag at the other end of the room.
5. After putting their card in the correct bag, the student will return to the end of the line. The team leader will then give a card to the next person in line.
6. The game goes on until both teams have put their cards in the bag.
7. After both teams have finished, go through the bags to make sure the cards are in the right bag, showing the students as you go through each card. If the team that finished first did not make any mistakes, they win. If they have a food in the incorrect food group, the second team wins if they got all of their cards right.

Learning Activity: Exploring the Food Guide Pyramid

Explanation of the activity:

This activity will help students understand how to meet dietary guidelines for the five food groups.

Directions:

Have the students log onto www.mypyramid.gov and click on the “for kids” link on the left-hand side of the page. Students can play the My Pyramid Blast Off game. It is an interactive game that explores food choices and meeting dietary guidelines for the five food groups. They can also explore the five food groups in depth.

Food Groups and the Food Guide Pyramid

Objectives

1. Students will understand the five food groups.
2. Students will understand the benefits of eating a diet rich in essential nutrients.
3. Students will understand how to define nutrient.

Materials needed for this lesson

1. Illustration of the food guide pyramid.
2. Descriptions of the five food groups (provided)
3. Paper grocery or lunch bags (10)
4. Index cards (about 30)
5. Marker
6. Computers with access to the internet (for Activity 2)

Background information and notes

Children tend to find foods that they like and stick to them. They aren't usually adventurous eaters. Some kids (and even adults) avoid fruits and vegetables because they think they taste bad. Kids need to realize the importance of eating a balanced diet. There is nothing wrong with having a favorite food group. The essential message in this lesson is that the students understand what the five food groups are and that each food group offers food with essential nutrients. If we eat from all five food groups and limit our intake of foods from the oil and sugar groups, our health will benefit from the foods we eat.

Time Management

Objectives

1. Students will understand how to classify actions into one of the following categories: Screen Time, Active Time, School Time or Down Time.
2. Students will understand how to list two ways to manage their time in order to incorporate physical activity into their day.
3. Students will understand the benefits of creating a schedule and the importance of time management.

Materials needed for this lesson

1. Writing utensils
2. 3 scheduling worksheets per student (blank worksheet provided)
3. 1 My Schedule worksheet per student (blank worksheet provided)
4. Scenarios (provided)

Background information and notes

Time management is an essential life skill. Everyone is busy these days, even children. Between school, extra-curricular activities, video games and television, children often leave out time for physical activity. They go to bed later and in turn, they wake up later. This leads to skipping breakfast and running late for school. The earlier children learn to manage their time, the more effective and successful they will be in school, managing their health and in life. This lesson focuses on specifically making time for physical activity, but learning time management will give the students the ability to implement many of the skills learned in other lessons in this curriculum.

Reading Nutrition Labels

Objectives

1. Students will understand how to locate the serving size, servings per container and nutrients on a nutrition label.
2. Students will understand how to avoid eating more than one serving of food at a time.
3. Students will understand that the nutrient amounts listed on the nutrition label pertain to one serving of food.

Materials needed for this lesson

1. Box of crackers*
2. Loaf of bread (sliced)*
3. Nutrition labels from the crackers and bread
4. Reading Nutrition Labels worksheet (provided)- enough for one per student or group
5. Calculators or scratch paper
6. Food package nutrition labels, enough for two per student or group
7. Pencils
8. Sample nutrition label (provided)

* Make sure that the crackers and bread have nutrients listed, as some bread and crackers appear healthy but are not. Our suggestions: whole wheat or seven grain bread and multi-grain crackers.

Background information and notes

Nutrition labels are the single best source for nutrition information for a food. They provide a wealth of product information. It is important for students to understand how to read a nutrition label, as they can be tricky. The sooner children learn to read nutrition labels and get in the habit of doing so, the sooner they can moderate their intake of unhealthy foods and portion sizes.

*Note: This lesson uses basic math skills. If the program leader does not feel comfortable with the included activities, s/he can simplify the lesson to just the basic content.

Presenting the Lesson

Ask the students whether bread or crackers have more nutrients. Explain that they cannot correctly answer the question without knowing *how much* bread is being compared to *how many* crackers. Display the entire loaf of bread and one cracker. Ask the question again: which has more nutrients?

Since there is so much bread compared to the one cracker, the loaf of bread as a whole is going to have more nutrients. The same would be true for the entire box of crackers compared to a slice of bread.

Ask students how many crackers they think are in the box. Let them make guesses. There are two ways to know how many crackers the box contains:

1. Count all the crackers in the box (this will give you an exact total)
2. Look at the nutrition label (this will give you an exact total or a very good estimate)

Estimating is usually much quicker and more efficient than counting the number of crackers in the box. To estimate the number of crackers in the box, students should look at the *serving size* listed on the nutrition label. In this case, a serving size is a given number of crackers. Let's say a serving size is **12 crackers**. Under the serving size, the number of servings is usually listed. Let's say in this case there are **about 4 servings** in the box. You would need to multiply the number of crackers per serving by the number of servings per box.

$$\mathbf{12\ crackers\ x\ about\ 4\ servings = about\ 48\ crackers\ per\ box}$$

If the serving size is given in an exact amount, then you have an exact total. If it gives an uncertain amount (usually denoted with the word "about") then you have an estimate.

It may be beneficial for the students to do another example using the loaf of bread. If a serving of bread is **1 slice** and the number of servings per loaf is *exactly* **16 slices**, it would be calculated as follows:

$$\mathbf{1\ slice\ x\ 16\ servings = exactly\ 16\ servings}$$

The nutrition label, by law, must be on every package of food. The nutrition label tells us which nutrients are in a particular food and how many nutrients are in it. The food label also tells us how much of that food or drink is in the package.

What is a nutrient? Remind students that a nutrient is a part of food that gives the body energy, keeps it healthy and helps it perform important functions. Students can find out how many nutrients are in a product by looking under the nutrient bar. The nutrient bar is the dark horizontal line found near the bottom of nutrition labels under which you are able to see many nutrients listed with percentages next to them.

Students may be wondering what exactly a serving size is. The serving size is listed on the nutrition label and it is how much of that food you should consume at one time. A

serving size is not always the whole package of food (as we saw with the crackers and the bread). Therefore, the amount of nutrients written on the nutrition label pertains to one serving size, which may not be the whole package.

Eating more than one serving at a time: If a person eats two serving sizes at once, such as two pieces of bread for a sandwich, then all the information on the label must be multiplied by 2. If you eat three servings, it should be multiplied by 3, and so on. If you only eat half of a serving, you divide the information by two.

Who decides what a serving size is? Who says that 12 crackers or 1 slice of bread is what should be consumed at one time? The company that makes the packaged food decides what the serving size for the product is. Then, they base the rest of the nutrition label on the serving size.

-The exception to this rule is fruits and vegetables. The United States Department of Agriculture (USDA) determines the serving sizes for fruits and vegetables. In this case, 1 serving = 1 cup. This follows their guidelines for the amount of servings of fruits and vegetables needed per day. The recommendation is 5 to 9 a day. Since fruits and vegetables are rarely packaged, it can be difficult to determine their serving sizes. Explain that one cup of a fruit or vegetable cut up is approximately the size of a baseball. *(Note: This issue is addressed more thoroughly in the 5 to 9 a day lesson)*

Serving Size Tip: A way to ensure you don't eat too many servings of foods lacking nutrients is to divide the packages into smaller baggies of one serving. Then, when they eat a snack that does not have a lot of nutrients, they are eating just one serving instead of many servings- or the whole package- without thinking about it.

Learning Activity: Reading Nutrition Labels

Explanation of the activity:

This activity will help students learn to calculate the amounts of certain ingredients in foods.

Preparation:

You will need a Reading Nutrition Labels worksheet (1 per student or group of students), calculators (if students are not expected to use mental math or long hand) and food packages with nutrition labels: enough for 2 per group or individual. Use the example provided to demonstrate what the students are supposed to do.

Example: Reading Nutrition Labels Activity

Nutrition Facts	
Serving Size ¼ cup (55g)	
Servings Per Container 5	
Amount Per Serving	
Calories 250	Calories from Fat 50
% Daily Value*	
Total Fat 6g	9%
Saturated Fat 0.5g	3%
Cholesterol <5mg	<2%
Sodium 200mg	8%
Total Carbohydrate 40g	13%
Dietary Fiber 4g	16%
Sugars 18g	
Protein 9g	18%
<small>Vitamin A 25% • Vitamin C 50% • Calcium 30% • Iron 25% *Percent Daily Values based on a 2,000 Calorie diet.</small>	

Name of Food: <i>soup</i>	Serving Size: <i>¼ cup</i>
Servings per container: <i>5</i>	
Sugar: Per Serving: <i>18g</i> Per Container: <i>(18g x 5) = 90g</i>	Fat: Per Serving: <i>6g</i> Per Container: <i>(6g x 5) = 30g</i>
Fiber: Per Serving: <i>4g</i> Per Container: <i>(4g x 5) = 20g</i>	Vitamin C: Per Serving: <i>50% of the daily value</i> Per Container: <i>(50 x 5) = 250% of the daily value</i>

Reading Nutrition Labels

Name _____

Directions:

Use the information on the nutrition label to fill in the chart. Follow the example done in class.

Nutrition Label #1

Name of Food:	Serving Size:
Servings per container:	
Sugar: Per Serving: Per Container:	Fat: Per Serving: Per Container:
Fiber: Per Serving: Per Container:	Vitamin C: Per Serving: Per Container:

Nutrition Label #2

Name of Food:	Serving Size:
Servings per container:	
Sugar: Per Serving: Per Container:	Fat: Per Serving: Per Container:
Fiber: Per Serving: Per Container:	Vitamin C: Per Serving: Per Container:

Activity Debrief:

The following questions will help to summarize the activity:

1. Do you think the serving sizes for either of your foods are realistic? Explain.

2. Did either of your foods have many nutrients listed under the Nutrient Bar? Which food(s)? Which nutrients did it contain?_____

3. What is one reason why someone might eat more than one serving of either of your foods?_____

Learning Activity: Nutrition Label Math

Explanation of the activity:

This activity will help students learn how to calculate the serving sizes of certain food products.

Directions:

Complete the following math problems. Remember to label your answer and show your work.

Example: A can of soup has 3 servings in it. One serving is 2 cups. How many cups are in the can?

$$2 \text{ cups} \times 3 \text{ servings} = 6 \text{ cups}$$

1. The nutrition label for a box of crackers says there are 5 servings in the box. There are 8 crackers in a serving. How many total crackers are in the box?
2. The serving size for sour cream is 2 tablespoons. The nutrition label says that there are *about* 8 servings in the container. How many tablespoons are in the container?
3. There are 16 ounces in a bottle of soda. The nutrition label says there are 2 servings per container. How many ounces is one serving of soda?
4. Annie ate one serving of cereal that was $1\frac{1}{2}$ cups (1.5 cups). The box of cereal has $4\frac{1}{2}$ cups (4.5 cups). How many servings are left in the box?
5. Jim, Chris and Todd want to share a container of ice cream. One serving is $\frac{3}{4}$ cup. The whole container is $3\frac{1}{2}$ cups. Is there enough ice cream for each person to have a serving? Show your work.
6. a. There are 6 cups of pasta in a box. A serving is $1\frac{1}{2}$ cups. How many servings are there per box?

b. If Kimberly and Emily each ate one serving of pasta and the box was full when they opened it, how many cups of pasta are left in the box?

Sample Nutrition Label

Nutrition Facts	
Serving Size 1 cup (228g)	
Servings Per Container 2	
Amount Per Serving	
Calories 260	Calories from Fat 120
% Daily Value*	
Total Fat 13g	20%
Saturated Fat 5g	25%
Trans Fat 2g	
Cholesterol 30mg	10%
Sodium 660mg	28%
Total Carbohydrate 31g	10%
Dietary Fiber 0g	0%
Sugars 5g	
Protein 5g	
Vitamin A 4%	• Vitamin C 2%
Calcium 15%	• Iron 4%
* 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

Serving Size: the amount of food a person should eat at one time.

The number of servings in the package: Given here as an exact amount.

Nutrient Bar

Nutrients

Fruits and Vegetables Inside and Out

Objectives

1. Students will understand how to use the scientific method to discover the answer to a question.
2. Students will understand how to talk about how fruits and vegetables are different from each other, both in physical characteristics and in nutritional value.
3. Students will understand that in order to be healthy, they should eat a variety of fruits and vegetables rather than just a few that are their favorites.

Materials needed for this lesson

1. A variety of fruits and vegetables
2. Index cards
3. One (1) Fruit and Vegetable line-up worksheet per student (blank copy provided)
4. One (1) Follow-up worksheet per student (blank copy provided)
5. Several copies of the 5 classification sheets (provided)
6. Writing Utensils
7. True and False signs (provided)

Background information and notes

Fruits and vegetables are a very important part of maintaining health. Without proper intake of fruits and vegetables, people lack essential nutrients that help with normal body function. Many people know that fruits and vegetables are healthy, but they do not know why. There are a variety of reasons why people do not eat fruits and vegetables. One of the main reasons is that they do not have access to fruits and vegetables. Another barrier might be that they were never exposed to a variety of fruits and vegetables and therefore never developed a like for their taste. This exercise is to familiarize children with the tastes and names of fruits and vegetables. The goal is for children to find out what a fruit or vegetable is through scientific inquiry. By gaining an appreciation for a fruit or vegetable's taste, students will hopefully begin to eat a wider variety of fruits and vegetables. In addition, students will understand how fruits and vegetables benefit them and how to get a variety of fruits and vegetables in their diet by eating different colored vegetables.

Note: This lesson requires a lot of materials and preparation. An alternative activity is provided if you are unable to use the Fruit and Vegetable Line-Up activity.

****Very Important: The activity in this lesson includes tasting fruits and vegetables. It is necessary to pay very close attention to any food allergies that your students may have.****

Presenting the Lesson

Begin by asking students to name their favorite fruits and vegetables. Write down their responses on the chalkboard or on a transparency. Is there a wide variety of fruits and vegetables listed? Ask the students if they think they can get the nutrients that they need from *just* the foods listed. Explain that one fruit or one vegetable does not contain all the nutrients your body needs to be healthy. Explain that fruits and vegetables and how they help our bodies can be put into categories by color. The color groups and their descriptions are listed below:

Blue/Purple: Fruits and vegetables in this group help to reduce one's risk of developing some cancers and improve one's memory function. This group includes: blackberries, blueberries, black currants, plums, purple grapes, raisins, purple cabbage and eggplant.

Green: Fruits and vegetables in this group promote vision health, strong bones and teeth and a reduction for the risk of some cancers. This group includes: avocados, green apples, green grapes, limes, green peppers, broccoli, green beans, cucumbers, celery, spinach, zucchini, peas and leafy greens (lettuce).

White: Fruits and vegetables in this group promote heart health and a lower risk of some cancers. This group includes: bananas, cauliflower, mushrooms, onions, white corn and potatoes.

Yellow/Orange: These fruits and vegetables promote a healthy immune system, heart health, vision health and a lower risk of some cancers. This group includes: cantaloupe, grapefruit, lemon, mangoes, peaches, pineapple, carrots, yellow peppers, sweet corn and oranges.

Red: These fruits and vegetables promote heart health, memory function and a lower risk of some cancers. They include: red apples, cherries, cranberries, red grapes, pink/red grapefruit, strawberries, watermelon, beets, red pepper and tomatoes.

More information can always be obtained at www.5aday.org . There is a special section for educators. Additional ideas for conveying these messages to children are also provided.

Students should strive for five fruits and vegetables a day. They can try to eat one fruit or vegetable from each color group to make it easy to remember. It is not as important that students remember how each fruit helps us stay healthy. It is most important that they increase their fruit and vegetable intake and eat a variety of fruits and vegetables.

Learning Activity: Fruit and Vegetable Line-Up

Explanation of the activity:

This activity will allow the students to use their deductive reasoning skills to classify fruits and vegetables.

Preparation:

You will need a variety of fruits and vegetables, index cards and 1 student worksheet. Also, thoroughly wash all fruits and vegetables and have the students wash their hands before beginning this activity. Slice small samples of each fruit and vegetables for tasting and smelling purposes. Line up each sample of fruit and vegetable.

For each sample, you will need one whole example (for items with seeds you will want to cut the whole sample in half so that the seeds are exposed) and enough bite size taste and smell samples for each student. Next to each sample, place an index card with the number of that particular sample. Record for yourself the name of the fruit or vegetable for each sample.

Directions:

1. Either individually or in groups, have the students spend a few minutes with each sample.
2. On the students' worksheet, have the students record each sample's outside color, inside color, size & shape, inside texture, outside texture, taste and whether or not it has seeds. Students should make a guess as to the identity of each fruit and vegetable. Then, they can fill in the space that says "name" in the classification charts.
3. After all students have had a chance to record the data for each sample, pass out the 5 classification charts titled "Discovering fruits & vegetables through classification." Using the classification charts, have students identify the correct fruit or vegetable, or confirm their guesses. These charts will show students how to answer a question using deductive reasoning.

Fruit and Vegetable Line Up



Student Worksheet

Name _____

Sample	Does it have seeds?	Outside Color	Inside Color	Size & Shape	Inside Texture	Outside Texture	Taste	What is it? (guess)	Name
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

Outside color = color of the fruit or vegetable's skin
Inside color = color of the fruit or vegetable on the inside when it is cut open or bitten into
Size = the size of the ENTIRE fruit or vegetable (small or large)
Shape= Triangle, circle, tube
Inside texture = how it feels when you chew it (soft or crunchy)
Outside texture = how the surface of the entire fruit or vegetable feels on the outside (smooth, rough, fuzzy)
Taste = flavor (sweet, bitter, sour, salty)

Fruit and Vegetable Line Up: Follow-Up Questions

Name _____

Directions: *Answer the follows questions after completing the Fruit and Vegetable Line-Up. Keep this sheet as an entry in your journal.*

1. Which sample was your favorite? (Give the name of the fruit or vegetable)

2. Had you ever tried that fruit or vegetable before? _____

3. What did you like about it? _____

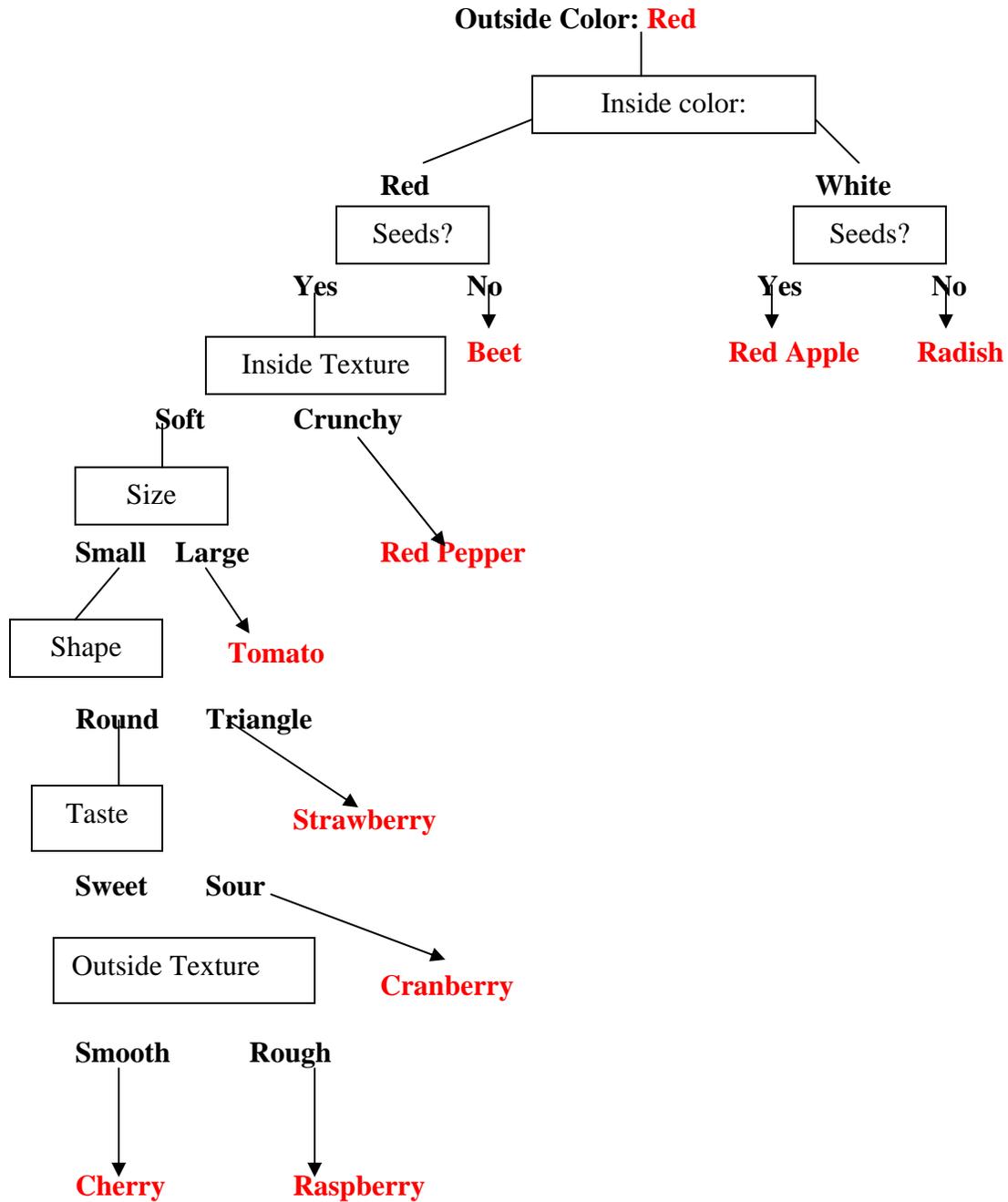
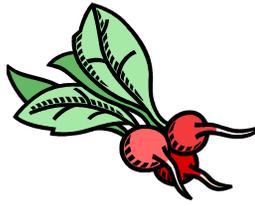
4. What can you do to try eat a variety of fruits and vegetables? _____

5. Were you able to guess the fruits and vegetables before seeing the answer sheet? What information led you to your hypothesis (guess)? _____

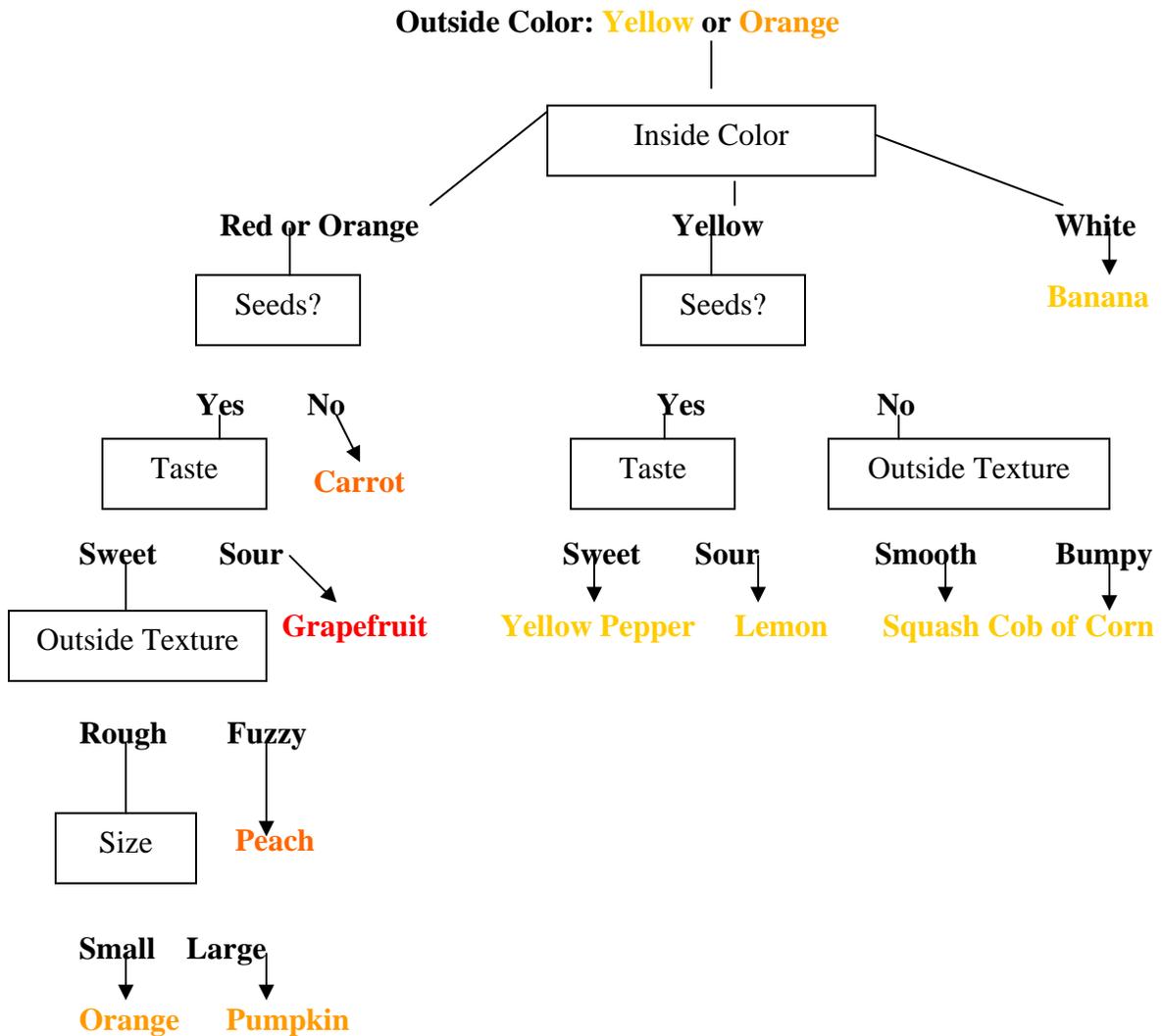
6. In a scientific observation, it is very important to record accurate data. Explain how writing down incorrect information could lead to an incorrect conclusion. (Example: All data leads to the sample being a watermelon, but you wrote down that the sample did not have seeds)

7. Name one person you are going to encourage to try a new fruit or vegetable and explain what you will say to convince them. _____

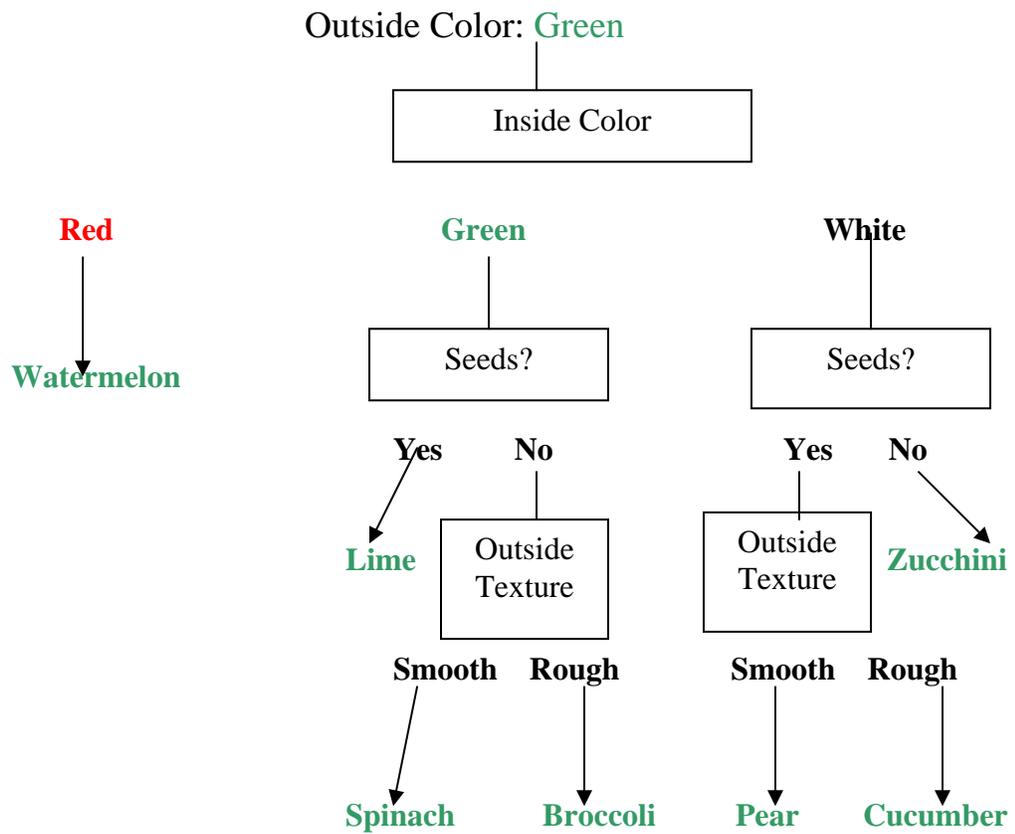
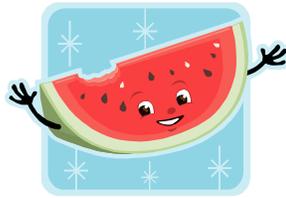
Discovering fruits & vegetables through classification



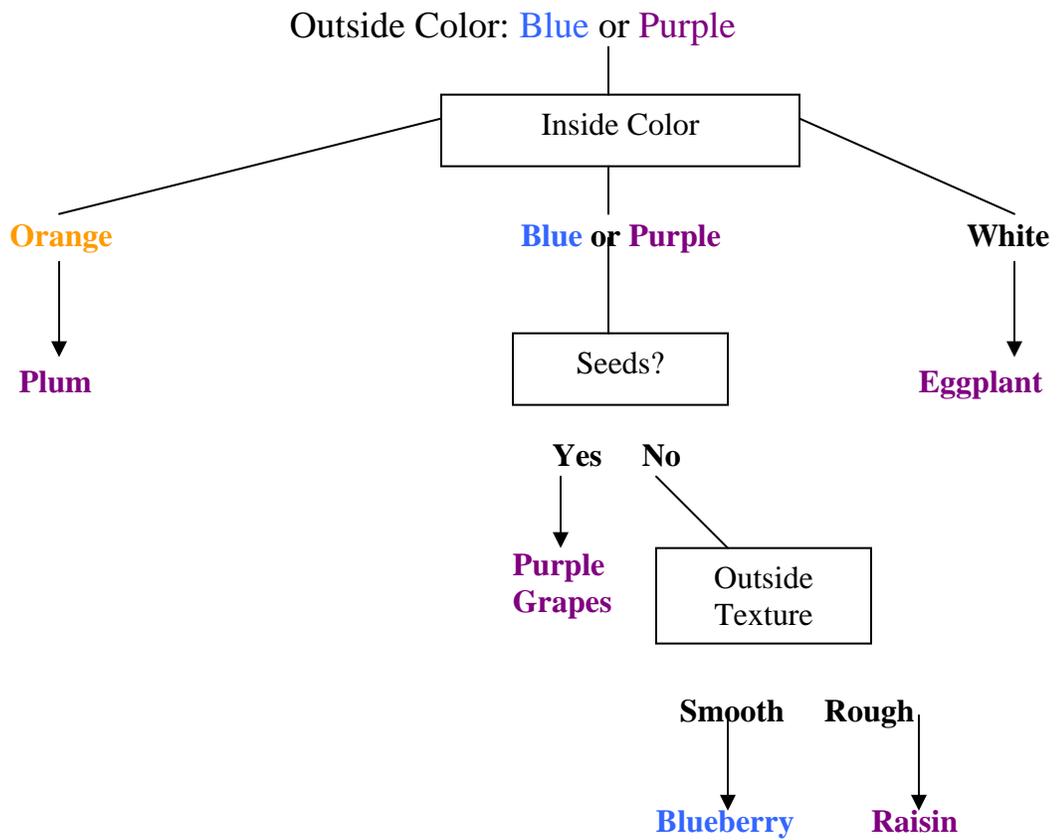
Discovering fruits & vegetables through classification



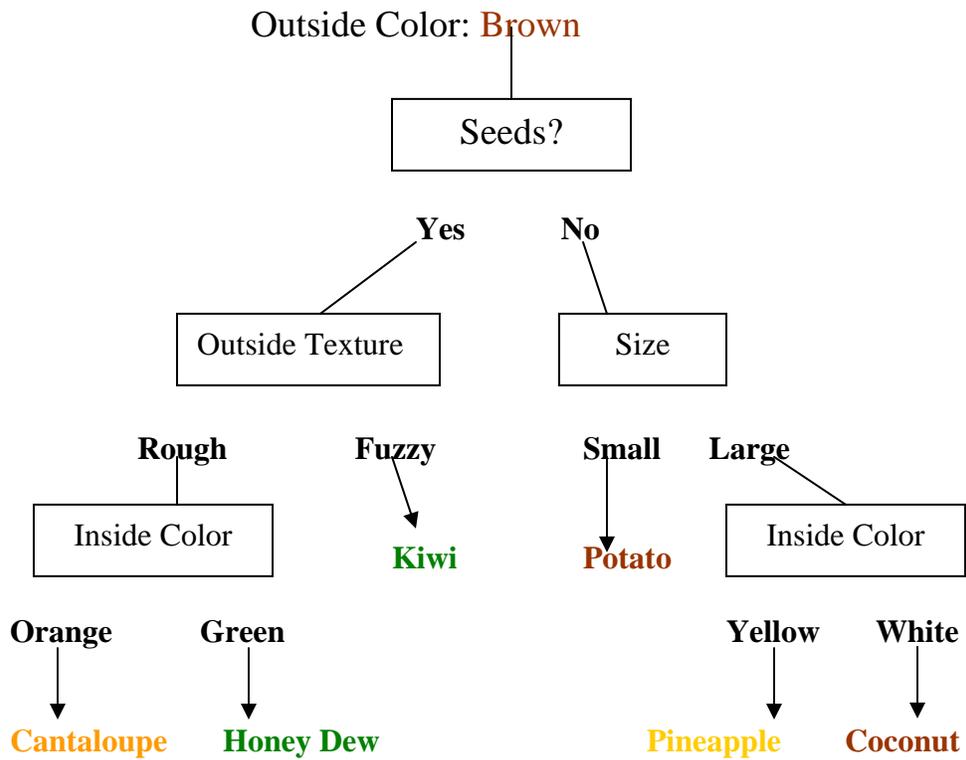
Discovering fruits & vegetables through classification



Discovery fruit & vegetables through classification



Discovering fruits & vegetables through classification



Activity 2: True/False Taste Game

Directions

1. Have all the students sit in a group in the center of the classroom/hallway
2. On one side of the room, hang the “TRUE” sign. On the opposite side, hang the “FALSE” sign.
3. Read one of the given statements about taste to the students. Give them about 5 seconds to determine the answer and run to the correct sign.
4. Read the correct answer and explanation. Have the students return to the center.
5. Repeat until all the statements have been read.

Statements

1. Different nutrients have different tastes. Some nutrients taste better than others.
FALSE! You cannot taste nutrients. They are flavorless.
2. There are invisible things called taste buds on your tongue that allow you to taste different flavors.
TRUE! Taste buds are tiny organs found on the tongue that sense different flavors.
3. You have ten taste buds on your tongue.
FALSE! You have about 10,000 taste buds on your tongue.
4. Taste buds can taste only four different flavors.
TRUE! The four main flavors are sweet, salty, bitter and sour.
5. Adults have a sharper sense of taste than children.
FALSE! Children have a sharper sense of taste than adults do. As we grow, our taste buds become dull as they are used more. We can lose taste buds as we get older.
6. If we do not like the taste of a food as a child, we will always not like the taste of it as an adult.
FALSE! As your taste buds become duller, you will like different flavors.
7. Your taste buds for tasting salty and sweet flavors are found on the front tip of your tongue.
TRUE! Sour flavors are tasted on the sides and bitter flavors are tasted on the back of the tongue.
8. Girls usually have more taste buds than boys do.
TRUE!

5 to 9 a Day

Objectives

1. Students will understand how to estimate the number of servings of fruit they are eating by comparing it to the size of a baseball.
2. Students will understand how to use a recipe to find out how many servings of fruit or vegetables are in one serving of a food.
3. Students will understand how to evaluate their diet to find out if they are getting enough fruits and vegetables each day.

Materials needed for this lesson

1. 2 Recipe worksheets with questions. Make a copy of each worksheet for each student or group.
2. Pencils
3. scratch paper (optional)
4. regulation-sized baseball
5. measuring cup (must hold at least one cup)
6. several whole fruits cut into small pieces
7. plates to put cut up fruit on
8. food (or pictures of food) that visibly combine fruits and vegetables with other foods, such as vegetable pizza or salad
9. paper plates (4 per student)
10. poster board (1 per student)
11. markers or crayons

Background information and notes

Getting enough servings of fruits and vegetables each day can be difficult. Even for adults, it may take some planning. This lesson is designed to show students how they can estimate their servings of fruits and vegetables or count exact servings by using a recipe. It also provides them with an opportunity to practice meal planning.

The recipe conversion activity involves some basic math. The summer salad recipe is easier than the vegetable lasagna recipe. The program provider should make sure s/he is comfortable with the math involved with this activity before trying it with the students.

Presenting the Lesson

Review from *Reading Nutrition Labels* what a *serving* and a *serving size* are. If the aforementioned lesson has not been done, then a *serving* or a *serving size* may be a new concept for your students. The definitions are:

Serving = one portion or helping of food that is eaten at one sitting or at one time.

Serving Size = is the amount of a particular food that equals one serving

Do the students recall how a *serving size* varies for different foods? A quick and easy way to explain that a serving size varies is to describe a nutrition label. All foods that come in boxes, bottles, wrappers or other packages always have a nutrition label on them that will tell you this information. How do you know what a *serving size* is for foods that do not come in packages with nutrition labels on them (i.e., fresh fruits)?

According to the United States Department of Agriculture, a *serving size* for fruits and vegetables is one cup. The 1-cup measuring cup should be displayed at this point in the discussion. One *serving* of fruit or vegetables would fit into the measuring cup. (You may wish to cut up fruit and put it in the measuring cup to let students see what constitutes a *serving*).

What if you do not have a measuring cup? How could the students **estimate** a *serving*? One cup of fruit or vegetables is roughly equal to the size of a baseball. Show the students what a baseball looks like. What is an **estimate**?

Estimate = an approximate judgment of (*in this case*) a serving size

How many servings of fruits and vegetables should you eat in one day? Health experts say that you should try to eat 5 to 9 servings per day. This does not mean you need to eat 5 to 9 servings all at one time. The servings can and should be spread out throughout the day. They should be incorporated into all of your meals, including snacks.

How do you know how many servings of fruits and vegetables are in the foods that you eat? You can use two methods: Conversion and estimation. Use the next two learning activities to demonstrate each method.

Learning Activity: Converting a Recipe into Serving Sizes

Explanation of the activity:

This activity will help students learn to convert a vegetable lasagna recipe into serving sizes.

Preparation:

You will need a worksheet with the recipe and questions, one per student or group (or a transparency that has the recipe and questions). You will also need pencils.

Directions:

1. Explain to students that one way of finding out how many fruit and vegetable servings you get from a food is to convert the recipe into cups, since we know that one serving = one cup.
2. Either individually, in groups or as a class, use the recipe on the worksheet to calculate how many servings of fruits and vegetables are in the recipe and then how many servings are in one serving size of the recipe. **The Summer Salad recipe is easier than the Vegetable Lasagna recipe. You may want to go through the Summer Salad recipe together as a whole class and then have the students work on the Vegetable Lasagna recipe individually or as homework.*
3. To calculate:
 - Identify what ingredients in the recipe are fruits or vegetables.
 - Convert the fruit and vegetable amounts into cups.
 - Add the total number of cups of fruits and vegetables.
 - Divide by the number of servings the recipe makes. Your answer is the number of cups of fruits and vegetables in one serving of the recipe.
 - Explain to students that this method works best before you have the actual food in front of you, when you are getting ready to eat. You need to have a recipe to use this method.

Summer Salad

Conversion Worksheet

Directions:

Figure out how many servings of fruits and vegetables you get from eating **one** serving size of the recipe.

1. **List the fruits and vegetables from the recipe:**

•Fruits:

•Vegetables:

2. **Convert the recipe so that all the fruit and vegetable amounts are in cups.**

•Fruits:

•Vegetables

3. **Add the total number of cups of fruits and vegetables.**

•Total cups of fruit:

•Total cups of vegetables:

4. **Divide the total number of cups of fruits and vegetables by the number of servings the recipe makes.**

• (a) Fruits:

• (b) Vegetables:

5. Write your answer to 4a here_____. You will get this many servings of **fruit**.
Write your answer to 4b here_____. You will get this many servings of **vegetables**.

Conversion Key:

1 cup = 8 oz (1oz = 1/8 cup)

Summer Salad

Serves: 4

32 ounces spinach leaves

16 ounces strawberries

1 cup onions

8 ounces oranges

Combine all ingredients in a large bowl. Add lemon poppy seed dressing.

Vegetable Lasagna

Conversion Worksheet

Directions:

Figure out how many servings of fruits and vegetables you get from eating **one** serving size of Vegetable Lasagna.

1. List the fruits and vegetables from the recipe:

•Fruit:

•Vegetables:

2. Convert the recipe so that all the fruit and vegetable amounts are in cups.

•Fruit:

•Vegetables:

3. Add the total number of cups of fruits and vegetables.

•Total cups of fruit:

•Total cups of vegetables:

4. Divide the total number of cups of fruits and vegetables by the number of servings the recipe makes.

•(a) Fruit:

•(b) Vegetables:

5. Write your answer to 4a here: _____. You will get this many servings of **fruit**.
Write your answer to 4b here: _____. You will get this many servings of **vegetables**.

Conversion Key: 1 cup = 8 oz (1oz = 1/8 cup)

Vegetable Lasagna

Serves: 6

4 lasagna noodles	2 teaspoons olive oil
1 cup head fresh broccoli, chopped	2/3 cup carrots, thinly sliced
1/2 cup large onion, chopped	1/3 cup green bell peppers, chopped
2 cup small zucchini, sliced	2 tablespoons and 2 teaspoons all-purpose flour
1 cup milk	1/4 cup parmesan cheese, divided
1/2 cup red grapes	16 ounce package chopped spinach
1/8 teaspoon salt	1/2 pound ricotta cheese
8 oz container small curd cottage cheese	
3/4 cup and 1 tablespoon and 1 teaspoon Shredded mozzarella cheese, divided	

Learning Activity: Estimating a Serving of Fruit or Vegetables

Explanation of the activity:

This activity will help the students to practice their estimation skills. They will estimate a serving of fruit or vegetables.

Preparation:

You will need a baseball, a 1-Cup measuring cup, a several whole fruits and vegetables with other foods, such as vegetable pizza or salad, plates to put the cut-up pieces of fruits and vegetables. Also, cut up some of the fruits and vegetables and place different amounts of them on plates. Record how many servings of each fruit or vegetable you are placing on each plate.

Directions:

1. Explain to the students that estimating servings of fruits and vegetables by looking at them is an easy way to keep track of your daily servings when you do not have the recipe to look at.
2. Be sure that the students recall that 1 cup = 1 serving
3. Remind the students that 1 cup is approximately the **size** of a baseball. If the serving, whole or cut-up, is about the **size** of a baseball, it is 1 serving. Make sure that students know how to distinguish between **size** and **weight**.
4. Pass around the baseball so that the students can get a feel for its actual size.
5. After you get the baseball back, put it out of the students' view. Have the students estimate how many servings of fruit or vegetables are in each sample.
6. For each sample:
 - Carry it or pass it around the room so that the students can get a close look at it.
 - Ask students how many servings they believe are in the sample.
 - Reveal the correct answer. Measure the samples of cut-up fruits and vegetables with a 1-cup measuring cup.

Learning Activity: How I get my 5 to 9 a Day

Explanation of the activity:

This activity will get students thinking about what they eat over the course of a day and their fruit and vegetable consumption. By putting the meals around a clock, students will see how to disperse their food intake throughout the day so that they maintain their energy levels.

Preparation:

You will need paper plates (Four for each student), poster board or a large piece of butcher paper for each student, and markers, crayons and other art supplies to decorate posters.

Directions:

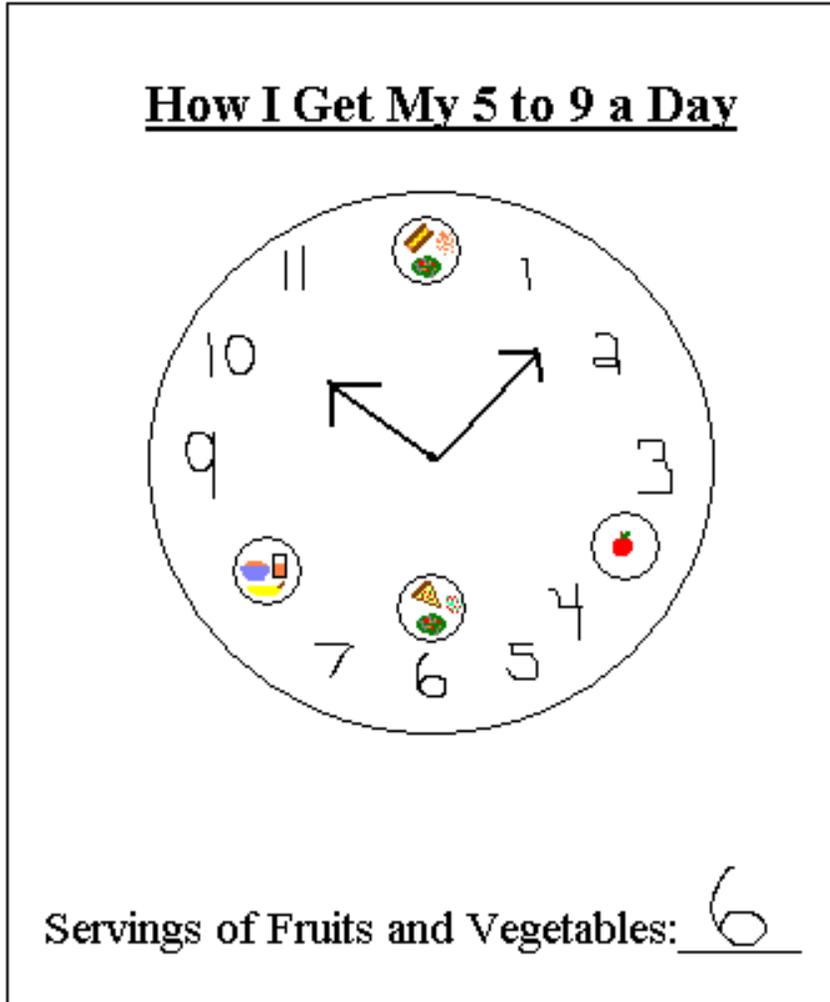
1. On their poster, have students draw a large clock.
2. Give each student four paper plates.
3. Have the students draw pictures of 3 meals and one snack on the paper plates. From the list of foods and meals brainstormed during the discussion of this lesson, students should pick a day's worth of meals plus one snack so that they get 5 to 9 servings of fruits and vegetables.
4. Once the plates are complete, have the students glue them to their poster either on or near the time they would eat that particular meal or snack.
5. On the bottom of their poster, have them write how many servings of fruits and vegetables their day's meals and snack provide.
6. Display the posters in the classroom or hallway.

Activity Debrief:

The following questions will help to summarize the activity:

1. Did everyone choose the same meals and snack?
2. Did you get a variety of different foods in your choices? Are there a lot of different colors and varieties of fruits and vegetables? Do you see foods from each of the Five Food Groups?
3. Did everyone choose to eat their meals and snack at the same times?

Example of a poster



The Importance of Breakfast

Objectives

1. Students will understand why it is important to eat a healthy breakfast.
2. Students will understand how skipping breakfast can have a negative impact on your health and your day.
3. Students will understand the concept of a complete breakfast.

Materials needed for this lesson

1. List of “energy sources for people”
2. Index cards
3. Clock pictures (provided)
4. Scenarios (provided)
5. Glue
6. Scissors

Background information and notes

Many people skip breakfast and don't realize the consequences of doing so. For kids, they are often in a hurry to get to the bus or to school in the morning. Sometimes students do not have enough food at home to have breakfast even if they wanted to. When the latter is the case, help those students identify sources of food outside the home. For instance, help them find out about a breakfast program at their school if one is available.

Skipping breakfast can cause a person to become very hungry before it is time to eat lunch. Being hungry can ruin a child's concentration and reduce their success in the classroom. Several studies have shown that students who eat breakfast behave better in the classroom, are tardy less often, and perform standardized tests better than those who skip breakfast. This lesson is designed to teach students the importance of breakfast and show them how to plan for breakfast every day.

Presenting the Lesson

What does breakfast mean?

Students should understand that breakfast is a compound word, meaning it is two words together to make one word. It consists of the words 'break' and 'fast.' Each word has several definitions. If time allows, have the students use dictionaries to find the definition of each word. Discuss the various definitions and determine which ones apply. The following definitions should be used:

Break = to separate or divide

Fast = to abstain from food; to not eat for a certain amount of time

Emphasize the importance of breakfast. As we sleep, you are fasting, but your body is still using the energy inside of it. Energy is the power or ability to be active. We give our bodies energy through food. Breakfast replenishes the energy that your body has been using up all night. During sleep, your body uses energy from the day before. When you wake up, your body is low on energy. In order to have enough energy until lunch, your body needs breakfast.

Use this analogy to emphasize the concept above: Let's say that someone left a car with a full tank of gas in the garage overnight. However, they left the engine on, so the engine is using up all the gas the whole night, even though it is not moving. In the morning, the tank of gas will be almost empty. The car will then not be able to go very far without refueling.

Your body is like the car. Even though you are not moving while you sleep, your engine (your heart, lungs, brain and other organs) are still working and doing their jobs throughout the night. You need to refuel your body and "fill your energy tank" by eating food when you wake up.

What are the consequences of skipping breakfast?

You do not have enough energy, you feel tired and you fall asleep when you should be awake.

- You feel cranky, grumpy or irritable.
- Your stomach grumbles or aches.
- You feel nauseous, dizzy or faint.
- You have a hard time concentrating.

Why might some people skip breakfast?

1. They are in a rush to get to school or the bus stop or maybe they woke up late.
2. They do not feel hungry right after they wake up.
3. They do not have "breakfast" foods at home or do not like breakfast food.
4. They do not have much food at home.

What are ways to overcome the barriers to eating breakfast listed above?

1. Many people skip breakfast due to lack of time. These students should focus on using better time management to overcome this barrier. They can:
 - Set your alarm clock 15 minutes early to avoid being rushed and to give yourself ample time to eat before leaving home.
 - Keep a box of granola bars (or another breakfast bar) in your locker, desk or with the teacher in case you do not have time to eat before leaving home.
 - Have your lunch packed, clothes picked out and homework done before going to bed. This will save time in the morning and allow for more time to eat breakfast.
2. Some people do not like to eat right away when they wake up. Students can get ready for school before eating to give themselves a little time to feel hungry. They can also take breakfast with them to school, like mentioned above.
3. Many people do not like typical breakfast foods such as cereal, toast, oatmeal or eggs. Breakfast does not have to be typical breakfast foods. Kids can eat leftovers from dinner, fruits, or any other food that is nutritious. Breakfast is about getting energy, not about eating any one particular food.
4. Students should be made aware of any breakfast programs that their school may offer. Students may also want to eat part of their lunch for breakfast if they have packed a lunch.

•What is a *healthy* breakfast?

A healthy breakfast is one that has many nutrients. Whatever students choose to eat for breakfast, whether it is a typical breakfast food or not, should be:

- Low in sugar
- High in vitamins

It is also good to aim for:

- High fiber
- High protein

A very healthy breakfast will include:

- 100% fruit juice
- And/Or
- A serving of fruit

Learning Activity: Energy = Movement

Explanation of the activity:

Energy is a difficult concept to grasp, as it comes in many different forms and has many meanings. This game is intended to help simplify the concept of energy: food has energy which gets into our body through the foods we eat, and we use this energy to move our bodies and for our bodies to work.

Preparation:

You will need the list of “Energy Sources for People.” And, if you are playing in a classroom, you may want to move the desks apart from each other so the students have more room to walk around. This is not really necessary since the students will only be walking around slowly and can maneuver around the desks.

Directions:

1. Have the students stand up.
2. Explain that they are going to play a game which requires them to use some of the energy in their bodies. They are going to walk slowly around the classroom and continue walking as they hear the names of things that give their *bodies* energy.
3. The students will begin the game by slowly walking around the space being used (a classroom, hallway, or gym).
4. Read down the list of “Energy Sources for People,” reading each word clearly and pausing between the words.
5. As you are reading the words, the students must continue moving as he or she hears words that give people energy (foods) and can be eaten for breakfast. The students will be slowly milling about the space, listening as each word is read off.
6. When a word is read that does not give people energy, the students should freeze where they are (because they cannot move if they do not have energy, and the word just read does not give them energy). Any student that continues to move is out and must sit out the rest of the game.
7. After calling students out, continue reading down the list. The students can move when they hear words that give them energy.
8. Continue playing in this fashion until all the students are out or until you read through the whole list.

*Some foods on the list are not typical “breakfast” foods. This is because we want to reinforce the concept that eating *anything with some nutritional value* for breakfast is better than eating *nothing*.

Energy Sources for People

(**Bolded** words are those which do *not* provide energy for people)

1. Cereal
2. Granola bar
3. Toast with jelly
4. Milk
5. **Brushing your teeth**
6. Pancakes
7. Orange
8. **Skipping breakfast**
9. Orange juice
10. Waffles
11. Yogurt
12. Low-fat milk
13. Buying a granola bar at school for breakfast with some of your lunch money
14. Bagel with jelly
15. Apple juice
16. Grapes
17. **Changing out of your pajamas into school clothes**
18. Banana
19. Pretzels
20. Hash browns
21. Cinnamon roll
22. Sugary cereal
23. **Toothpaste**
24. Eating part of the lunch you packed for breakfast instead
25. Omelet
26. **Walking to school**
27. Peanut butter and jelly sandwich
28. Grapefruit
29. Leftovers from dinner the night before
30. Whole-grain cereal
31. **Finishing your homework before school starts**
32. Muffin
33. Pomegranate
34. Cheese sandwich
35. Toast with peanut butter
36. Oatmeal

Learning Activity: Breakfast Timeline

Explanation of the activity:

There are three different rounds of sequencing to this activity. First, students will be given pictures of clocks to put into the correct sequential order. Then, they will be given scenarios of things that happened during a day when breakfast was eaten (Monday), and they will have to match the scenarios to the times on the clocks in which the scenario happened. Third, they will be given another set of scenarios to match to the clocks which depict a day in which breakfast was skipped (Tuesday).

The day in which breakfast was eaten will be much more positive than the day in which breakfast was skipped.

Preparation:

You will need index cards, clock pictures, scenarios, glue and scissors. Glue the pictures of the clocks to index cards. Glue the scenarios to index cards. On the other side of the cards, write whether that scenario took place on Monday and Tuesday.

Directions:

1. Split the class up into teams of about 3-4 students.
2. Give each team a stack of clock cards.
3. Tell them to put the clocks in order by placing them in a timeline. Start with the earliest time of day at the bottom, then place the next time above it, and so on, so that the six cards are in order from bottom to top (or the earliest to the latest time) to form a timeline. **They can also make the timeline horizontal, if you prefer, with the earliest time to the left and the latest time to the right.*
4. Next, give them the stack of Monday cards.
5. They are to read each scenario on the cards and place them next to the clock that corresponds to the time at which each scenario would logically take place.
6. Once all six Monday cards are placed next to the clock which depicts the corresponding time, hand the team the Tuesday cards.
7. Have them place these cards next to the clock which corresponds to the time at which each scenario would take place again. They should place the scenarios on the opposite side of the clocks on their timeline.
8. Once the timeline is filled in, go through the correct sequential order for the clocks (Monday cards, Tuesday cards) and then Debrief.

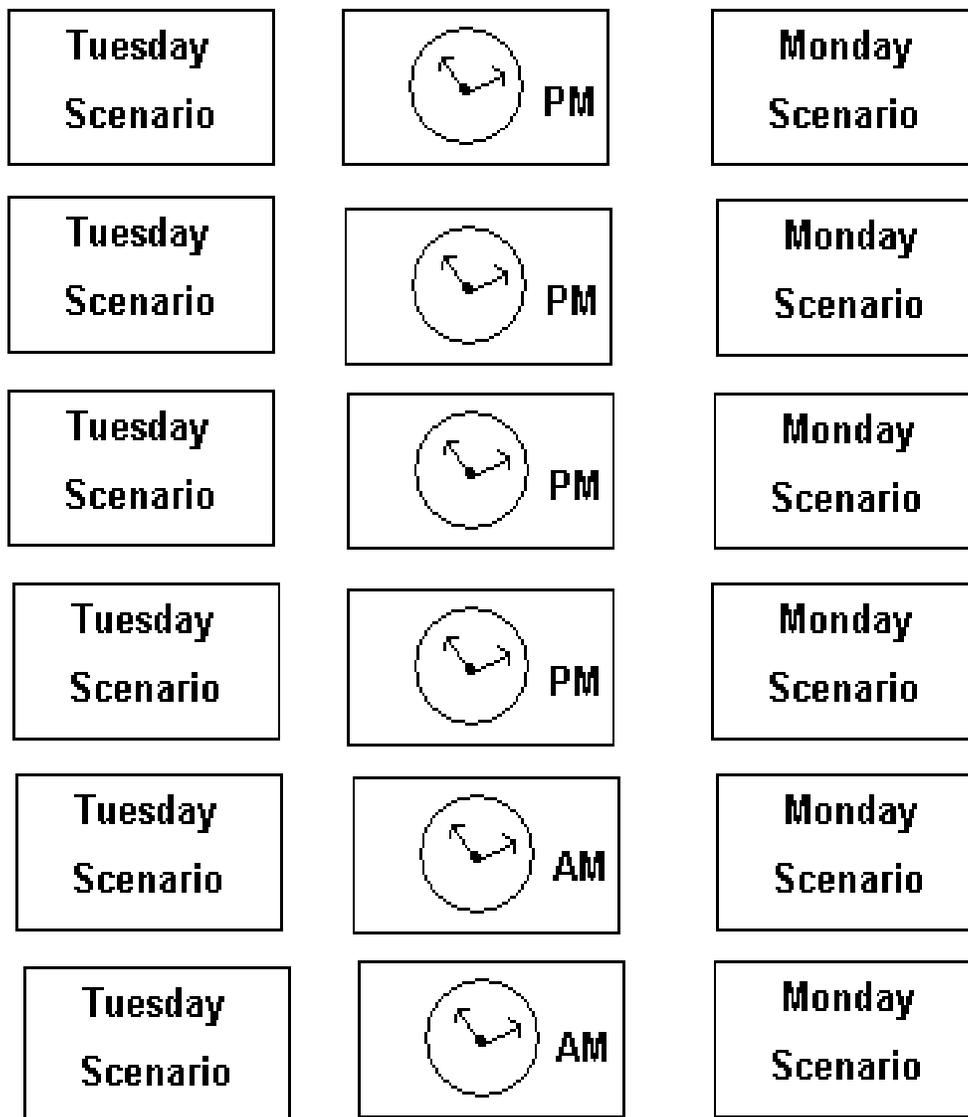
Activity Debrief:

The following questions will help to summarize the activity:

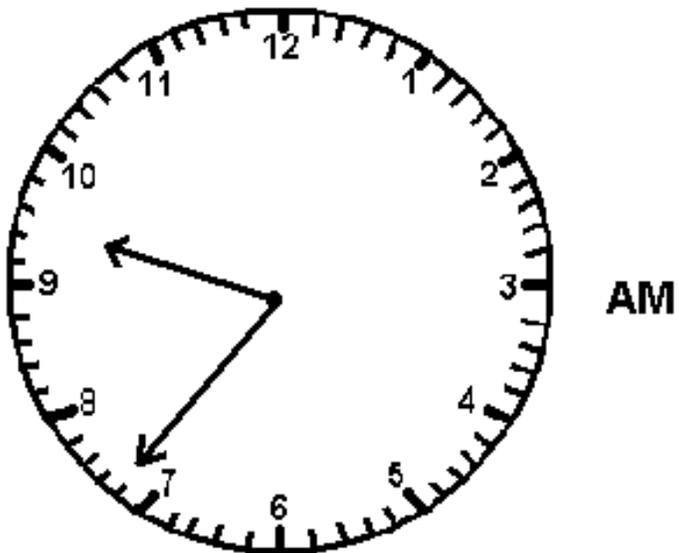
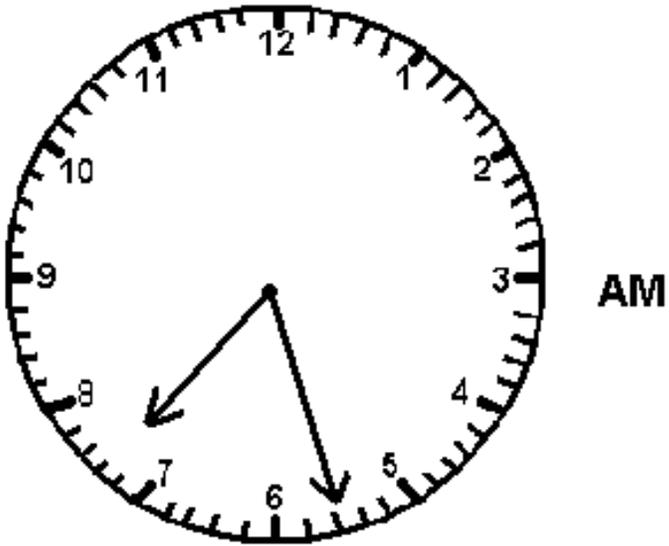
1. Which day, Monday or Tuesday, was a better day?
Monday was a better day.
2. What happened first on Monday?
I woke up and ate breakfast.
3. What happened first on Tuesday?
I woke up late and had to hurry to get to school on time.

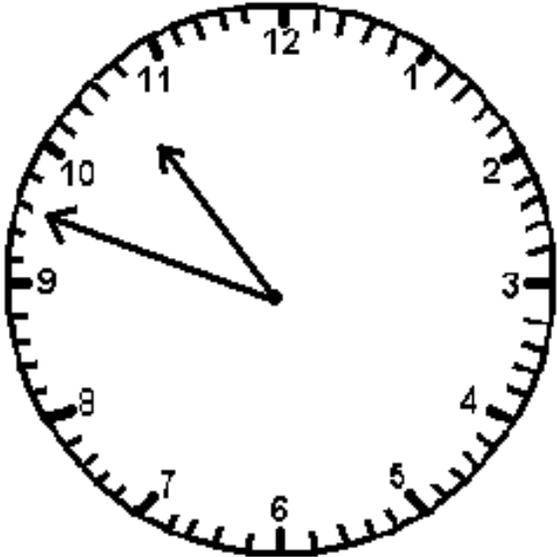
4. What were some bad things that happened to you on Tuesday?
I couldn't concentrate in class; I got in a fight with my friend; I ate too much for lunch and got a stomachache; I couldn't play outside because I felt sick; and, I didn't know how to do my math homework because I had not paid attention in class earlier.
5. How come these things did not happen on Monday?
I ate breakfast on Monday, so I started my day off right and avoided the things that happened to me on Tuesday.
6. If you eat breakfast every morning, does that mean that you will always have a good day?
No, but it will start your day out right. You will be more alert and better prepared to handle what comes at you during the day.
7. What did you learn from this activity?
Eating breakfast will prepare you for the rest of the day. You will be able to concentrate in school, get along with your friends, and make better food choices the rest of the day.

*This is what the timeline will look like when it is completed. First, the students will sequence the clocks. Then, they will sequence the Monday scenarios and the Tuesday scenarios. A vertical timeline is shown below. However, they can make their timelines vertical or horizontal. They can sequence the scenarios on either side of the clocks. The key element of this lesson is that they sequence the scenarios correctly.

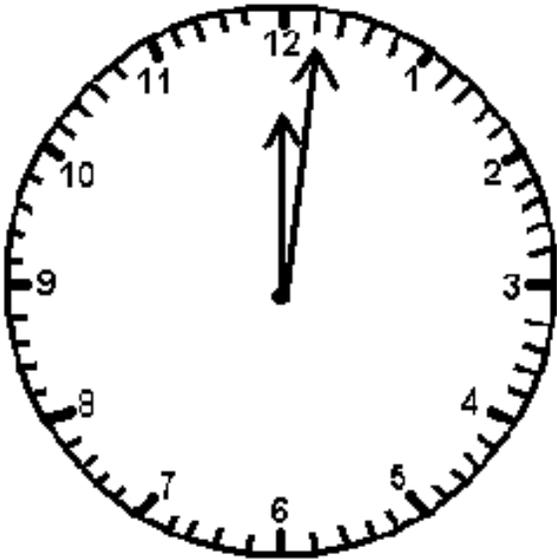


Clock Pieces

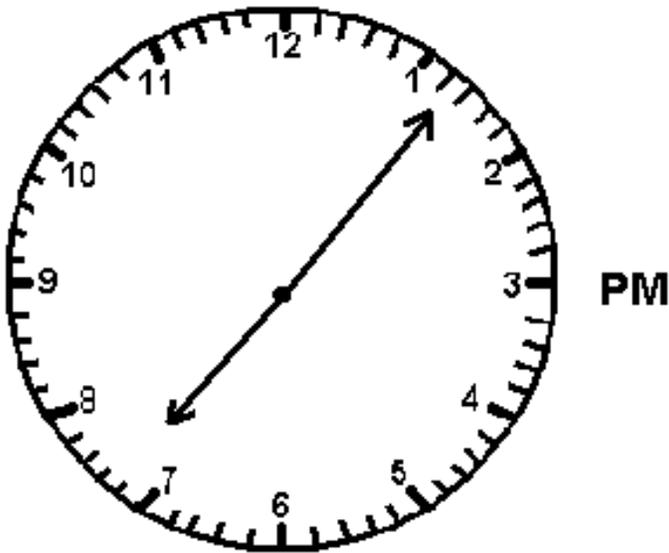
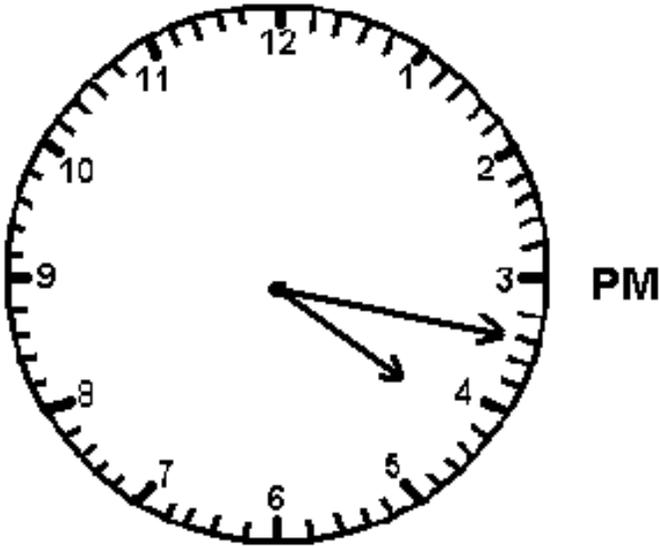




AM



PM



Scenarios

Print and paste these scenarios on index cards. Do not include the time, however. The time is included above their corresponding scenario on these pages only to act as a master for the teacher. Write "Monday" or "Tuesday" on the other side of the index card. Each group of students will need a set of Monday and Tuesday cards, in addition to Clock cards.

Monday:

7:28AM:

BRRRRING! Your alarm goes off at 7:15AM. You change clothes and within 15 minutes you eat breakfast. You eat cereal with low-fat milk and drink 100% orange juice. You feel full, awake, and energized!

9:36AM:

You get to school at 9:00AM. About 30 minutes later you are learning something new in math class. You pay attention to your teacher and concentrate very hard. At the end of class, you understand how to do the new math problems. You are proud of yourself.

10:48AM:

It is 10:40 AM. Art class is over. While you are putting your art supplies away, your friend comes up to you. He invites you to come over to his house this weekend for a sleepover party. You are very excited!

12:01PM:

The bell for lunch rings everyday at noon. You are feeling a little hungry! You go to lunch and eat a turkey sandwich, applesauce, carrots and a brownie. You drink water with your lunch. You have lots of energy!

4:17PM:

You get home from school at 3:30PM. About 45 minutes later you are outside playing. You run and ride your bike with your friends.

7:11PM:

You are finished with dinner at 7:00PM. For the next ten minutes you do the dishes. Then, you start your math homework. Your homework is easy because you paid attention in class. You finish it quickly and feel like you did a great job.

Tuesday:

7:28AM:

Your alarm did not go off this morning! You wake up and rush to get to school. You are hungry, but you decide to skip breakfast because you have to get to school.

9:36AM:

During math class, your stomach is growling because you are so hungry. You hope no one hears it. You do not pay attention in class because you are so embarrassed about your stomach growling..

10:48AM:

Your head hurts and you feel dizzy. You still have 1 hour and 12 minutes before lunchtime! Your friend asks if you are allowed to come to the sleepover, and you snap back, "I don't know! I forgot to ask my mom! Stop nagging me!" Your friend is mad because you yelled at him and walks away.

12:01PM:

Finally lunchtime! You run to the front of the lunch line, cutting classmates in line. Your friends do not sit with you at lunch because you are so cranky.. You eat twice as much as you normally do because you are so hungry.

4:17PM:

You have been home from school for 47 minutes. You want to go play outside after school, but you have felt sick since eating lunch. Your stomach hurts from eating so much at lunch!

7:11PM:

Just after 7:00PM, you try to do your math homework, but you don't know how to do the math problems! You were so hungry during math class this morning that you did not pay attention to your teacher. You think you will get a bad grade on your homework.

Snack Math

Objectives

1. Students will understand the importance of reading nutritional information before choosing a snack.
2. Students will understand the importance of choosing snacks that are low in fat, sugar and/or salt.
3. Students will understand the ability to make healthy snack choices.
4. Students will understand how to solve problems involving money and count change using coins and paper bills.

Materials needed for this lesson

1. Sample nutrition label(s) for several different snacks- some that are low in fat, salt (sodium) and sugar and some that are not.
2. Comparing Snacks worksheet, 1 per student (blank worksheet provided)
3. Enough currency (paper bills-provided) for each student to have \$10 (a ten-dollar bill)
4. Enough currency (provided) for the students to make change for the students' purchases. (They will need \$1 bills and coins)
5. Round 1 price tags with pictures (several copies)- provided
6. Round 2 price tags with pictures (several copies)-provided
7. 2 receipt worksheets for each student-blank copy provided

Background information and notes

When it comes to snacks, we have a lot of choices. Often, we snack on foods that are high in fat, salt (sodium) or sugar. Because we should limit all three of these ingredients in our diet, it's important to learn what snacks are healthiest for us. Additionally, it is important to keep fruit and vegetables in mind when making snack choices. In this lesson, students will be able to engage in an interactive activity that allows them demonstrate their knowledge about choosing healthy snacks.

Presenting the Lesson

Begin the discussion by asking the students to raise their hand and say what they usually eat as a snack. Once several students have shared their typical snacks, ask them which snack(s) they think is the healthiest.

A **healthy** snack means it is:

- Low in fat
- Low in sugar
- Low in salt (sodium)

How do you **know** if a snack is healthy?

The snack's nutrition label is the **best** source of information about a food or drink.

·If sugar (or fructose) is listed as one of the first three ingredients, then the product is high in sugar.

·Salt is listed as **Sodium** on a nutrition label.

·Low-fat usually means that no more than 30% of the calories in the food come from fat.

→ Example: Each **gram of fat** in a food contains **9 calories**. So, in a food that has 3g of fat, 27 of its calories would be coming from fat. If the food is 180 calories, anything less than 54 calories from fat would be considered low-fat (6g of fat or less).

→ 54 calories is 30% of 180 calories

→ 6g of fat x 9 calories per gram of fat = 54 calories

***Remember that **fruits and vegetables** are **always** a healthy snack choice.

Learning Activity: Comparing Snacks

Name _____

Directions: Use the nutrition labels that your teacher has given you. Fill in the information below to help you find three snacks that are healthy. **Remember that salt is listed as **sodium** on a nutrition label.

What is your source for data? _____

What are you trying to discover about the food? _____

Place your data findings below:

Snack food	Fat g	Sugar g	Salt mg

Based on the information you discovered, what are three healthy snack options?

- 1.
- 2.
- 3.

Learning Activity: Snack Shop

Explanation of the activity:

Through the snack shop game, the students will learn about the importance of purchasing healthy food choices.

Preparation:

You will need the following: enough currency (paper bills) for each student to have \$10 (a ten-dollar bill), enough currency for the students to make change for the students' purchases (They will need \$1 bills and coins), round 1 price tags with pictures (several copies), round 2 price tags with pictures (several copies) and 2 receipt worksheets for each student. You will also print currency and price lists and cut out currency and price tags.

Directions (Round 1):

1. Students should be matched in pairs. The student purchasing food will have a ten-dollar bill and the student making change will have several ones and quarters.
2. One student will be the cashier and one student will purchase snacks.
3. The student purchasing the snacks will need to choose 5 snacks, one for each day of the week. They can choose a snack more than once.
4. The student will choose whatever s/he desires and the cashier will write a receipt, total the purchase and make change.
5. Then the students will switch roles and repeat steps 3 & 4.

***Note:** The students should choose snacks based on desire in the first round. The prices are set so that students can purchase five snacks for \$10, without having to choose foods with nutritional value.

Activity Debrief (Round 1):

The following questions will help to summarize the activity:

1. Students should lay their food choices in front of them. Ask if any of their choices would be found on the food guide pyramid. Which foods? If they chose foods that are not included on the food pyramid, ask why they chose them. Will they be able to get a lot of nutrients from those foods? Explain.
2. Have the students raise their hand if they had **more than** \$2 left after purchasing five snacks. Ask them what foods they chose. This should show the class that students who made at least a couple healthy choices had money left over.
3. Have the students raise their hand if they had no money left or less than \$2. Ask the students what foods they chose. This should show several unhealthy choices.
4. Students who had \$2 or more left over should be given a reward. (optional)
5. Snacks are one way of putting energy and nutrients into our bodies. If snacks don't have a lot of nutrients, how will we get the nutrients we need? If you have eaten very well throughout the day, you may be able to choose a snack with fewer nutrients.

Directions (Round 2):

1. Students are going to play Round 2 exactly the same way they played Round 1. However, they have a different price list.
2. Students can't spend more than \$10. In round 2, the snack prices for foods without a lot of nutrients have increased. They will have to buy at least a few healthy foods.
3. There is no prize this round.

Activity Debrief (Round 2):

The following questions will help to summarize the activity:

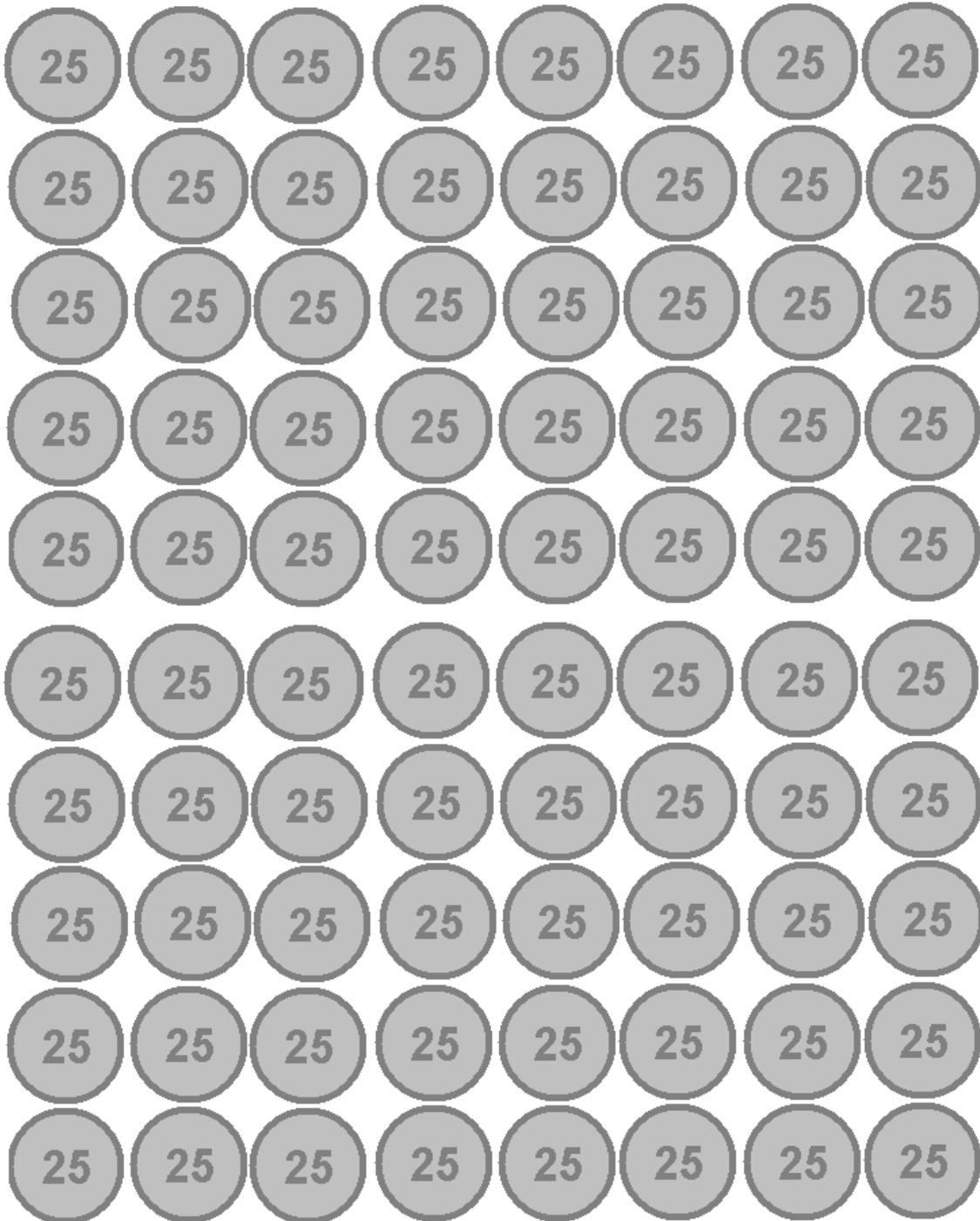
1. In order to spend less than \$10, everyone had to buy at least two healthy foods. Hold up what you bought that you think is healthy.
2. Do you think you made better choices the first or the second round?
3. Do you think you will feel better after eating your choices from the first or the second round?

Currency: Snack Shop









Price Tags: Round 1



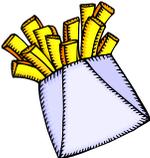
Ice Cream Sundae
\$1.75



Potato Chips
\$2.00



Chocolate Candy bar
\$1.75



French Fries
\$2.00



Soda Pop
\$1.25



Doughnuts
\$1.75



Banana
\$.25



Trail Mix
\$1.00

Price Tags: Round 1 (Continued)



Yogurt
\$.75



Bottled Water
\$.50



Apple
\$.50



Orange
\$.25



Pretzels
\$.75



Apple Juice
\$1.00



Brownies
\$2.00



Cookies
\$1.25

Price Tags: Round 2



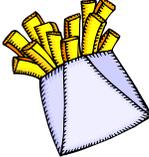
Ice Cream Sundae
\$2.75



Potato Chips
\$3.00



Chocolate Candy bar
\$2.75



French Fries
\$3.50



Soda Pop
\$3.00



Doughnuts
\$3.00



Banana
\$.25



Trail Mix
\$1.00

Price Tags: Round 2 (Continued)



Yogurt
\$.75



**Bottled
Water**
\$.50



Apple
\$.50



Orange
\$.25



Pretzels
\$.75



**Apple
Juice**
\$1.00



Brownies
\$3.00



Cookies
\$2.75

Receipt

Item Purchased	Cost
1.	
2.	
3.	
4.	
5.	
Total:	
Amount (\$) given:	
Change:	

Food is our Energy Source

Objectives

1. Students will understand that energy is what gives us the ability to do work.
2. Students will understand that the source of our energy is food.
3. Students will understand the importance of energy balance.
4. Students will understand that we must include physical activity in our daily routine to balance out the energy that we take into our bodies from food.

Materials needed for this lesson

1. 1 roll of tape per group of students
2. 1 ruler per group of students
3. Scratch paper and pencils
4. 1 stack of Food Cards per group
5. List of “Energy Sources for People” (provided)
6. Energy balance pictures (provided)

Background information and notes

Your students may already understand that food is what gives us the ability to do work, move our bodies, etc. In other words, we need food to survive. However, students may not realize that we cannot take in an endless amount of energy. We only need enough energy to keep our bodies functioning. The energy we take in must be proportional to the amount of energy we expend. If we eat too little, we will not be able to get through the day. If we eat too much, our bodies store the energy and we may become overweight.

In this lesson, the students will learn about energy and how we benefit from it. They will also learn how to reach energy balance. The important part is to stress physical activity as a means of balancing the energy we take in with the amount that we need to get through the day.

Presenting the Lesson

Every living thing has to have energy to survive. Plants get their energy from the sun, animals get their energy from plants or from other animals, and humans get their energy from food (which comes from plants or animals). This is typically referred to as the food chain.

What is energy?

Energy is the ability to do work (move, dance, walk, run, play, etc). Our body needs energy to perform essential functions (breath, pump blood, send messages, talk, etc). Energy comes from an external source, food, which we put into our bodies.

Does it matter what type of energy we put into our bodies?

Yes! It not only matters **what type** of energy we consume, but **how much** energy we consume. The type energy that is best will come from a diet with a lot of variety. This means eating from the five food groups and limiting foods of minimal nutritional value (sweets, potato chips, soda, etc)

What if we get too much energy?

Energy not used by our daily activities and essential body functions is stored in the body. Energy is stored in our bodies in the form of extra weight. To make sure that we balance the amount of energy we consume with the amount of energy we expend, we need to incorporate physical activity into our daily routine. Our body uses energy to do everything, even to sleep. But there is usually a little extra that we should use to play with our friends, take a walk, do chores, or anything else we consider a fun way to be physically active.

What is energy balance?

Energy balance means eating enough food to do what we want to do and to be healthy, but not eating too much and getting too little physical activity. Balance means two things are equal or almost equal.

*Show the students the Energy Balance illustrations found with this lesson.

Do Activities 1 & 2 to help the students understand the concepts discussed above.

Learning Activity: Energy = Movement

Explanation of the activity:

Energy is a difficult concept to grasp, as it comes in many different forms and has many meanings. This game is intended to help simplify the concept of energy. Food has energy which gets into our body through the foods we eat. We use this energy to move our bodies and for our bodies to work.

Preparation:

If playing in a classroom, you may want to move the desks apart from each other so the students have more room to walk around. This is not necessary; however, as the students will only be walking around slowly and can maneuver around the desks.

Directions:

1. Have the students stand up.
2. Explain that they are going to play a game which requires them to use some of the energy in their bodies. They are going to walk slowly around the classroom and continue walking as they hear the names of things that give their *bodies* energy.
3. The students will begin the game by slowly walking around the space being used (be it a classroom, hallway or gym).
4. Read down the list of “Energy Sources for People,” reading each word clearly and pausing between words.
5. As you are reading the words, the students must continue moving as they hear words that give people energy (foods). The students will be slowly milling about the space, listening as each word is read off.
6. When a word is read that does not give people energy, the students are to freeze where they are (because they cannot move if they do not have energy, and the word just read does not give them energy). Any student that continues to move is out and must sit out the rest of the game.
7. After calling students out, continue on reading down the list, and the students can move when they hear words that give them energy.
8. Continue playing in this fashion until all the students are out, or until you read through the whole list.

Energy Sources for People

(**Bolded** words are those which do *not* provide energy for people)

1. Carrots
2. Hamburger
3. Wheat bread
4. Milk
5. **Batteries**
6. Tuna fish
7. Macaroni and cheese
8. **Cars and trucks**
9. Chicken sandwich
10. Pretzels
11. Yogurt
12. Low-fat milk
13. Papaya
14. Spaghetti and meatballs
15. Orange juice
16. Beef taco
17. Swiss cheese
18. **Electricity**
19. Pepperoni pizza
20. Rice
21. Baked potato with sour cream
22. Honey
23. **Gasoline**
24. Sushi
25. **Wind**
26. Waffle
27. Banana split with a cherry on top
28. Eggs
29. **Coal**
30. Peanut butter and jelly sandwiches
31. Corn
32. Tortillas
33. Avocados
34. Microwave TV dinner
35. **Sunlight** (students may protest that plants get their energy from sunlight, and we eat plants and the animals that eat plants, so therefore we do get energy from sunlight. Explain that this interaction is called the “food chain.” Ask the students if we get energy directly from the sun. Ask them: “If we are tired and hungry and go stand in sunlight, will our bodies get energy?”)
36. Barbeque ribs
37. Pomegranate
38. Grilled cheese sandwich

Learning Activity: The Energy Zone Game

Explanation of the activity:

The object of this game is to demonstrate that energy is taken into the body by eating foods, and that different foods provide different amounts of energy. Energy is either used up or stored. We want to stress the fact that storing food is not necessarily a bad thing. Although the energy unit values assigned to the different foods are loosely based on their caloric values, this fact should not be mentioned to the students. We want to ensure that the students do not get the message that they need to count calories and then expend the amount of calories they consume. Rather, we want them to realize that food contains energy which is used by the body to perform physical activities. Energy that is not used by physical activity is stored in the body.

Preparation:

You will need: 1 roll of tape per group (or per student, if playing individually), 1 ruler per group (or per student, if playing individually), scratch paper and pencils for the groups (or student), and 1 stack of Food Cards per group (or per student, if playing individually). Prepare the “field” by marking the width of one end of the room or hallway with a long piece of tape. This is the starting line, so label it as such with a marker. Measure 8 feet (96 inches) from the starting line and mark the finish line, or “Energy Zone,” with another long piece of tape the width of the field. Label it as the “Energy Zone” with marker. Every 2 feet from the starting line to the energy zone, make a long mark the width of the field with tape, in order to give the students a better sense of the length of the field.

Scenario 1

Mark on the tape the number of inches from the energy zone that it is. For instance, the first line of tape from the starting line will say “72 inches,” the second line will say “48 inches,” and the third line will say “24 inches.” This will allow the students to get a better sense of how many inches they still need to go to reach the Energy Zone.

Directions:

1. Tell the students to imagine that they are going to play a game of touch football with their friends that evening. Playing a game of touch football for about 25 minutes uses up a measure of 100 units of energy from their body.
2. Explain that these energy units (EUs) get into the body through foods they eat, and different foods contain more or less EUs than other foods.
3. Explain that the game they are going to play right now is kind of like football, and they are going to all start on one end of the “field” and try to get to the other end, the end zone—or in this case, the “Energy Zone,” without going too far beyond it.
4. They will be given a stack of cards with different foods on them, and over the course of the game they must pick 6 different foods to “eat.” They will move across the field according to the EU value assigned to each food that they choose to “eat,” where 1 EU = 1 inch.
5. Once again, stress that they want to get to the energy zone without going too far beyond it, so they want to choose foods that will get them there, but without going beyond it, if possible.

6. Since they must pick 6 foods, they have 6 “downs” to get into the energy zone (similar to the 4 downs needed for a first down in football).

Scenario 1

The students know the EU values assigned to each food because the value is written on the backside of the food cards. They will try to plan mathematically which foods to “eat” by combining 6 different foods with EU values equaling 100, or nearly 100.

Scenario 2

The students do not know the corresponding EU values assigned to the foods they choose to “eat.” The teacher has a list of the foods and their EU values. Once the groups decide which food they want to “eat” at a particular down, the teacher tells them how many EUs the food contains and the students move the corresponding number of inches.

7. Have the groups line up at the starting line. Hand each group their own stack of food cards (40 per stack).
8. 1st Down -- give them a few minutes to pick their first food to “eat.”
9. Depending on which scenario you are using, allow the students to use their rulers to measure the distance their food’s EUs will take them.
10. Have the students place a small piece of tape on the floor to mark how far that food took them, so they know where to measure from for their next food choice.
11. 2nd Down – give the students a few minutes to pick the next food they want to “eat,” stressing that they *cannot* choose the same food, and they want to try to get to the energy zone without going far beyond it.
12. Repeat until the 6th Down.
13. Allow students to move beyond the energy zone (as far as the space you are working in will allow), which will occur if they consistently choose foods with high EU values.
14. The students who get closest to the energy zone tape, with or without going beyond it, are the winners.

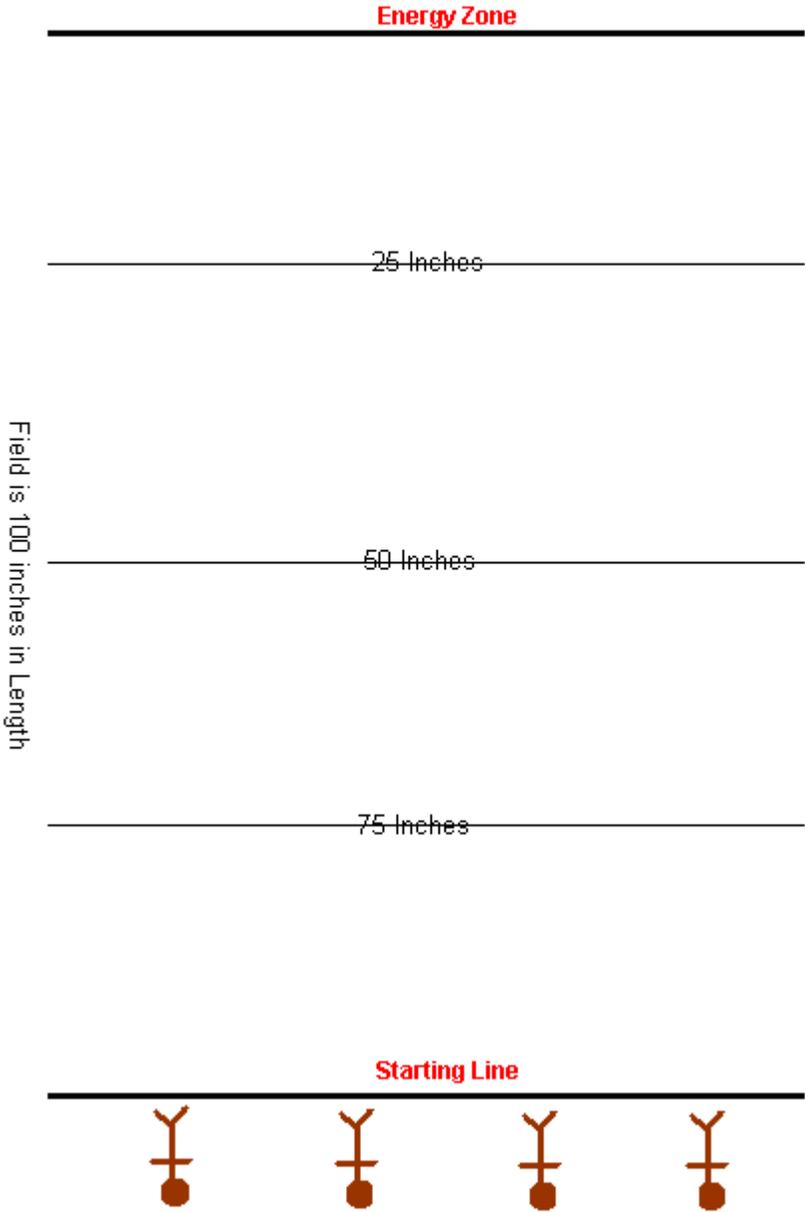
Activity Debrief:

The following questions will help to summarize the activity:

1. What kinds of foods had the highest amount of energy? Why?
Foods that do not have many nutrients have the most energy. Sugar and fat provide more energy per ounce of food, but they don't provide many nutrients.
2. Since foods of minimal nutritional value have the most energy. Why should we eat them less often than fruits, vegetables, whole grains, and low-fat milk?
Because fruits, vegetables, whole grains, and low-fat milk products have the nutrients we need. Think of your diet like an allowance or budget. If you spend all of your allowance or budget on luxury items, you may not have enough to pay for what you really need. Similarly, if you eat a lot of fatty or sugary foods that don't contain many nutrients, you may be too full to eat the nutrient-rich foods you need. Your budget for food is determined by your age, gender, height, and how physically active you are. The only things you can control are the foods you eat and the amount of physical activity you get. The relationship between these two things is called "energy balance." You want to keep a balance between the energy coming into your body through the foods you eat and the energy you use during physical activity.
**You may wish to refer to the Nutrient Chart included in this activity.*
3. Why did you want to get as close as possible to the Energy Zone?
The Energy Zone represented a balance between the energy coming into your bodies through the food you ate and the energy being used up as you played touch football.
4. What did it mean if you went far beyond the Energy Zone?
If you went far beyond the Energy Zone, you took in much more energy than what you used up playing the physical activity of touch football. Your body was not in energy balance.
5. What did it mean if you did not get to the Energy Zone?
It meant you did not get enough energy from the foods you ate. You do not want to go too far over the Energy Zone, but you definitely want to make sure you have enough energy to get there. Without enough energy, you will feel hungry, tired, nauseous, distracted and dizzy. You want to make sure you have enough energy to do all the things you want to do during the day.
6. What do you think would happen to left-over energy if you went past the Energy Zone?
Energy that is not used by the body is stored. Any energy left-over at the end of the activity would be stored...unless the activity was extended. Playing longer would use up any extra energy. You can make your energy budget more balanced by increasing your physical activity.

Diagram of Set-Up

*The black lines represent tape markings, with the words written on them in marker.

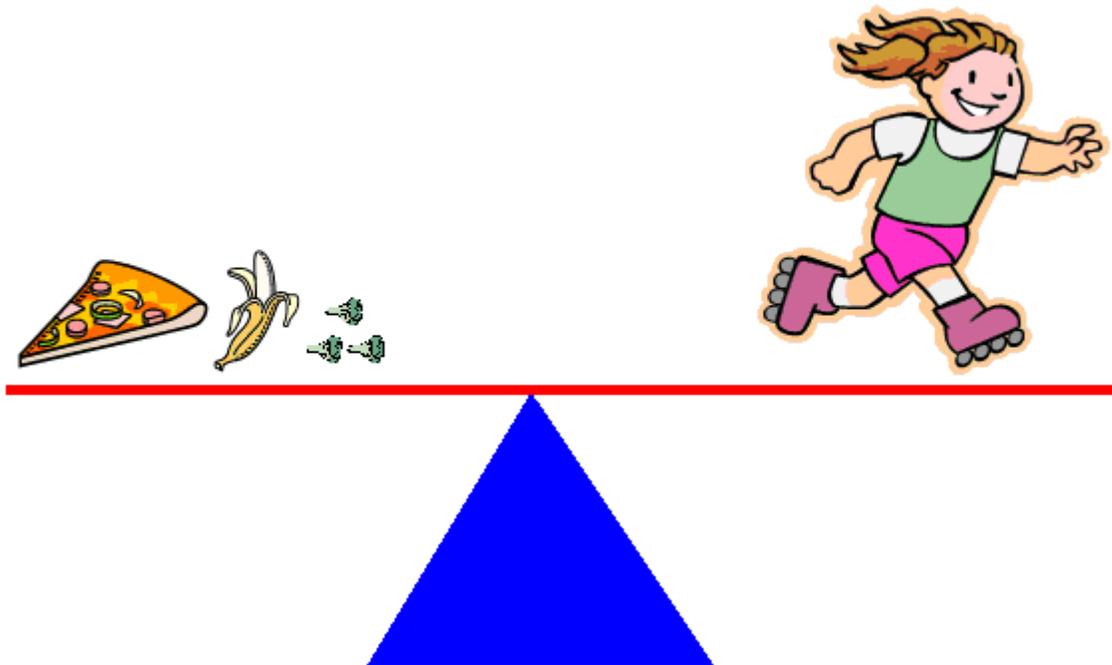


Food	EU's
1. Pizza	50
2. Cheeseburger	40
3. Ice cream sundae	55
4. Pop	18
5. Hot dog	23
6. Potato chips	47
7. Candy bar	34
8. Brownie	28
9. Sugary cereal	49
10. Scrambled eggs	22
11. Turkey sandwich	20
12. Broccoli	12
13. Carrots	12
14. Corn	14
15. Apple	15
16. Banana	15
17. Apple juice	13
18. Tomato soup	20
19. Whole-grain cereal	14
20. Pretzels	15
21. Glazed donut	32
22. French toast sticks	32

23. Milkshake	42
24. Fast food egg, cheese, and ham sandwich	54
25. Pepperoni sausage	38
26. French fries	37
27. Cheesecake	29
28. Rice cake	4
29. Trail mix	14
30. Chicken noodle soup	17
31. Popsicle	5
32. Spaghetti with marinara sauce	36
33. Cottage cheese	13
34. Peanut butter and jelly sandwich	24
35. Granola bar	15
36. Popcorn with no butter	10
37. Steak	55
38. Fast food chicken nuggets	44
39. Salad with small amount of dressing	24
40. Milk	15

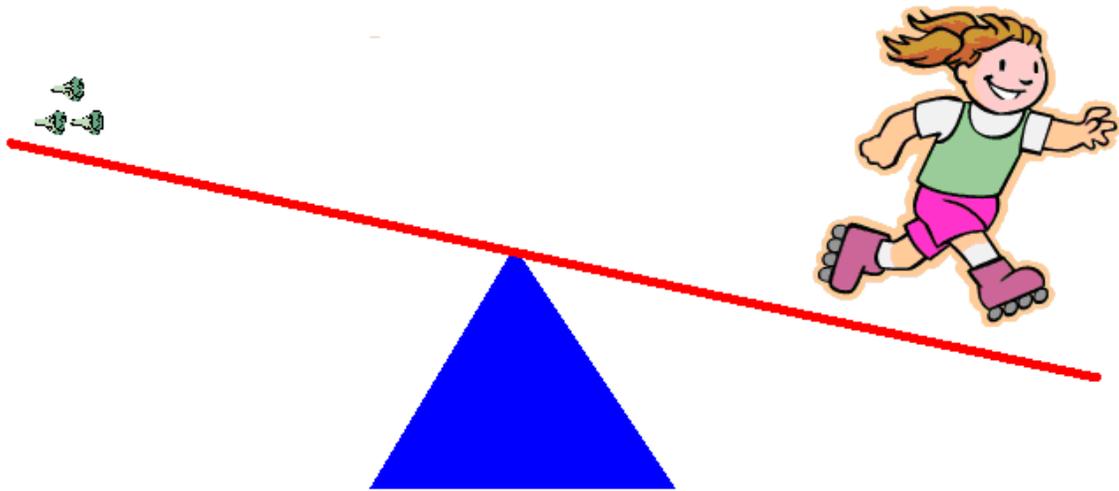
YES, in energy balance.

The amount of energy in these foods is equal to the amount of energy needed to roller skate. The girl has enough energy to do her favorite high-energy physical activity.



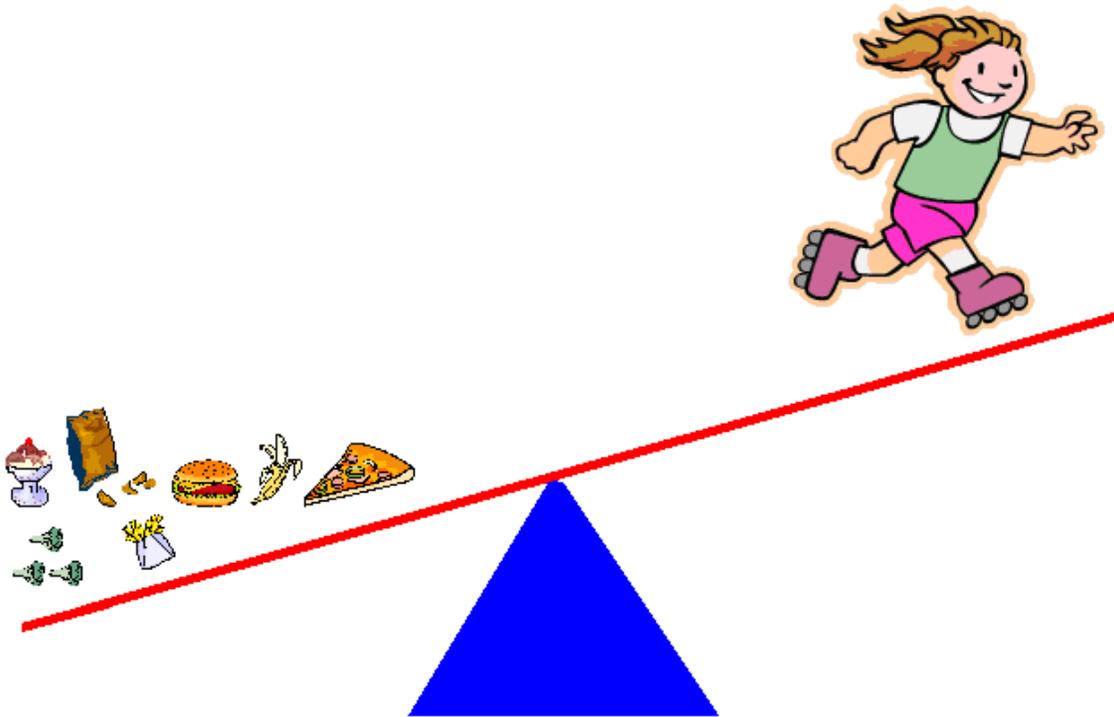
NOT in energy balance.

Since the girl just ate three stalks of broccoli, she does not have enough energy in her body to roller skate. If the girl ate more she would have enough energy in her body, and she would feel well enough to roller skate. However, because she has such little energy in her body she does not feel well enough to do high-energy activities.



NOT in energy balance.

These foods provide too much energy. There is a lot of left-over, unused energy that will be stored in the girl's body.



Nutrients: Growing Essentials

Objectives

1. Students will understand that healthy food and beverages are essential components of a healthy lifestyle.
2. Students will understand that scientific experiments are a useful way to provide evidence to support a claim.
3. Students will know that your health is affected by what you drink and eat.

Materials needed for this lesson

1. Styrofoam cups
2. Potting Soil
3. Plant Food or Fertilizer
4. Water
5. Spoon
6. Marker
7. Bean Plant Seeds
8. Rulers or Measuring Tape
9. Worksheets

Background information and notes

In order to survive humans need water, food and shelter. These three basic elements provide a foundation for humans to sustain life. The earth is composed of 70% water and more than half human body consists of water. Without clean water to drink, a person cannot live longer than a couple of days. Additionally, a person can only live for a couple of weeks without food and shelter. Therefore, it important for children to understand that in order to be healthy, it is necessary to eat a nutritional diet and drink water. This lesson is also good if you would like to incorporate a gardening aspect to your program.

Presenting the Lesson

Review the meaning and purpose of nutrients. Nutrients are substances that help nourish the body. Inform students that nutrients are responsible for helping hair, nails, teeth, and gums stronger and making skin clear and healthy. Nutrients give energy, help to speed up the healing process from illnesses and can help improve eyesight. Nutrients also aid in concentration and clarity in thinking.

Ask students to identify how humans get nutrients. Nutrients are available in fruits, vegetables, dairy products, meats and beans. By eating healthy foods that include fruits and vegetables, the body can utilize the nutrients to stay healthy and grow strong. Remind students of the importance of water. More than half of the human body consists of water and 3-5 glasses of water a day are needed to keep the body from dehydrating. Water serves to filter the body and rid the body of toxins through urination.

Inform students that in order to maintain a healthy lifestyle it is important to eat healthy food and drink plenty of water. The body can survive on one or the other, but the body is most productive if it has both water and nutrients from food. In order to grow strong and healthy, the body needs water and nutrients. Without healthy food and water, the body becomes more susceptible to disease. Also, without healthy food and water, the body does not function as well and may become sluggish. To emphasize this concept, students will conduct a scientific plant experiment and play an interactive game. The game will help students become more familiar with the definition of a nutrient. It will also serve as a way for students to identify the purpose and function of each nutrient.

Following, students will plant three plants and expose each to a different environment. Plants will receive water only, plant food only, or a combination of water and plant food. Although each plant will show some signs of growth, the plant that receives the water and plant food should have the most growth and appear the healthiest. From the experiment and the scientific report, students should learn that in order to be healthy the body needs water and nutrients, similar to the plant that was the healthiest because it received water and nutrients. After the children complete the worksheets, have each group present the results to the class.

Learning Activity: Can a Nutrient...?

Explanation of the activity:

This game provides students with additional information regarding what nutrients can do for their bodies in a fun, active way.

Directions:

1. Have all the students sit in a group in the center of the classroom or gym, moving the desks out of the way. On one side of the classroom or gym, post a “YES” sign. On the opposite side of the classroom or gym, post a “NO” sign.
2. Tell the students that you will read them a question about a nutrient, then have them stand under the sign that they think is most correct, **YES** or **NO**. They have a choice of either running, walking, skipping, crab-walking, twirling, giant-stepping, etc. to each sign. This will promote physical activity for the child.
3. After you tell them the correct answer, you may want to mention what specific nutrient enhances the activity mentioned. Additionally, you might want to provide an example of a food that contains that nutrient.
4. For the second question of the game, have the students get into the center of the gym again. Tell the students the second question.
5. Repeat this for all thirteen questions.

**This game works best as detailed above in a large classroom, gym, or hallway—anywhere with a generous amount of space. It allows the students to run, skip, twirl, etc., to the sign of their choice. If space is limited, instead of having the students go to the sign of their choice for each question, give them each two signs. One sign should say “YES” and one sign should say “NO.” Have them hold up the sign of their choice for each question.*

Questions for Can a Nutrient...?

“Can a nutrient...

1. ...help you get better faster from some sicknesses, like a cold or the flu?
YES! (Vitamin C) (orange)
2. ...make your teeth stronger?
YES! (Calcium) (milk)
3. ...make your eyes change color?
NO!
4. ...strengthen your muscles?
YES! (Calcium) (yogurt)
5. ...improve your night vision?
YES! (Vitamin A) (carrots)
6. ...make you fly?
NO!
7. ...make you feel less tired?
YES! (Iron) (fish)
8. ...help a broken bone heal faster?
YES! (Vitamin C) (green peppers)
9. ...make you sing better?
NO!
10. ...make your skin healthier?
YES! (Vitamin C) (broccoli)
11. ...make you get a new puppy for your birthday?
NO!
12. ...make your hair and nails grow stronger?
YES! (Vitamin A) (eggs)
13. ...make you a better artist?
NO!

Learning Activity: Plant Experiment

Note: This experiment will allow students to understand that water and nutrients are essential for healthy growth and development. This lesson will take at least two weeks to complete, therefore, please plan accordingly so that students have time each day to collect data for a 3-week period.

Preparation:

At each work station, lay the materials out for each student group. You may want to soak beans overnight for 24 hours to speed up the growing process. Make eleven copies of the data portion of the Group Worksheet for each group to record data. Make a copy of the Final Report section for every student to complete.

Day 1: Set-up

1. Divide students into groups. Before starting the experiment, have students conduct an inventory of the materials. Using the marker, a student should label the cups; Cup 1: Water, Cup 2: Nutrients, and Cup 3: Water and Nutrients. Also, have the groups label the cups with their group name
2. Have students fill their cups with soil and plant one bean seed in each cup.
3. Have students add water only to the cup labeled water, plant food or fertilizer only to the cup labeled nutrients, and water and plant food to the cup labeled water and nutrients. Please read the instructions for the purchased plant food and have students add the plant food accordingly.
4. Have students place plants near a window or area that will get adequate sunlight. If preferred, growth lamps can be used.
5. Have students complete the experiment and fill in the Group Worksheet. Each student is responsible for the Final Report Worksheet.

Steps for Maintenance and Recording Data

1. Have students water plants every third day and add plant food to plants as specified on the directions. Miracle Grow instructs individuals to add plant food every 7 to 14 days.
2. Have groups record any observations concerning growth, appearance, texture and seedling production. Measure any sprouts and record measurements on the worksheet. Have each group fill in the chart each day with the measurements.

Group Worksheet: Plant Experiment

Names:

Hypothesis: Circle the answer from the selection of bolded options.

*Our hypothesis, or guess, is that the plant **with water** / **with nutrients** / **with water and nutrients** will grow the fastest and the tallest and will look the healthiest.*

Methods:

1. Review materials and make sure you have Styrofoam cups, markers, potting soil, plant food, water, spoons, bean seeds, rulers, and worksheets.
2. Label three cups.
Cup 1: Water
Cup 2: Nutrients
Cup 3: Water and Nutrients
3. Write the group name on the side of each cup
4. Fill the cups with 2/3 of soil. Place the bean in the soil so that it is covered with dirt.
5. Water the plants in the cups labeled "Water" and "Water and Nutrients."
6. Place plant food as instructed by the teacher in the cups labeled "Nutrients" and "Water and Nutrients."
7. Place cups on the window sills or in a place where sunlight is available. Make sure to place all three of the cups in the same place.

Data: Example

Date <u>1/23/2007</u> Day <u>4</u>	Growth (height)	Appearance (color)	Texture (firm or wilted)	Production (# of seedlings)
Plant with water only	.5cm	Green	Firm	1 seedling
Plant with nutrients only	.2cm	Yellowish green	Wilted	0 seedlings
Plant with water and nutrients	.7cm	Green	Firm	2 seedlings

Additional Observations: This is the fourth day of observation and it is the first time that we see growth. The plants look healthy and strong but the plant with water and nutrients seems to be doing the best. We made observations and recorded the data at 12: 45pm.

Data: Fill in the date and day of the observations along with observations for each plant.

Date _____ Day _____	Growth (height)	Appearance (color)	Texture (firm or wilted)	Production (# of seedlings)
Plant with water only	_____ in. _____ cm.			
Plant with nutrients only	_____ in. _____ cm.			
Plant with water and nutrients	_____ in. _____ cm.			

Additional Observations:

Date _____ Day _____	Growth (height)	Appearance (color)	Texture (firm or wilted)	Production (# of seedlings)
Plant with water only	_____ in. _____ cm.			
Plant with nutrients only	_____ in. _____ cm.			
Plant with water and nutrients	_____ in. _____ cm.			

Additional Observations:

Final Report

Discussion: Discuss your results. Was your hypothesis correct? Which plant grew the most? Which plant looked greener and healthier? Which plant produced more seedlings?

Conclusion: Write your final thoughts about the experiment. Do you think a person who eats nutrient-rich food and drinks water will show the same results as the plant that received water and nutrients? What about a person who does not drink water and eat nutrient-rich food? What should a person do to stay healthy and grow strong? You may use an extra sheet of paper if needed.

To Drink or Not to Drink: The Importance of Nutritional Beverages

Objectives

1. Students will understand the difference between healthy and unhealthy beverages.
2. Students will understand the benefits and consequences of drinking healthy beverages.
3. Students will understand and be able to follow instructions to complete an experiment using the scientific method.
4. Students will understand and be able to accurately complete each step of the scientific method.
5. Students will understand and be able to present scientific information to the class.

Materials needed for this lesson (Sponge Bobby)

1. 4" x 6" dishwashing sponge
2. 4" x 6" gingerbread man cookie cutter (optional)
3. Scissors (sharp enough to cut through a dishwashing sponge)
4. Straw
5. Cup of water
6. Plate or paper towel on which to sit a moist sponge.

Materials needed for this lesson (pH Level of Pop)

1. 12 oz. Coca-Cola (6-pack)
2. 12 oz. Pepsi Cola (6-pack)
3. 12 oz. Mountain Dew (6-pack)
4. 12 oz. Sprite (6-pack)
5. 12 oz. Orange Soda (6-pack)
6. 12 oz. Root Beer (6-pack)
7. Milk
8. Water
9. pH meter or pH strips for each group
10. Pack of cups

Background information and notes

As children age, they begin to consume more and more unhealthy beverages including pop and artificial fruit juices instead of water, milk and natural fruit juices. Taste tends to persuade the decision-making process of youth, and the concept of drinking healthy beverages is somewhat forgotten during the shift from adolescence to adulthood.

However, what you drink affects your health, and neglecting to choose healthy beverages that serve as replenishment and provide necessary nutrients for the body results in negative consequences.

Presenting the Lesson

Begin by brainstorming the meaning of nutrients. Nutrients are substances that help nourish the body. Inform students that nutrients are responsible for helping hair, nails, teeth, and gums stronger and making skin clear and healthy. Nutrients give energy, help to speed up the healing process from illnesses and can help improve eyesight. Nutrients also aid in concentration and clarity in thinking.

Invite students to brainstorm ideas about the composition of the earth and the human body. After students have discussed the different components of the earth and the human body, explain to the students that the body and the earth are mostly made of water.

Human Body: More than half of the human body consists of water.

Earth: 70% of the earth is made of water.

Note to Teacher: Students may find it difficult to understand that the human body is made mostly of water when humans have an epithelial (skin) outer covering. In order to illustrate this point you may choose to do the Fruit Demonstration Activity.

Dehydration occurs when you lose too much water from your body before you are able to replace water by drinking the recommended amount of water. The recommended amount of water to drink for children includes 3-5 glasses of water per day. Inform students that symptoms of dehydration include headaches, feeling hungry, irritability, tiredness, dizziness, and nausea.

Create a list of beverages by identifying the students' favorite drinks or the beverages that students prefer to drink. Write the results on the chalkboard or on a transparency so that the children can see the different types of beverages. Did the students mention water, milk and 100% fruit juice in their responses? Ask the students if there is a difference between different types of fruit juices. Explain to students that although there are a variety of different beverages available to drink, water, 100% fruit juices and milk are the best beverages to drink because they provide nutrients and prevent dehydration.

- Water replenishes the body and prevents dehydration.
- 100% Fruit Juice has important nutrients including Vitamin C.
- Milk is an important source of calcium and can include Vitamin D that helps keep bones healthy and strong.

In contrast, pop and artificial fruit juices are not beneficial to drink.

- Pop aids in dehydration and bone calcium depletion.
- Artificial fruit juices do not have the essential vitamins and nutrients that are useful for helping the body stay healthy.

Explain to students that drinking water, 100% fruit juices, and milk will help in preventing dehydration and aid in acquiring nutrients that help keep your body healthy.

To reinforce these concepts students will participate in two scientific experiments that will explore the concept of dehydration, and examine the nutrient concentration of beverages. Each experiment teaches the students how to use the scientific process to produce an evidence-based conclusion. Each experiment builds on the previous to improve scientific experimental skills.

Learning Activity: Sponge-Bobby Demonstration

Explanation of the activity:

This demonstration helps to show that our bodies lose water while doing everyday activities and how it is important to drink water to stay hydrated.

Preparation:

Take a 4" x 6" sponge and draw a man on it, like the outline of a gingerbread man. Cut the sponge-man out using scissors. Sit the sponge out for four days before using it in the lesson, so that it is dried out and stiff to begin the lesson.

Note: This demonstration can conclude after several hours or several days, depending on how long it takes the sponge to completely dry out. Therefore, it is important that enough water is added to the sponge so that information can be collected at two time periods. Students should observe Sponge-Bobby in the wet stage and in the dry stage.

Directions:

1. Gather students around a table with a sponge, cup of water and plate.
2. Introduce them to Sponge-Bobby and explain that Sponge-Bobby is like us, because he is healthiest and feels his best when his body is full of water.
3. Pass the dry sponge around the class and discuss the texture of Sponge-Bobby. Emphasize that in this state, Sponge-Bobby is dehydrated and doesn't have any water.
4. Add water to Sponge-Bobby until he is full of water.
5. Have students write a hypothesis (guess) about what will happen to Sponge-Bobby. Have students keep observations in their journals.
6. Let Sponge Bobby sit until he is once again dry.

Learning Activity: pH Level of Pop

pH Level of Pop

Explanation of the activity:

Bone calcium is turned into alkaline by the body to neutralize pH in pop, thus depleting bone calcium. This experiment is designed to test the pH level in various beverages to identify the beverage with the lowest pH level. The lower the pH, the more likely the beverage will aid in bone calcium depletion.

Note: It may be more cost-effective to purchase 2-liters instead of 6-packs of pop. Also, even though the students are conducting the experiment individually, have students share a pH meter in groups of 6 unless you have opted to use the pH strips.

Preparation:

Lay out all the materials for the students. Mark the inside of the plastic cups at the same level so the students pour the same amounts of pop in the cup for testing. Make sure not to open the pop before the experiment. The results may change depending on the flatness of the pop.

Directions:

1. Assign students to test Coca-Cola, Pepsi, Mountain Dew, Sprite, Orange Soda, Root Beer, water, or milk. **Note:** Please make sure that the class is evenly dispersed with the different types of beverages. Ask students to predict the pH levels of their respective beverage. Write some of the predictions on the chalkboard. Have the students fill in the “Hypothesis” and pH level guesses on their Lab Sheets.
2. Have each student gather their 3 cups and pour their respective beverage into the first cup up to the designated mark. To test the pH level, place the pH meter or pH strips in the beverage and wait 10 seconds or until the numbers or color stops changing. Have students record the number that is on the pH meter or the number that is associated with the color on the pH strips. The student should repeat this process two more times and take the average of the results. **Note: *Since the students will be sharing a pH meter within the group, have each student wait to open their pop until it is their turn to test the pop using the pH meter.***
3. Have students complete the experiment using the directions outlined on the Lab Sheet and answer the follow-up questions.
4. At the conclusion of the experiment, have each student present their findings and discuss their conclusions.

Student Lab Sheet – pH Level of Pop

Name: _____

Objective

To determine the pH level in Coca-Cola, Pepsi, Mountain Dew, Sprite, Orange Soda,
Root Beer, water, and milk

Pop: Circle your pop.

Coca-Cola	Pepsi	Sprite	Orange Soda
Root Beer	Mountain Dew	Water	Milk

Hypothesis (Pre-experiment predictions):

1. What is your hypothesis? What do expect to happen?

Example: I predict that Sprite will have the lowest pH level.

Procedure

1) Labeling

Label the three cups.

Cup 1: Test 1

Cup 2: Test 2

Cup 3: Test 3

2) Test pH Level

Cup 1

a) Pour the beverage from the container into the first cup until it reaches the outlined mark in the cup.

b) Hold the pH meter in the cup for ten seconds or until the numbers stop changing.

Alternative: Hold the pH strip in the cup for ten seconds until the color changes.

c) Record your result

Cup 2

a) Repeat directions from cup 1

Cup 3

a) Repeat directions from cup 1.

Data:**Example:
pH Meter:**

Example Pop: Mountain Dew	pH Level
Test 1	3
Test 2	2.5
Test 3	2.1
Average	2.53

*To get the average: Add the pH Levels in Test 1, Test 2, and Test 3 and divide by 3
For Example $3 + 2.5 + 2.1 = 7.6$ and $7.6/3 = 2.53$*

pH Meter:

Pop:	pH Level
Test 1	
Test 2	
Test 3	
Average	

pH Strips:

Pop:	Color	pH Level
Test 1		
Test 2		
Test 3		
Average		

Additional Resources:

Fruit Demonstration

Explanation of the activity:

This demonstration further explains the somewhat abstract concept that the human body is composed mainly of water, despite the fact that it is not seen due to our skin.

Preparation:

You will need a grapefruit and a sharp knife for this activity.

Directions:

1. (Cut open the fruit) Inform students that this grapefruit is like our bodies. On the outside, it is firm, solid, and can sit up on its own, but on the inside it is filled with water.
2. Slice the fruit and give a piece to each student, allowing them to feel the outside and the inside of the fruit. Discuss the structure of the fruit and how the peel or the outer covering of the fruit aids in protecting the more vulnerable parts inside of the fruit. Discuss how this concept relates to the human body and how the skin helps to protect the inner parts of the body.

Activity Debrief:

Conclude by explaining to the students that the water that gives us shape and form is inside our body. If possible, dissect the grapefruit and extract the tiny bits of the grapefruit that actually hold the water and juices. These tiny pieces of the grapefruit illustrate how the water in the human body is encapsulated in the organs. In fact, that is the reason why we as humans are not like huge puddles or all wet and soggy.



Making Healthy Choices in Restaurants

Objectives

1. Students will understand that although restaurant food is typically unhealthy, there are healthy food options at your favorite fast food restaurants.
2. Students will understand that there is a variety of fruits, vegetables and other healthy foods available at restaurants.
3. Students will understand how to plan and make healthy food choices.
4. Students will understand how to distinguish between nutritious and unhealthy foods.
5. Students will understand how to calculate the price of a purchased meal and supply change.

Materials needed for this lesson

1. One menu for each pair of students
2. Two receipts for each pair of students
3. Paper money
4. Butcher paper/chalkboard/transparency (to make a large graph with the class)

Background information and notes

Eating at fast food restaurants can be a quick option to providing a meal in the event a parent is unable to prepare a meal at home. However, the nutrition and financial burden of purchasing a quick meal at a restaurant can be costly. This lesson is designed to teach students how to make healthy decisions in any environment and especially in a restaurant setting.

Presenting the Lesson

When eating at a restaurant, what are many of the things considered before making an order or purchasing a meal? Is taste, nutrition, and cost all factors for consideration when purchasing a meal? After purchasing an order, are the selected items healthy and nutritious? Explain to students that even when they are not preparing food, it is important to think about the foods they are eating. Begin by asking students a series of questions about which meal is healthiest.

Which is a healthier meal, Wendy’s Grilled Chicken Sandwich or McDonald’s Garden Salad?

Wendy's Grilled Chicken Sandwich actually has *less* fat than McDonald's Garden Salad with ranch dressing. The garden salad has 21 grams of fat (all from the ranch dressing). The grilled chicken sandwich has only 8 grams of fat.

	Item	Calories	Total Fat	Saturated Fat	Carbohydrates	Protein
Wendy's	Grilled Chicken Sandwich	310	8	1.5	35	27
McDonald's	Garden Salad with Ranch Dressing	265	21	3	17	3

Which is a healthier meal, Boston Market's quarter chicken without skin or Boston Market's half chicken with skin?

The quarter chicken has 33 fewer fat grams compared to the half chicken with skin. The quarter chicken has **no** skin, and the skin has a lot of fat in it.

Item	Calories	Total Fat	Saturated Fat	Carbohydrates	Protein
Quarter Chicken without Skin	160	4	1	0	31
Half Chicken with Skin	630	37	10	2	74

Which is a healthier meal, McDonald's Fish Fillet Deluxe or McDonald's Grilled Chicken Deluxe?

McDonald's Grilled Chicken Deluxe has only 20 grams of fat, and McDonald's Fish Fillet has 28 grams of fat. Although fish is sometimes healthier than chicken, McDonald's Fish Fillet is **deep fried** in oil. The chicken is grilled.

Item	Calories	Total Fat	Saturated Fat	Carbohydrates	Protein
Grilled Chicken Deluxe	440	20	3	38	27
Fish Fillet Deluxe	560	28	6	54	23

Explain to students that even when they are eating out at restaurants (or the school cafeteria) which may or may not provide healthy food selections, they can make healthy food choices. Tell students that it is okay to eat fast food, but emphasize that it is important to eat fast food in moderation. Explain to students that it is possible to eat a healthy meal in a restaurant as long as you try to incorporate fruits and vegetables into the purchase. To illustrate this concept, display the following information:

Recommended daily allowance (RDA) for one full day:

Calories	Total Fat	Saturated Fat	Carbohydrates
2000	65	20	300

McDonalds

A hamburger, grilled chicken salad deluxe with fat-free herb vinaigrette dressing, and a small Sprite.

Calories	Total Fat	Saturated Fat	Carbohydrates	Protein
530	22	7.5	61	18

Burger King

A hamburger, broiled chicken salad with reduced calorie light Italian dressing, and a medium Coke.

Calories	Total Fat	Saturated Fat	Carbohydrates	Protein
815	23.5	10	110	40

Wendy's

A grilled chicken sandwich, side salad with fat-free French dressing, and an iced tea.

Calories	Total Fat	Saturated Fat	Carbohydrates	Protein
575	11	1.5	48	31

Taco Bell

A regular taco, cinnamon twists, and a large Pepsi.

Calories	Total Fat	Saturated Fat	Carbohydrates	Protein
520	16	4	82	9

Boston Market

A quarter white meat chicken without skin, new potatoes, whole kernel corn, and a Diet Coke.

Calories	Total Fat	Saturated Fat	Carbohydrates	Protein
471	10	1.5	55	39

Subway

A six-inch turkey breast sub with lettuce, onions, tomatoes, pickles, and peppers and a medium Sprite.

Calories	Total Fat	Saturated Fat	Carbohydrates	Protein
480	6	1	99	17

Arby's

A roast turkey deluxe, regular fries, and a Dr. Pepper.

Calories	Total Fat	Saturated Fat	Carbohydrates	Protein
666	20	5	103	22

KFC

An Original breast, mashed potatoes and gravy, garden salad with Italian dressing, and a Coke.

Calories	Total Fat	Carbohydrates
571	16	86

To further illustrate this concept, have students complete the making healthy choices activity.

Learning Activities: Making Healthy Choices**Directions:*****Round 1***

1. Divide the students into pairs and give each pair a menu and five dollars. Designate one student as the cashier and the other as the customer.
2. Using their budget of five dollars, have one student order a meal from the menu provided. The partner will total up their order and make change. Have the partner create a receipt with the items purchased, the total cost, and the change received. Then, have the students switch roles.
3. Poll the class to determine which items were ordered. You may wish to make a graph depicting the students' selections. After Round 2, you will poll the class again regarding their selections. After both polls have been taken, you can determine in which round the students made the healthiest selections.

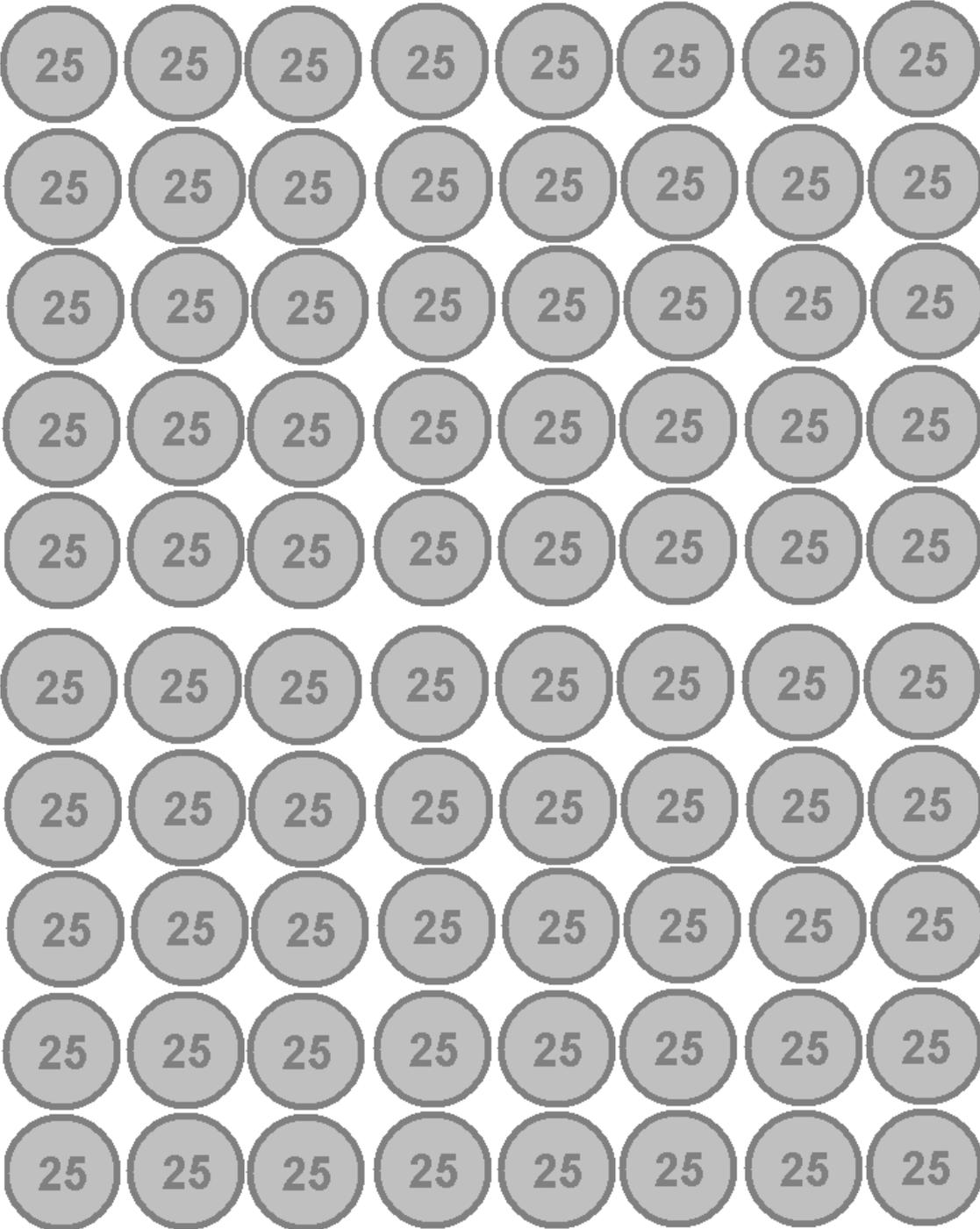
Begin by discussing the contents of each meal selection. Did students choose food based on taste, nutrition or cost? It may be helpful at this point to have a student or students collect data on the amount of children who purchased food based on the different categories of taste, nutrition or cost. Ask each child to report their purchased items and graph the results accordingly using a bar graph. Continue to ask the students if they thought that their purchase was healthy and nutritious. Once you have established if each child's selection was healthy or unhealthy, ask the students which items on the menu are nutritious (i.e., salads, fruit cups and meats) and which items on the menus have few nutrients (i.e., french fries, cookies and ice cream).

Round 2

1. Take the pairs from Round 1 and combine them into groups of four. Each person still has a budget of five dollars. However, two members of the group will pretend that they are going out to lunch. Therefore, they have the option of sharing items if they choose to do so. The other two group members are responsible for calculating the cost of the order. Each role should be determined before starting the next round.
2. Advise students to make the healthiest meal choices in this round. Some tips include:
 - Order regular sized meals instead of the extra-large or “super-sized” meals
 - Split items with a friend
 - Order water instead of pop
 - Order a side salad instead of french fries
 - Order a fruit cup instead of ice cream, cookies or pie for a sweet dessert
 - Eat half of your order and take the rest home
3. After one pair purchases a meal, have the group members switch roles.
4. Following the activity, poll the class again to see how many people ordered each item this round. Create a graph of the Round 2 choices. Compare the first and second round graphs. Using the graphs, have students determine which round included the healthiest choices.

Discuss with the class which items were bought the **most** from Round 1 to Round 2 and which items were bought the **least** from Round 1 to Round 2. Did more students purchase water, fruits, and vegetables in Round 1 or Round 2? Identify in each round the amount of water, fruits and vegetables purchased. Explain to the students that it is OK to order food that does not have a lot of nutrients. But, it is important to try to eat nutrient-rich food and to stay active so that you are able to concentrate in school and interact well with others.

Sample Materials:



\$1  \$1
One Dollar

\$1  \$1
One Dollar

\$1  \$1
One Dollar

\$1  \$1
One Dollar

\$1  \$1
One Dollar

\$1  \$1
One Dollar

\$1  \$1
One Dollar

\$1  \$1
One Dollar

\$1  \$1
One Dollar

\$1  \$1
One Dollar

\$1  \$1
One Dollar

\$1  \$1
One Dollar

Mmmm! Good Eats!



Sandwiches		Regular	Large	X-Large
	Hamburger.....\$1.75 with cheese...add 25 cents		\$2.25	\$3.00
	Chicken.....\$1.75		\$2.25	\$3.00
	Fish.....\$1.75		\$2.25	\$3.00
Sides				
	French Fries.....\$1.00		\$1.25	\$1.75
	Side Salad.....\$1.00		\$1.25	\$1.75
	Fruit Cup.....\$1.00		\$1.25	\$1.75
Desserts				
	Ice Cream.....\$1.50		\$1.75	\$2.00
	Cookies.....\$1.50		\$1.75	\$2.00
Drinks				
	Soda.....\$1.00	\$1.25		\$1.50

Receipt

NAME _____

Menu Choices	Price
	\$
	\$
	\$
	\$
	\$
TOTAL:	\$
Payment:	\$5.00 - \$.
Change:	\$

Thank you for shopping at

Mmmm! Good Eats!



Active Every Day: Physical Activities in All Seasons

Objectives

1. Students will understand the importance of doing high energy activities.
2. Students will understand that physical activities can be accomplished in any season and weather condition.
3. Students will understand how to define low and high energy activities.
4. Students will understand how to classify actions into one of the following categories: Screen Time, Active Time, School Time or Down Time.

Materials needed for this lesson

1. Several large sheets of butcher paper
2. Pencils, markers, or crayons
3. Masking tape
4. Paper on which to write an outline
5. Construction paper or the “My Weekend Activity Book”
6. Staples, glue or yarn and paper punch (to bind the book)

Background information and notes

Nine out of ten parents believe their children are physically fit, but in reality only 1 in 3 children are physically active. In fact, 63% of children are physically inactive by the time they are in high school. Instead, children spend approximately 20% of their waking hours playing videogames, watching television or playing on the computer/internet. According to the American Academy of Pediatrics (AAP), the average child is watching about 3 hours of television a day and the average kid spends 5 1/2 hours on all media combined as reported by the Kaiser Family Foundation. According to the 2005 dietary guidelines from the U.S. Department of Agriculture (USDA) and the Department of Health and Human Services (HHS), **all** children 2 years and older should get 60 minutes of moderate to vigorous exercise on most, preferably all, days of the week. The AAP recommends that children under the age of 2 years watch no TV at all and that screen time should be limited to no more than 1 to 2 hours of *quality programming* a day for children 2 years and older.

National Association for Sport and Physical Education (NASPE):

Recommended Guidelines

Age	Minimum Daily Activity	Comments
Infant	No specific requirements	Physical activity should encourage motor development
Toddler	1 1/2 hours	30 minutes planned physical activity AND 60 minutes unstructured physical activity (free play)
Preschooler	2 hours	60 minutes planned physical activity AND 60 minutes unstructured physical activity (free play)
School age	1 hour or more	Break up into increments of 15 minutes or more

References: <http://kidshealth.org/parent/fitness/general/exercise.html>
<http://missourifamilies.org/features/childcarearticles/childcare9.htm>
<http://www.globalhealthandfitness.com/children.htm>

Presenting the Lesson

Ask students to name low- and high-energy activities. List them on the chalkboard, transparency or butcher paper. Ask students to identify the best type of activity: low-energy or high-energy activities? Explain that one is not better than the other. Both types of activities can be done each day. Low-energy activities include reading or doing homework. High-energy activities include running, playing four square, and hopscotch. Doing high- and low-energy activities are important because they provide a balance.

Explain that many of the activities that we do every day are low-energy, so we need to make an effort to make sure that we do at least one high-energy activity every day. Ask students why they think it is important to do one high-energy activity every day. List their responses on the chalkboard. Explain that doing high-energy activities:

- Gives the heart a good workout and makes it stronger.
- Makes muscles and bones stronger. Strong muscles and bones will help us to grow
- Reduces stress and anxiety. Doing a high-energy activity for 20 minutes relieves stress and can make us feel better.
- Improves the immune system which makes us less likely to get sick.
- Increases a sense of calmness and helps us sleep better at night.
- Makes us feel more energetic and better able to concentrate on schoolwork.

The more you do high-energy activities, the better you will become at them. Your whole body gets a workout and gets stronger when you do high-energy activities. A healthy and strong body is able to do many activities well.

Ask the students for strategies for engaging in high-energy activity. Ask them why it is important to make sure that they do a high-energy activity every day. Ask them when, how and which activities they could fit into their days. List their answers on the chalkboard. Some strategies include the following:

- Do push-ups, crunches or sit-ups during commercials.
- At recess, play a high-energy game with your friends or play hard by yourself.
- During gym class, participate as much as you can. Gym classes usually involve doing high-energy activities and supervised weight lifting.
- Cut Screen Time to 30 minutes every day. Screen time is any time you spend watching a screen--watching TV or a movie, playing a video game or using the computer. Screen Time cuts into your time to do a high-energy activity.
- Join a sports team. Your school or community most likely has sports teams like soccer, football or cheerleading. Ask your parents if you can join one.
- Take lessons in a high-energy activity which you like. Dancing, swimming and martial arts are some examples. If you do not know a high-energy activity that you like, try doing different things until you find something you like.
- Do your chores at a fast pace. You can make just about anything high-energy if you do it quickly and move around a lot. Outside chores like raking the leaves and gardening are some high-energy chores.

Now have students brainstorm different activities that can be done during different seasons or weather conditions.

Learning Activity Extension: Complete the *Physical Activities in All Seasons* Activity (see *Additional Resources*).

Students will design a Weekend Activity Book to identify how much time they've spent on specific activities that include screen time, down time, school time, and active time. After they have completed their Weekend Activity Books, students will create a Pie Chart of Weekend Activity that further illustrates how they spent their time.

Learning Activity: Weekend Activity Book

Explanation of the activity:

Seventy six (76) percent of elementary school girls and Twenty six (26) percent of boys cannot do one chin up; therefore, this activity will help students identify high energy activities that will improve strength and endurance.

Preparation:

To create a "My Weekend Activity Book", fold 3 sheets of construction paper in half and staple or bind in the middle to make a booklet for each student. Then, label the pages in the booklet in the following order:

- Saturday Morning
- Saturday Afternoon
- Saturday Evening
- Sunday Morning
- Sunday Afternoon
- Sunday Evening

You may wish to have the students do this preparation themselves.

Note: This lesson should be done on a Monday, as it involves recalling and recording the past weekend's activities. Doing the lesson later in the week will make it much more difficult for students to be able to recall and record their weekend activities accurately.

Directions:

1. Before the students begin writing in their books, have them create an outline to organize their thoughts. The outline should include the time of the day (morning, afternoon or evening) and what activity they did. Most likely the students did more than one thing during each specified time frame. Encourage them to recall what they did the majority of the weekend. ***(If it is difficult for them to remember, ask them to identify the activities that stick out in their minds.)***
2. Using their outlines, have each student write at least two sentences about what they did during the specified time period for each page of the book.
3. After students have completed the "My Weekend Activity Book," allow them to illustrate their books and share them with the class in small groups or in pairs.
4. *Allow students to look through their books while having the following discussion.* Do you think your weekend activities were mostly high-energy or low-energy? Do you think you could have been more active? If so, what are some ways you

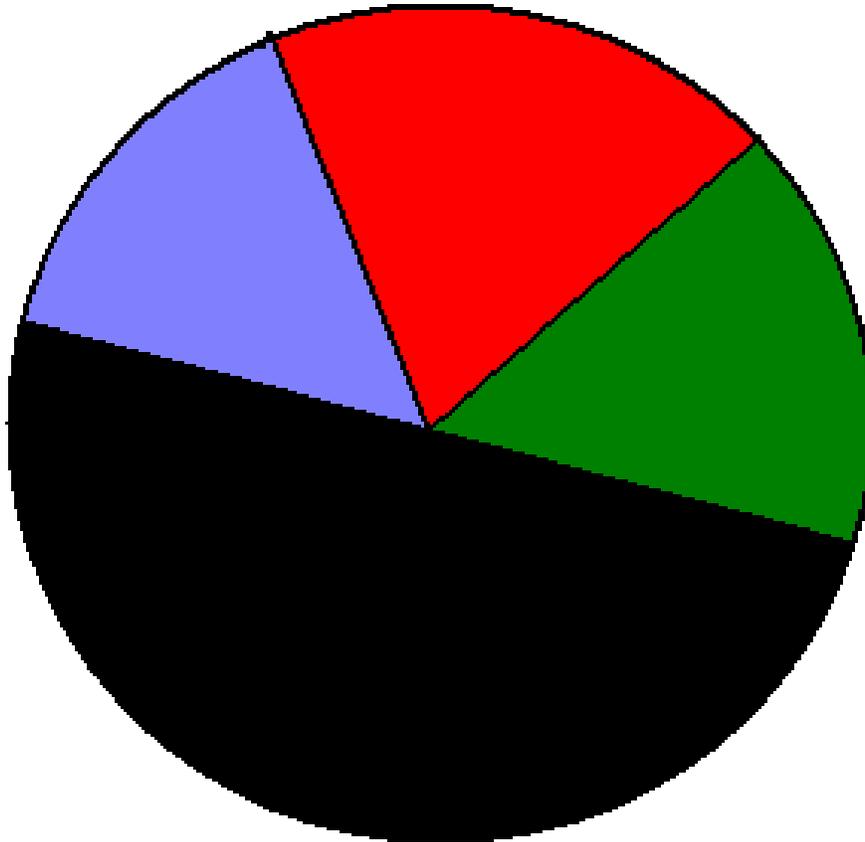
can be more active and do more high-energy activities? What are some benefits to being active and doing at least one high-energy activity per day?

Learning Activity: Pie Chart of Weekend Activity Level

Directions:

1. Have each student look through the Weekend Activity Book that they created in Activity 1.
2. Have the students place each of the activities described in their Weekend Activity Books in one of the four categories: Screen Time, Active Time, School Time and Down Time. Some of their activities may not fit neatly into one category, but have them choose the most appropriate category for each activity. The categories are listed below.
 - **Screen Time:** time spent playing video games, watching TV and using a computer.
 - **Active Time:** time spent actively playing, exercising, walking, doing household chores, etc. High-energy activities fit in this category.
 - **School Time:** time spent in classes or doing homework or reading for school or for fun.
 - **Down Time:** time spent relaxing, talking with family or friends, doing art, etc. Low-energy activities fit in this category.
3. Incomplete fractions are under the pie chart on their worksheet. These fractions show the fraction of the weekend spent doing each of the four categories listed above. Have the students write down the number of activities in each category, to complete the fractions.
4. Then, have the students color in the pie chart above according to their fractions' colors. The slices depicting *active time* should be colored red. *Screen time* should be colored in black. Color *school time* green and *down time* blue. For example if $\frac{2}{6}$ of their weekend was spent on *Active Time*, then two of the slices on the pie chart should be colored in red.
5. Discuss with students the composition of the pie chart. Explain to students that if the pie chart is mostly one color it means that all of the activities you wrote about were in the same category. In contrast, if your pie chart is many different colors, it means that you did something from all, or many, of the categories. Ask students to identify the color that is not necessary to include on the pie chart. Inform students that the pie chart does not need to include black because it represents *Screen Time*; however, *Active Time*, *School Time* and *Down Time* are all things you need every day to be healthy. *Screen Time* does not add to your health. It is OK to have some *Screen Time*, but it is more important to do things from the other categories.

Example of Finished Pie Chart:



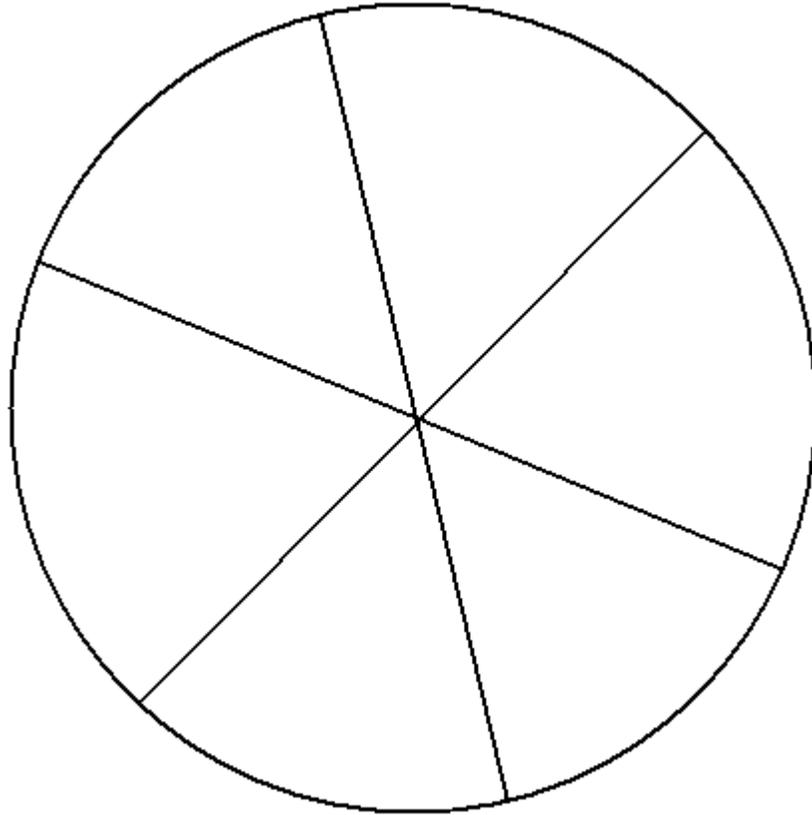
Active Time: 1 /6

Screen Time: 3 /6

School Time: 1 /6

Down Time: 1 /6

NAME _____



What activity did you spend most of your weekend doing?

Active Time: /6

Screen Time: /6

School Time: /6

Down Time: /6

Learning Activity Extension: Physical Activity in All Seasons

Physical Activity in All Seasons Activity

Preparation:

Create posters that have each season written at the top. In parentheses, write the weather condition that is specifically associated with the respective season. For example, if winter was the season, snow would be written in parentheses. Place the butcher paper posters and writing utensils around the room.

Directions:

1. Remind students that it is important to do a high-energy activity each day to improve cardiovascular health and strengthen muscles. Explain to students that weather conditions do not have to be perfect for them to be physically active. Students can be active indoors when it is cold, raining, snowing, or very hot outside. Some activities can be done when it is cold or snowy and others are accomplished best in hot weather during the spring or summer.
2. Divide students into groups and send each group to a poster station.
3. Give the groups 2-3 minutes to brainstorm fun activities and write the activities in each category. Allow students to write both high-energy and low-energy activities.
4. After 2-3 minutes, rotate the groups to give each group an opportunity to write an activity in each category. After each group has identified an activity for each category, post the results in front of the class.
5. Go through each “fun activity” written on the posters, and have the students determine if each activity is high-energy or low-energy.
6. Begin discussion with students using the following questions. Are there high-energy and low-energy activities in each category? Are some activities listed in more than one category? Can some activities be done during more than one season (or weather condition)? Are there some activities which can only be done during one season? Are high-energy activities only sports or exercises, like sit-ups?

Learning Activity Extension: Four Seasons Freeze Tag Game

Four Seasons Freeze Tag

Explanation of the activity:

This activity is a take on “TV tag” and other versions of freeze tag where naming an example from a particular category keeps a player unfrozen.

Directions:

1. Designate a season for the round of play.
2. Designate 3-4 students to be “It.” When they tag a student, they will say the name of a season to that student.
3. The student must name a high-energy physical activity that they can do during that particular season.
4. If the student does not say an appropriate physical activity (i.e. skiing during Summer), then the student is frozen and must not move for the rest of the game.
**If a student says a physical activity that is questionable about fitting into the season (i.e. basketball during winter), ask them where that activity takes place (i.e. in a gym) or give them some time to explain their answer.*
5. Activities can only be said once by each player, and each player only has 10 seconds to give their answer, or else they are frozen in that place for the rest of the game.
6. The game continues until all players are frozen.

Cardiovascular Health

Objectives

1. Students will understand the cardiovascular system and the functions of the heart.
2. Students will understand the positive attributes of doing a cardiovascular fitness plan.
3. Students will understand how to determine where and how to take a pulse.
4. Students will understand how to calculate the Target Heart Rate.
5. Students will understand how to trace and diagram the important components of the circulatory system.

Materials needed for this lesson

1. Chalkboard or transparency
2. Writing Materials

Background information and notes

Students will learn about the cardiovascular system and the function of the heart. Without the heart, oxygen and nutrients would not get transported throughout the body to vital organs and muscles. The right side of the heart receives blood from the body and pumps it to the lungs. The left side of the heart receives the blood from the lungs and pumps the blood carrying oxygen and other important nutrients throughout the body. Wastes are carried away in the blood. This process is called circulation, and the heart is responsible for circulating blood through arteries to the organs and back to the heart via veins. In order to emphasize the importance of a healthy heart, students will trace the cardiovascular system, take their pulse, identify their target heart rate, and construct a cardiovascular fitness plan.

Presenting the Lesson

Begin the discussion by revealing to the student that the cardiovascular system includes one of the most important organs in the body--the heart. Explain to students that the heart is a muscle and it is important to exercise all muscles to keep them healthy and strong. Exercise helps the heart function better and prevents it from working as hard or as fast to supply the same amount of blood throughout the body with the same amount of force. The stronger and the healthier the heart, the less likely the heart will be stressed from doing extra work. A healthy heart can be conditioned by exercising the heart so that it reaches its target heart rate. **Complete the Diagram Worksheet, the Pulse Activity, and the Target Rate Activity** to show how the heart functions and the process of circulation.

Now that students understand the importance of exercising the heart, introduce the concept of using a cardiovascular fitness program as a way for students to stay healthy. Cardiovascular fitness programs involve doing a scheduled physical activity or exercise to make your heart and cardiovascular system stronger. Fitness programs help to increase muscular strength, increase endurance, improve the quality of life, and extend life. Explain the importance of a cardiovascular fitness program. Emphasize that exercise makes your heart stronger by making your heart beat harder and faster. Also, explain that doctors recommend that people exercise at least three times a week for at least 20 minutes each time.

Ask students to identify activities that they could incorporate into a cardiovascular fitness program. Brainstorm with students how they could fit certain activities into their days. List their answers on the chalkboard. Some strategies include:

- Exercises: jumping jacks, yoga, Pilates, lifting weights, jump rope
- After-school activity: cheerleading, swimming, sports
- Extra-curricular activity: martial arts, dancing

Learning Activity: Diagram Worksheet

To familiarize the students with the components of the cardiovascular system, have the students trace the diagram provided. This exercise highlights the circulation process and emphasizes the important body parts including the arteries, veins, bloodstream, lungs and the parts of the heart.

Diagram Worksheet

To view the following activity in motion visit:
(Copyright by Leif Saul, <http://www.biologyinmotion.com/cardio/index.html>)

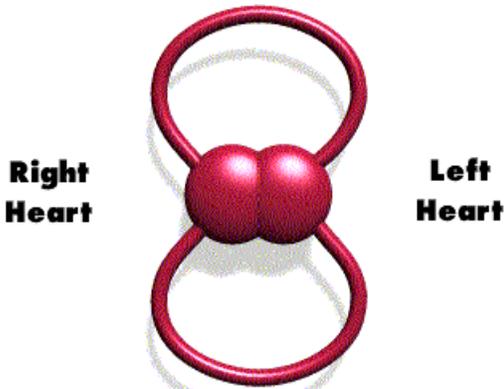
Read each text box to understand the circulatory system. Box 1 discusses the parts of the heart. Box 2 describes the flow of blood through the body. Box 3 and 4 illustrate the complete circulatory system.

1

The pathway of blood through the heart and blood vessels is easy to understand if we leave out the details at first, and just consider the basic design of the system.

The heart is completely divided into a right half and a left half. These two halves of the heart act as separate pumps, and there is no mixing of blood between them. Each is in charge of pumping blood through one of the two blood vessel circuits.

Pulmonary Circuit



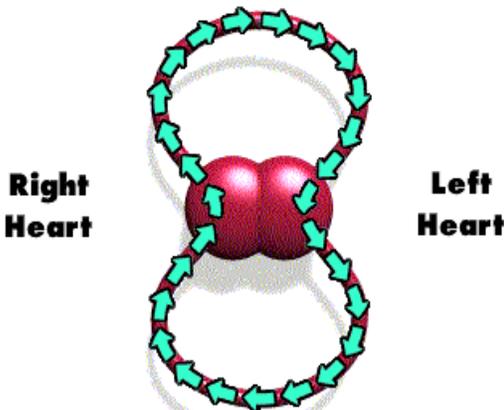
Right Heart **Left Heart**

Systemic Circuit

2

The right heart pumps blood to the pulmonary circuit, where the blood picks up oxygen from the lungs. The left heart then pumps it into the systemic circuit, where the blood delivers oxygen to the tissues that need it. Finally, the blood returns to the right heart and the cycle repeats itself.

Pulmonary Circuit



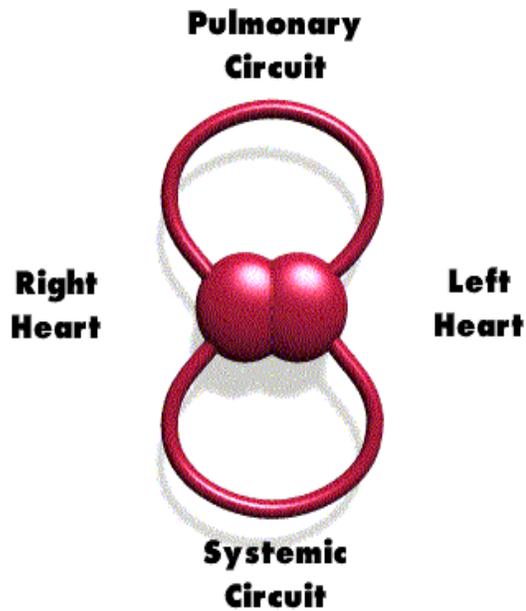
Right Heart **Left Heart**

Systemic Circuit

3

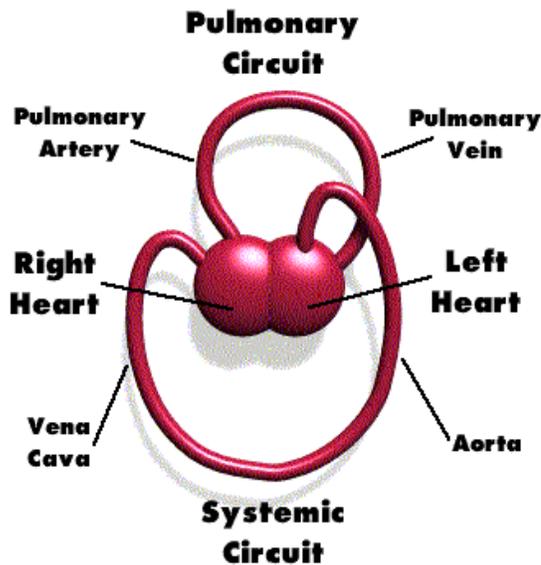
The actual appearance of the cardiovascular circuits is much more complex than this. But it still uses the same basic design that we have discussed. To see this, we can gradually bend the blood vessels around to resemble the way they are positioned in real life.

Press the green triangle to start the animation.



4

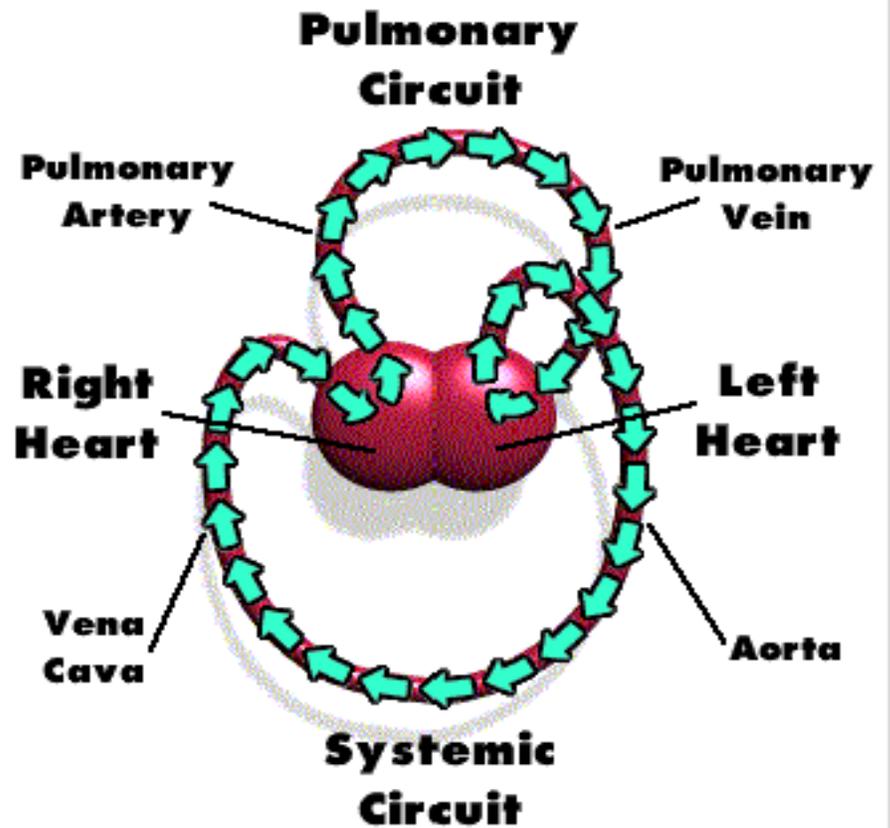
We can now label the major blood vessels that are connected to the heart. The pulmonary arteries and veins lie in the pulmonary circuit. The aorta and vena cava are part of the systemic circuit.



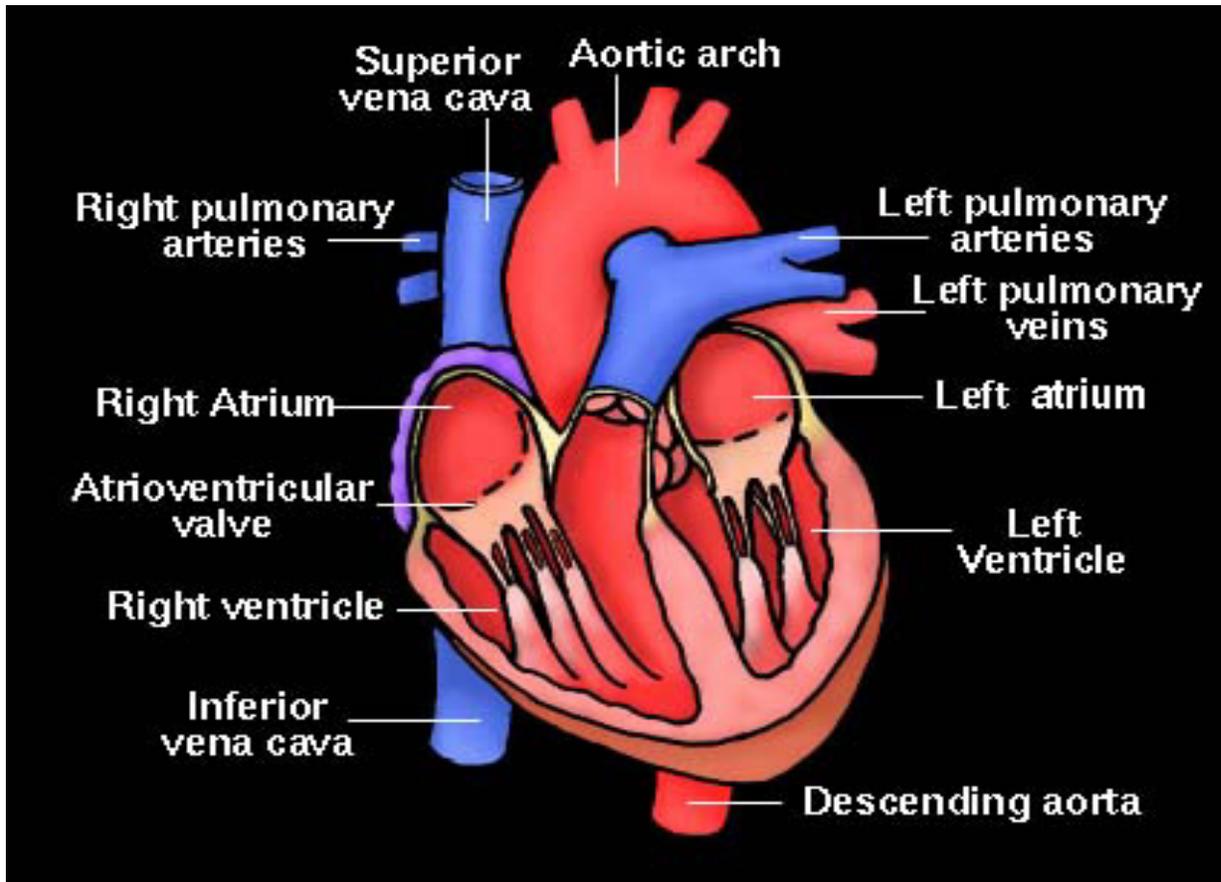
Now trace the arrows in the diagram so that you can understand how the heart pumps blood through the circulatory system.

5

Blood always leaves the heart through arteries, which include the aorta and pulmonary arteries. Conversely, blood enters the heart through the veins, the largest being the pulmonary veins and the vena cava.



Fun Fact: Arteries are colored blue because the blood in the arteries hasn't reached the lungs yet to get oxygen. Blood is blue in color until oxygen is added to it. After the blood has reached the lungs and becomes oxygenated, the color changes to red. Arteries are red because after the blood travels through the body, it returns back to heart in the veins that have oxygenated blood.



www.kensbiorefs.com/humphry.html

Learning Activity: Finding Your Pulse

Preparation:

Introduce the concept of a pulse by stating that a healthy heart should take less than 60 seconds for circulation to occur. Complete the Pulse Activity to show students how long it takes for the heart to pump blood through the body.

Directions:

1. Explain to students that a pulse can be calculated by determining the number of times a heart beats in one minute.
2. Have students feel their pulse on their wrist or on their neck at the baseline of their jaw using the tips of the index and middle finger. **Note:** Do not use the thumb because it has its own pulse.
3. Starting at the same time, have them count to themselves the number of beats for 15 seconds and multiply that amount by four. Have students record their pulse.
4. Take the average of the class’s pulse and compare it to the average for children their age:

Ages 1-10	70-120 beats per minute
Ages 10 and up	60-100 beats per minute

**Note: You may want to review the concept of ranges with students.*
5. For the next ten minutes, have students engage in a game or activity that gets them moving around (i.e., have them run in place, do jumping jacks next to their desks). Have students record their pulse.
6. After ten minutes of physical activity, have them re-take their pulses.
7. Take the average of the class’s pulse and write it on the board again.
8. Discuss the following questions with the class. What happened to your pulse the second time in comparison to the first time? What does this tell you about the heart as it relates to doing high energy activities?

Pulse	(Example Beats/Minute)	Beats/Minute
Pulse (before activity)	65	
Class average (before activity)	72	
Pulse (after activity)	95	
Class average (after activity)	93	

Learning Activity: Finding Your Target Heart Rate

Directions:

1. Explain to students that there is a formula used to determine if our hearts are working at a level that is safe during exercise.
2. Explain that there is a limited amount of work that our hearts can do safely. We want to make them beat faster but not too fast.
3. The formula used to determine the safe level is called the Target Heart Rate.
4. The first step in finding the Target Heart Rate is to find the Maximum Heart Rate. The formula for this is 220 minus your age.

$$\text{Example: } 220 - 10 = 210$$

5. The next step is to figure out the Target Heart Rate, which is where we want our heart rate to be when we are being physically active. The Target Heart Rate is a range instead of a steady rate. When being physically active and doing high-energy activities, it is necessary for our pulse to fall into this range to give our heart a hard enough workout. This will make the heart stronger without working it too hard.
6. To figure out the low end of the Target Heart Rate range, take the Maximum Heart Rate divided by 2.

$$\text{Example: } 210 \div 2 = 105$$

7. To figure out the high end of the Target Heart Rate range, divide your previous result by 2 again and add that number to the previous result.

$$\text{Example: } 105 \div 2 = 52.5$$

$$105 + 52.5 = 157.5$$

Target Heart Rate for 10 year old is: 105 – 157.5 beats per minute

8. Have students look at the results of taking their pulse in Activity 1. Did their pulse fit within the Target Heart Rate the first time they took it before doing a physical activity? What about after doing a physical activity?

****Optional: The Target Heart Rate is 50-75 percent of the Maximum Heart Rate. If your students can calculate percentages, use percentages instead of the whole number formulas used above. Example: Target Heart Rate 1 = Max Heart Rate x .5***

Target Heart Rate 2= Max Heart Rate x .75

Since it is not always practical to stop and take your pulse for a whole minute during exercise, there is a short-cut. Using stopwatches or a clock with a second hand, have students count the number of beats using their wrist or neck for 10 seconds. Then multiply that number by 6. Repeat the 10 minute game or exercises. But, this time have the students use the short-cut method three times during the exercise and raise their hands if they are in the Target Heart Range.

Learning Activity: Cardiovascular Health Worksheet

Students will choose one activity and design a weekly workout schedule. Use the time worksheet to plot their current schedule and identify times to incorporate their fitness schedule. Ask students to present their respective cardiovascular fitness programs to the class. Discuss why they chose that activity and how they plan to incorporate this in their weekly schedule.

Cardiovascular Health Worksheet

Time	Activity	Location
7:00 - 7:30 AM		
7:30 - 8:00 AM		
8:00 - 8:30 AM		
8:30 - 9:00 AM		
9:00 - 9:30 AM		
9:30 - 10:00AM		
10:00 - 10:30AM		
10:30 - 11:00 AM		
11:00 - 11:30AM		
11:30 - 12:00 PM		
12:00 -12:30 PM		
12:30 - 1:00 PM		
1:00 - 1:30 PM		
1:30 - 2:00 PM		
2:00 - 2:30 PM		
2:30 - 3:00 PM		
3:00 - 3:30 PM		
3:30 - 4:00 PM		
4:00 - 4:30 PM		
4:30 - 5:00 PM		
5:00 - 5:30 PM		
5:30 - 6:00 PM		
6:00 - 6:30 PM		
6:30 - 7:00 PM		

Stretching: Flexibility

Objectives

1. Students will understand the concept of flexibility.
2. Students will understand the function of each type of muscle in the human body.
3. Students will understand that stretching can be accomplished anytime and anywhere.
4. Students will understand and be able to follow a stretching routine.
5. Students will understand and be able to identify muscles and their anatomical names.

Materials needed for this lesson

1. Carpet squares or floor mats
2. Student Group Scavenger Hunt Worksheet
3. Teacher Scavenger Hunt Activity Worksheet Key
4. Dictionary
5. 3 packages of spaghetti noodles (or as many as needed for the class)

Background information and notes

The muscular system includes all of the muscles in the body and muscles are bundles of cells and fibers that work by tightening up (contracting) and relaxing. Explain to the students that there are over 600 muscles in the body. Muscles function to move the body. There are three main types of muscles; Smooth Muscles, Cardiac Muscles, and Skeletal Muscles.

Smooth Muscles are involuntary muscles that work all the time without intentional thought or without a choice. Smooth muscles are found in the stomach, bladder, and eyes. Explain to students that muscles in the stomach help to digest food after it has been swallowed. Also, when someone is feeling sick, these same muscles aid in throwing up. In the bladder, muscles relax to hold in urine and contract to push the urine out. Blinking muscles in the eye help to protect the eye, keep the eye moisturized, and clear pollutants from the eye.

The cardiac muscle also known as the heart is an involuntary muscle. The heart contracts as blood is pumped through the circulatory system and relaxes to allow blood back to the heart.

Skeletal muscles are voluntary muscles. These muscles carry out pre-conceived or intentional actions. For instance, in order to move a hand, the brain processes the thoughts about moving the hand and sends signals to the hand to move. The hand in return moves. This is accomplished by tendons that attach the muscle to the bone. This muscle, bone and tendon group pulls to cause movement. In fact, muscles usually work in pairs to pull and relax. To bend the arm, the bicep muscle pulls and the tricep muscle relaxes. In contrast, extending the arm or making it straight requires the tricep muscle to

pull and the bicep muscle to relax. Some examples of skeletal muscles include pecs, deltoids, and quadriceps.

Presenting the Lesson

Ask students to define muscle or the muscular system. If students are having trouble defining the terms, ask students to describe the function of a muscle. What does a muscle help us do?

Brainstorm with students the meaning of flexible and the purpose of stretching. Explain that flexible means capable of being bent or twisted without being injured. Explain to students muscles must move to remain healthy and functional. When muscles are not used, they lose their ability to contract and perform as they were intended. They may become weak or they may become tight, and when eventually used, be painful. Stretching is significant because it provides a workout for your muscles and enables muscles to become flexible when doing physical activity.

Ask students when they should stretch. Stretching should be done before and after exercise also explain that it is good to stretch at any time of the day. Stretching can be done in the morning when you wake up, while you watch TV, during breaks at school or any other time. The more you stretch, the more flexible you will become.

Explain that students should stretch before doing a high-energy activity. High-energy activities work your muscles, and your muscles are more likely to get strained or injured when they are working hard. Stretching makes it easier for a person to bend and flex the body without sustaining an injury.

Review the benefits of stretching:

1. Stretching makes muscles more flexible. Flexible muscles are less likely to become strained or injured.
2. Being flexible increases agility which improves the performance. Physical activities that require bending and moving, like sports, dancing, martial arts and even everyday things like chores are better accomplished after becoming more flexible.
3. Stretching helps to relieve stress. Stretching can reduce anxious and nervous feelings. Stretching and breathing helps with concentration and relaxation.
4. Stretching uses energy from your body without causing sweat. Therefore, stretching is possible in any setting or environment, and can be done in any and all attire. Stretching does not require any special equipment and can be done for short or long periods of time.
5. Stretching can make tight muscles feel better. If muscles are tight, light stretching can loosen them.

To cultivate interest in stretching, flexibility and muscle types, students will participate in a stretching routine and a scavenger hunt. Emphasize that stretching can be accomplished at anytime but it is important to stretch before and after physical activity and exercising.

Learning Activity: Spaghetti Noodle Demonstration of Flexibility

Explanation of the activity:

The purpose of this demonstration is to reinforce concepts about the importance of stretching and muscle flexibility.

Preparation:

Boil 2 packages of spaghetti noodles in boiling water the night before use. Immediately after boiling the noodles, put them in a plastic bag and refrigerate, to keep them soft and flexible for use the next day. Before using them in class, carefully microwave the noodles to make them soft and flexible, but not so much that they are too hot to touch. Just warm them up in 10 second increments until the noodles are soft and flexible. Print out the picture of the person for each student. Cut the noodles in half in order to shorten them and make them more manageable to curl into circles. Use different sizes and shapes of pasta if possible.

Directions:

1. Tell students that you have two containers of noodles, and these noodles represent your muscles.
2. One container of noodles represents your muscles before you stretch, and the other container represents your muscles after you stretch. You are going to decide which container has the “muscles” that stretched.
3. Take a small bunch of dry spaghetti noodles in your hand. You may give each student a dry noodle.
4. Remind students that the noodle represents a muscle.
5. Tell the students to bend the noodle. It will break in half.
6. Now grab a handful of the boiled noodles, or you may give each student a noodle.
7. Again, remind students that this noodle represents a muscle.
8. Tell the students to bend the noodle. It will bend without breaking.
9. Give each student a picture of Muscle Man.
10. Place a few drops of glue on a muscle mass, such as the bicep, and show the students how to curl a noodle over the glue to make it fit on to the bicep.
11. Do the same for the triceps, abdomens, calf muscles, etc.

Discussion:

Discuss the following questions with the students. Which noodle was flexible, the first or the second? Which noodle represents the muscle of someone who stretched? Why? Which muscle would be less likely to get hurt: the stretched, flexible muscle or the stiff, rigid muscle?_Can your muscle really break in half like the first noodle did?

Learning Activity: Stretching Routine

Note: You may want to consult a physical education teacher or a certified fitness instructor at a local community center to help develop or supervise a simple stretching routine for the students.

Preparation:

Remind students of the three rules of stretching before beginning the routine. Make a poster of these rules so that you may refer to it when reviewing the rules of stretching and during the routine.

1. Stretch comfortably and stop if it hurts.
2. No bouncing during stretching, ease into the stretching stance.
3. No competing against others to see who can bend or stretch more.

Students can use floor mats/carpet squares or students can position themselves an arm's length apart on the floor.

The stretching routine can be done in the morning, between subjects or at breaks throughout the day.

Learning Activity Extension: To promote an understanding of anatomy, have students name the muscles or muscle groups that are stretched during the routine.

Stretching Routine:

1. Stand and reach for toes. (20 seconds)
2. Stand and reach for the ceiling. (20 seconds)
3. Arm circles. (20 seconds)
4. Holding arms straight out, alternate between making a tight fist and spreading fingers with a flat palm. (20 seconds)
5. Hold right ankle behind back. (20 seconds)
6. Hold left ankle behind back. (20 seconds)
7. Sit down with legs straight out and reach for toes. (20 seconds)
8. Sit down with legs spread apart and reach forward. (20 seconds)
9. Sitting down with legs spread apart and reach toward right ankle. (20 seconds)
10. Sitting down with legs spread apart and reach toward left ankle. (20 seconds)

Learning Activity: Scavenger Hunt

Preparation:

View the Teacher's Key. Create clues that can be attached to surfaces throughout the classroom. On the back of the clues, write the information contained in the suggested exercise category. Provide dictionaries to each group. **Optional:** Using colored paper, copy the Student Group Scavenger Hunt Worksheet on red, blue, green, and yellow paper.

Learning Activity Extension: Use the student worksheets as a homework assignment instead of a classroom activity and have each student complete the worksheet.

Directions:

1. Hide clues throughout the classroom for students to find.
2. Divide students into groups and give each group a red, blue, green, or orange student group scavenger worksheet and a dictionary. The color coded worksheets have a theme connected with the clues. The red worksheet organizes the clues by listing the muscles from head to toe. The blue worksheet lists muscles from toe to head. The green worksheet lists the muscles in alphabetical order, and the yellow worksheet lists the anatomical names for the muscles in alphabetical order. Therefore, each color coded worksheet will have a different starting clue so teams can start at different points. This will prevent competing group members from copying from each other.
3. Instruct students to follow the directions outlined on the Student Scavenger Hunt Worksheet
4. Students should identify the answer for the first clue. Then, the students will search for clues throughout the classroom until they are ultimately led to the grand prize. The grand prize could include extra-credit or a purchased gift for the winning team
5. In order to win the grand prize, each team must have the name of the muscle, anatomical name of the muscle, the location of the clue, and the exercise that was attached to the clue listed in the correct order on the worksheet. Students will use the dictionary to look up the anatomical muscle name.

Key

Clue	Muscle	Proper Muscle Name	Suggested Location	Suggested Exercise
This muscle is the same shape as a dime, and eye use this muscle to tell time.	Eye	Orbicularis oculi	Hide behind clock	Blink eyes 10 times before opening the next clue
Don't get frustrated and backed against the wall, learning about muscles is not hard at all.	Upper back	Deltoid	Hang on the wall	Clasps both hands behind the back and pull up for 20 seconds before opening the next clue
You are already armed with a lot of knowledge about the muscular system, but you can always learn more. The opportunity is waiting at the door.	Front arm	Biceps	Hide on the front of the door	Raise your hand straight above your head, bend the elbow and hold this position for 20 seconds before opening the next clue
Your understanding of the muscular system is quite alarming, I must admit. But to get the next clue search for it at the exit.	Back arm	Triceps	Hide on the back of the door	Use your left hand to pull your right arm across your chest as tightly as you can. Hold it for 20 seconds to stretch your left tricep, then switch arms.
Now, buck up and do your best, The next clue is hidden like a treasure chest; The clue is here, where X marks the spot	Upper chest	Pectoralis major (pecs)	Write a huge X on the chalkboard and hide under the chalkboard	Go give someone a big bear hug. When you squeeze with your arms, you're flexing your pectoralis major.
To stomach the next clue, if you are able, take a good hard look around a table.	Abdominal (stomach)	Rectus abdominis (abs)	Table	Have a friend hold your feet while you do 5 sit-ups. This exercises your rectus abdominis.
Stretching before doing physical activities is not a waist of your day. You should always try to stretch if you can before you play.	Waist	Obliques	Hide under the waste basket or trash can	Twist your body from left to right for 20 seconds before opening the next clue
With your hands on your lap, you are touching this muscle; Go look on the teacher's desk. Come on, kids, hustle!	Thigh	Quadriceps (quads)	Teacher's desk	Squat down so that your knees are bent slightly; hold that position for 30 seconds and you will feel your quadriceps.
This muscle is a great cushion, butt it can get soar if you use it too much.	Butt	Gluteus maximus	Hide under chair	Sit on the floor and pull your knees into your chest to stretch your gluteus maximus.
This muscle is the name of a baby cow, Go look around the coatroom; check it out now!	Calves	Gastonemius	Coatroom, Cubbies	Stand on the edge of a stair step, with your toes on the step and your heels hanging over the edge. Lower your heels and hold the position for 20 seconds to stretch your gastonemius.
Your muscles will feel free when you stretch this place below your knee. Come out the dark and look for the next clue on something shiny.	Shin	Tibialis anterior	Hang on the light or something shiny	Sit on a chair and point your toes as far as you can. Hold it for 20 seconds to stretch your tibialis anterior.

Student Group Worksheet:

Search the classroom for hidden clues about the muscular system. Each team is responsible for completing this worksheet. Using the clues fill in the muscle name, the anatomical muscle name, the location of the hidden clue and the exercise. Use the dictionaries to find the proper muscle name
Good Luck!

Blue Team

First Clue: Your muscles will feel free when you stretch this place below your knee. Come out the dark and look for the next clue on something **shiny**.

Muscle	Anatomical Muscle Name	Location	Exercise

Student Group Worksheet:

Search the classroom for hidden clues about the muscular system. Each team is responsible for completing this worksheet. Using the clues fill in the muscle name, the anatomical muscle name, the location of the hidden clue and the exercise. Use the dictionaries to find the proper muscle name
Good Luck!

Orange Team

Orange Team: You are already **armed** with a lot of knowledge about the muscular system, but you can always learn more. The opportunity is waiting at the **door**.

Muscle	Anatomical Muscle Name	Location	Exercise

Why Do People Use Tobacco Products

Objectives

1. Students will understand why people use various tobacco products
2. Students will understand and be able to identify alternative activities to do instead of using tobacco.

Materials needed for this lesson

1. CD of calming music, CD player, and mats (if possible)
2. Poster board or butcher paper
3. Markers and crayons and other art supplies to decorate the posters
4. Path spaces
5. Tobacco Temptation questions
6. Addiction Circle spaces
7. Breaking the Addiction questions
8. Construction paper
9. Glue
10. Dice

Background information and notes

This is a brief explanation of each practice that you can share with students to prepare them for doing the interviews. Meditative exercises are highly effective in reducing stress and are associated with providing health benefits. Some examples of meditative exercises include Tai Chi, Yoga, and Qigong. Yoga is one of the most ancient cultural practices of India. The word *yoga* in Sanskrit means "to unite," and so *yoga* connotes a unitive discipline. In this sense, it is an exercise in moral and mental cultivation that generates good health (*arogya*), contributes to longevity (*chirayu*), and the total intrinsic discipline culminates into positive and perennial happiness and peace. Tai Chi, if looked at from a Western point of view, can best be described as a moving form of yoga and meditation combined.

Originally derived from martial arts, the slow, graceful movements also sometimes reflect the natural movements of animals and birds, designed to focus the mind and breathing through a complex series of executions. In Tai Chi, where the form is practiced in slow continuous fluid movement, muscles and joints are in motion. Breathing is regulated as an integral part of this exercise. The effect is a sedative upon the central nervous system which helps to stimulate improvements upon the body's other systems. It is calming and de-stressing, the movements themselves becoming physical poetry. When practiced properly, Chi energy is increased, and one often feels a 'tingling' of fingers and toes and a warming up of the body. The mind becomes clear and relaxed. The movements give a means for motor control, balance, etc. and can help posture and loosen tight muscles. Qigong or "Energy-Cultivation" is an aspect of Chinese medicine involving the coordination of different breathing patterns with various physical postures and motions of the body.

References: <http://hinduism.about.com/library/weekly/extra/bl-yoga-define.htm>
<http://www.soton.ac.uk/~maa1/chi/taichi/whattai.htm>
<http://en.wikipedia.org/wiki/Qigong>

Presenting the Lesson

Ask students why people smoke. Record their answers on the chalkboard, transparency or butcher paper. Be sure the following reasons are listed:

- To look cool
- To look older
- To be adventurous/rebellious
- To see what smoking is like
- To relax and relieve stress
- Because parents/family are smoking
- Because friends are smoking
- To fit in with friends
- To seem tough
- To feel independent

Explain that unfortunately some people smoke cigarettes as a way to relieve stress. However, deep breathing is a healthy alternative that helps to reduce stress and can function to improve the immune system. Yoga, Tai Chi, and Qigong are specific meditative practices that incorporate deep breathing into exercise routines. Tai Chi and Qigong has been known to improve health of cancer survivors and Yoga can serve as a stress – relieving technique.

Ask students what “addiction” means.

Explain that addiction means when it is extremely difficult to stop doing something, even if you want to stop doing it. Some things have chemicals in them that are addictive. Tobacco products like cigarettes, cigars and chewing tobacco have a chemical in them called nicotine. Nicotine is very addictive. **This is why it is not safe to “just try” cigarettes or tobacco products – because once you start it is extremely difficult to stop.**

Explain that withdrawal is when your body readjusts to not having the chemicals in it that it has become addicted to, like nicotine for smokers or tobacco chewers. Withdrawal symptoms are very, very unpleasant. Some of the symptoms of withdrawal are:

- Irritability
- Anxiety/nervousness
- Anger/moodiness
- Inability to concentrate
- Increase in appetite (can lead to weight gain)
- Increased heart rate/Heart beats faster (need to smoke to “relax”)
- Headache
- Trouble sleeping

Emphasize that if you are addicted to the nicotine in cigarettes or chewing tobacco, you start to feel these things when you are not smoking or chewing tobacco. Therefore, whenever you are not smoking or chewing tobacco, you feel sick and want to smoke or

chew so that you feel better. Ask students: “If smoking or chewing tobacco makes people who are addicted to these things feel better, why should they not do it?”

To reinforce these concepts students will partake in a simplified progressive muscle relaxation and breathing routine and play two interactive games. The breathing activity encourages students to focus on their breathing and since stress is a common reason people cite for smoking, this deep-breathing routine is a useful technique to reduce feelings of stress. The two interactive games teaches students the importance of having strong and healthy lungs and why people choose not to smoke.

Learning Activity: Deep Breathing Routine

Note: This activity is designed to get students to focus on their breathing and also to learn deep-breathing as a stress-management technique. Some students with asthma may have a harder time taking deep breaths and this may be a trigger for their asthma. Monitor them closely, or have them do another activity.

Directions:

1. Have the students lie on their backs on the floor or on mats several feet apart from each other. Turn on the calming music.
2. Ask students to do the following:
 - Close your eyes.
 - Take a deep breath in and slowly release it.
 - Take another deep breath and hold it for 3 seconds...1...2...3, and slowly release...1...2...3.
 - Take a deep breath in and hold it for 5 seconds...1...2...3...4...5, and slowly release...1...2...3...4...5.
 - Continue breathing deeply in this manner until the mind is cleared. Continue to breathe in until you feel the breath originating from the stomach.
 - Release the breath slowly and controlled.
 - Continue breathing and imagine that you are sitting underneath a tree on a sunny summer day. Can you feel the warmth of the sun and a slight breeze or birds singing? Do you feel calm and relaxed?
 - *Feel free to substitute any other location or have students imagine their own favorite calming spot. The important thing is that it is a place where they feel happy and relaxed, and that they can visualize a location that embodies serenity.*
 - Curl your toes up and hold them for 5 seconds...1...2...3...4...5 and relax ...1...2...3...4...5.
 - Tense the muscles in your legs making them very stiff...1...2...3...4...5 and relax...1...2...3...4...5.
 - Remember to keep breathing deeply and slowly.
 - Place your hands next to your sides with your palms on the floor. Tense your arms and push your palms down onto the floor...1...2...3...4...5, and relax ...1...2...3...4...5.
 - Tense the entire body. Make every muscle in your legs, arms, neck, hands, feet and torso tense and stiff. Hold it for 5 seconds...1...2...3...4...5, and relax...1...2...3...4...5.
 - Take a deep breath in and hold it for 5 seconds...1...2...3...4...5, and now slowly let it out...1...2...3...4...5.
 - Take another deep breath in and hold it for 3 seconds...1...2...3, and slowly release...1...2...3
 - Breathe in and slowly release
 - Now open your eyes, and slowly sit up.

Discussion:

Discuss the following questions with students. Do you feel relaxed? Why or why not? Do you think you can perform breathing exercises on your own? When is the best time for you to do a deep-breathing routine? What body parts were used during the deep-breathing routine? Would it be harder for you to do a deep-breathing routine if you smoked? Why or why not?

Learning Activity: Why I Don't Need to Smoke

Explanation of the activity:

This activity helps students to realize that smoking does not help you to achieve your goals. Therefore, you don't need to smoke!

Directions:

1. Review the list of reasons of why people smoke generated during the brainstorm session. Reasons include:
 - To look cool
 - To look older
 - To be adventurous/rebellious
 - To see what smoking is like
 - To relax and relieve stress
 - Because parents/family are smoking
 - Because friends are smoking
 - To fit in with friends
 - To seem tough
 - To feel independent
2. Using the list of reasons people smoke generated in the previous discussion, have students create an essay, poem or poster illustrating personally relevant ways in which they currently do or can achieve the same goal without smoking or using tobacco products. You may want to have the class select the top five reasons or select the top five most relevant reasons from the list to help narrow down the assignment.
3. Go over the following alternatives to achieving the same goal without smoking. Encourage students to come up with their own alternatives, or expand on these:
 - To look cool → Be friendly to everyone you meet and people will like you and want to be around you, making you more popular and “cool.”
 - To look older → Being able to care for yourself is associated with being older, so do things to take care of yourself. Get ready for school and bed by yourself without being told, or help out around the house without being told. Being self-assured and standing up for your beliefs are other ways to look older and gain respect of family and friends.
 - To be adventurous/rebellious → Try a new sport or activity that you have never tried, like skateboarding or karate. Debating is a good way to express yourself and “go against the grain.”
 - To see what smoking is like → Quitting smoking is very, very hard to do, because it has addictive chemicals in it. Smoking is not something that is safe to try. It is easier to never begin smoking than it is to quit smoking.

You can also talk to an adult who smokes or someone who has tried to quit smoking and listen to their story of how hard smoking it is to quit once you've started.

- To relax and relieve stress → A good way to relax and relieve stress is by closing your eyes for a few minutes and taking deep breaths. While your eyes are closed, picture a place that makes you feel calm and relaxed. You can even do some stretches while doing this to increase your relaxation.
 - Because parents/family smoke → Sometimes people do not know how unhealthy smoking is and do not know they should quit. However, some people know how dangerous it is, but it is still very hard for them to quit. Instead of joining them in this unhealthy habit, start a healthy habit or tradition with them. For example, you could read a book together before bed every night or play a board game every Tuesday night. Or, join your parents in other things they do. Help them cook dinner or do laundry. Doing things with your parents will help you to connect with them.
 - Because friends are smoking → Play a sport or game with friends instead of smoking. If your friends start smoking that does not mean that you can not be their friend anymore, but find other things to do with them that do not involve smoking. Also, ask them to please not smoke when they are around you.
 - To fit in with friends → You do not have to smoke just because your friends smoke. In fact, you shouldn't. Tell your friends that you do not want to smoke, and ask them to please not smoke around you. If they continue to pressure you to smoke, find friends that do not smoke. Fit in with friends that have the same values and beliefs as you do.
 - To seem tough → First, ask yourself: "What does "tough" mean? Why is it important for me to seem 'tough'?" Self-confidence is the best way to seem "tough" to others.
 - To feel independent → You can be independent by doing things for yourself. Dress yourself and get ready for school by yourself, clean up your room or your house without being told, or do your homework without being told.
4. Give the students time to complete their essay, poem or poster.
 5. Post the posters around the room, and allow the students to walk around and admire each other's work.

Learning Activity: Addiction Board Game

Object of the Game:

- The object of the game is to be the first to get from one end of the path to the other. Reaching the end of the path is akin to being in “good health,” and you can get there only by moving along the path which states healthy things you do. Doing unhealthy things (using tobacco products) takes you off of the path towards good health, thus slowing you down for reaching your goal.
- Along the path, there are three question spaces regarding tobacco use. If the student answers the question correctly, they have effectively said “no” to tobacco use at that time. They can continue on unhindered toward their goal of good health. If they answer the question incorrectly, the student must now continue along the “addiction circle” of that particular tobacco product. This takes them off the path towards good health for a while and slows them down from reaching their goal--until they can get out of the circle.
- Students get out of their addiction circle by the combination of two factors: luck and knowledge. They must land directly on the space where they entered the circle (the luck factor), and they must answer a tobacco-related question to be able to get back on the path towards good health. These two factors are intended to make it difficult-but not impossible-to break the addiction. Ultimately, those students who did not fall into addiction are able to move further along the path of good health and reach their goal more quickly.

Preparation: (See diagram below for path set up)

***For limited space:** Instead of making a life-size board game, use poster board or an overhead projector to make the game board.

1. Print out the Path spaces and glue them to a variety of colors of construction paper.
2. Print off the Addiction Circle spaces and glue each space to the same color of construction paper. Designate one color for each set of Addiction Circle spaces.
3. Lay the Path spaces in a straight line outside, in the gym, or in the hallway. Make sure to begin with the “START” space and end with the “GOOD HEALTH” space. Intermingle blank construction paper spaces with the Path spaces as needed to elongate the path, as needed.
4. At three different areas on the path place a Tobacco Temptation space. Space the Tobacco Temptation spaces out.
5. Off of that space, lay that particular tobacco product’s spaces (as outlined below for cigarettes, cigars, and chewing tobacco) in a complete circle.
6. The teacher will have a list of the questions that are asked to get in and out of the addiction circles. Each question should be asked only once during the game so that other students who land on the same space cannot use a previous answer.

Healthy Habit Path Spaces

1. You drink water instead of pop. You feel full of energy!
2. You run around and are physically active during recess.
3. You stretch before being physically active.

4. You ask your parents to please buy you carrots to snack on instead of potato chips.
5. In your free time, you do not watch a lot of TV. Instead, you play, read or do your favorite hobby.
6. You eat all your vegetables at lunch, even though you do not really like their taste.
7. You try new fruits you have never tried before.
8. You try new sports.
9. You see advertisements on TV and know they are just trying to get you to buy something. They may not be telling the truth.
10. You realize that you have not eaten anything from the fruit group yet today, so you eat an apple instead of a candy bar as a bedtime snack.
11. You saved a lot of money by not buying tobacco products. You saved up enough to buy a toy, clothes or a book you really wanted.
12. When you go to fast food restaurants, you order a side salad with your meal instead of French fries. Salads have lots of nutrients and French fries do not.

Addiction Circle Spaces: Cigarettes

1. Your teeth yellow.
2. You smell like smoke.
3. You spend a lot of money on cigarettes instead of toys, games and books.
4. You cough a lot—even when you are not sick.
5. You want to quit but cannot.
6. It is hard to run and play.
7. It is hard to breathe.
8. Your breath smells bad

Addiction Circle Spaces: Cigars

1. Your teeth yellow.
2. You smell like smoke.
3. You spend a lot of money on cigars instead of toys, games and books.
4. You cough a lot--even when you are not sick.
5. You get sick more often.
6. It is hard to run and play.
7. It is hard to breathe.
8. You want to quit but cannot.

Addiction Circle Spaces: Chewing Tobacco

1. You get sores in your mouth.
2. Your teeth yellow.
3. You always have to spit.
4. Your teeth get more cavities.
5. Your breath smells bad.
6. You spend a lot of money on chewing tobacco instead of toys, games and books.
7. You lose your sense of taste, so everything you eat tastes the same.

8. You want to quit but cannot.

Tobacco Temptation spaces (for getting into the Addiction Circles):

1. Cigarette circle

- a. Most kids smoke cigarettes. If you smoke cigarettes, you will fit in with everyone else. (True or False)
 - i. The most recent numbers on tobacco use among middle school students come from a 2004 survey by the US Centers for Disease Control and Prevention (CDC). These numbers have not changed significantly since 2002.
 1. About 12% of students reported using some form of tobacco – cigarettes, spit (smokeless) tobacco and snuff, cigars, pipes, and flavored cigarettes like bidis or kreteks/clove cigarettes – at least once in the past month.
 2. Cigarettes (about 8%) were the most common type of tobacco used, followed by cigars (about 5%), spit tobacco (about 3%), pipes (about 3%), bidis (about 2%), and kreteks/cloves (about 2%).
- b. It is totally safe to smoke cigarettes. (True or False)
- c. How old do you have to be to legally buy cigarettes? (Answer: 18, in Ohio)

2. Cigars circle

- a. Are cigars safer to smoke than cigarettes?
- b. When you see actors smoking cigars in movies, they always are really smoking the cigar--not just acting. (True or False)
- c. Your friends know what is best for you. So, if they smoke a cigar, it is okay for you to try one with them. (True or False)

3. Chewing tobacco circle

- a. Some baseball players chew tobacco because it makes them able to hit the ball farther and throw the ball faster. (True or False)
- b. Chewing tobacco is much safer than smoking cigarettes and cigars. (True or False)
- c. “Snuff” is safer to chew than chewing tobacco. (True or False)
 - i. NO! Snuff is another name for chewing tobacco.

Breaking the Addiction Questions (for getting out of the Addiction Circles):

1. Cigarette circle

- a. What are some of the things you might feel if you were trying to quit smoking?
 - i. Irritable/grouchy, nervous/anxious, restless, fatigued/tired, unable to focus or concentrate, trouble sleeping, cravings, hungrier than usual, headache
- b. How much does one pack of cigarettes cost?
 - i. Answer: In Ohio, the cost is about \$5.00 per pack. The cost varies state-by-state due to taxes. Taxes continue to increase on cigarettes.

2. Cigar circle

- a. What is the best way to not get into the bad habit of smoking cigars?
 - i. Never start!
- b. Are kids allowed to buy cigars?
 - i. NO! (Answer: Minimum age is 18, in Ohio)
- c. Brushing your teeth a lot will get rid of the yellow stains on your teeth caused by smoking. (True or False)
 - i. Answer: NO! Stains caused by tobacco will not disappear just by brushing your teeth a lot. A professional and expensive whitening procedure must be used to lessen the stains.

3. Chew circle

- a. Is chewing tobacco safer than smoking cigarettes or cigars?
 - i. NO!
- b. Name five reasons why chewing tobacco is bad for your health. What are five effects of chewing tobacco?
 - i. Answers:
 - 1. You get sores in your mouth.
 - 2. Your teeth yellow.
 - 3. You always have to spit.
 - 4. Your teeth get more cavities.
 - 5. Your breath smells bad.
 - 6. You lose your sense of taste, so everything you eat tastes the same.
 - 7. You lose your sense of smell.
- c. Many baseball players now chew on sunflower seeds instead of tobacco. Sunflower seeds are much safer than chewing tobacco. (True or False)

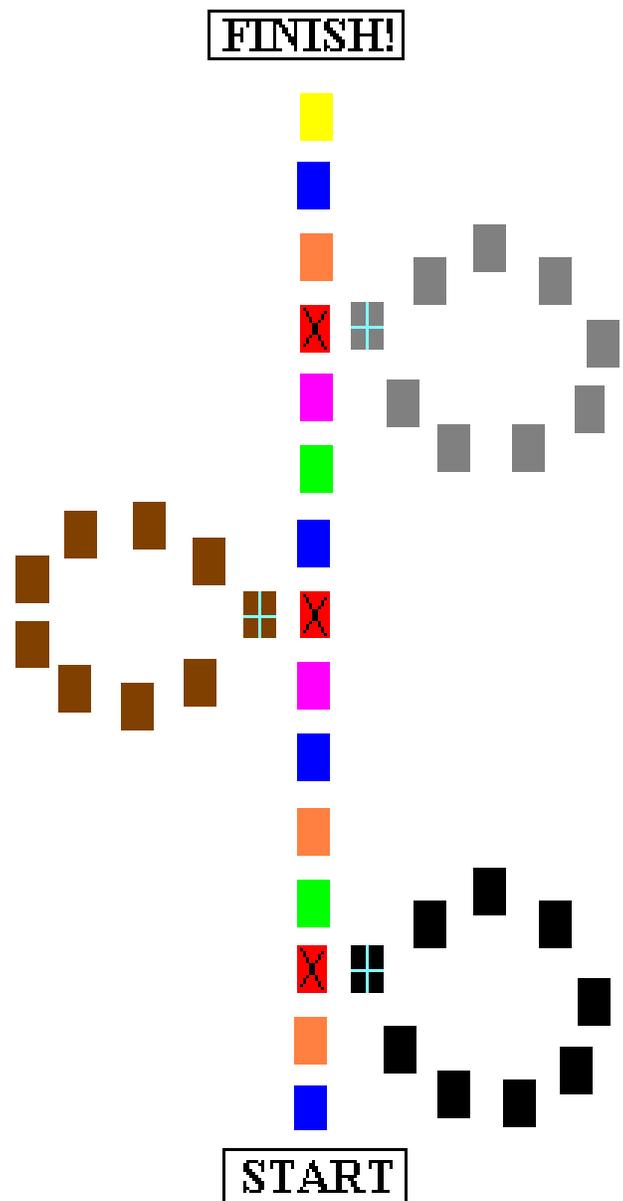
Healthy Habits Path Set-Up

KEY:

 = Tobacco
 = Temptation
 = Space

   = Must land directly on this space when in the circle to receive a question which, when answered correctly, will get you out of the Addiction Circle. When answered correctly, move to the space on the Healthy Habits Path directly next to it, and wait for your next turn to move along the Path.

* By mixing in blank construction papers for extra spaces, you can make the Healthy Habits Path longer, as needed. This diagram is to provide a general idea of how the set up will look, but modifications may be necessary.



You drink water instead of pop! You feel full of energy.



You run around and are physically active during recess!



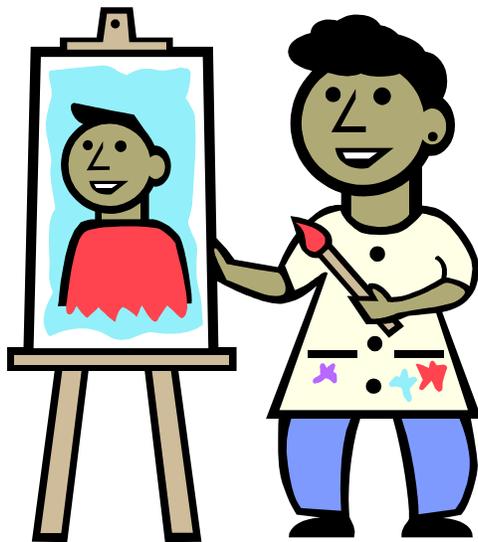
You stretch before being physically active!



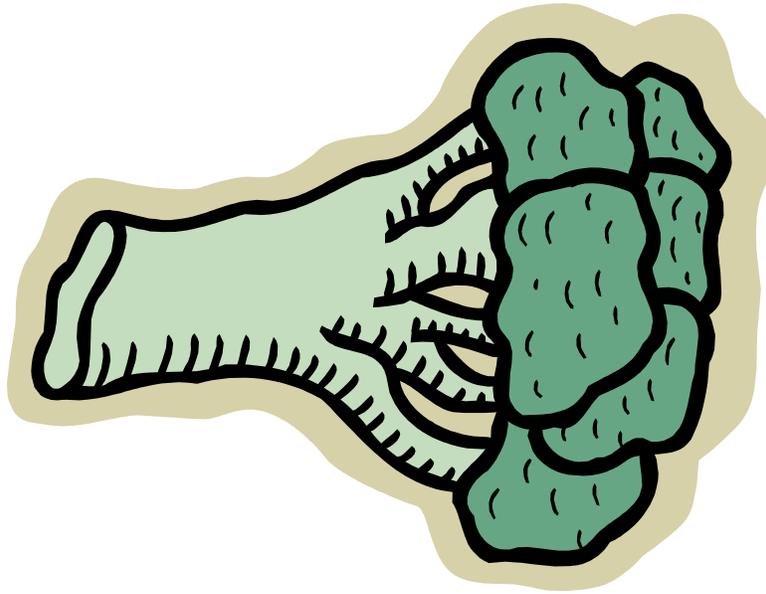
You ask your parents to please buy you pretzels to snack on instead of potato chips!



In your free time, you do not watch a lot of TV. Instead, you play, read or do your favorite hobby.



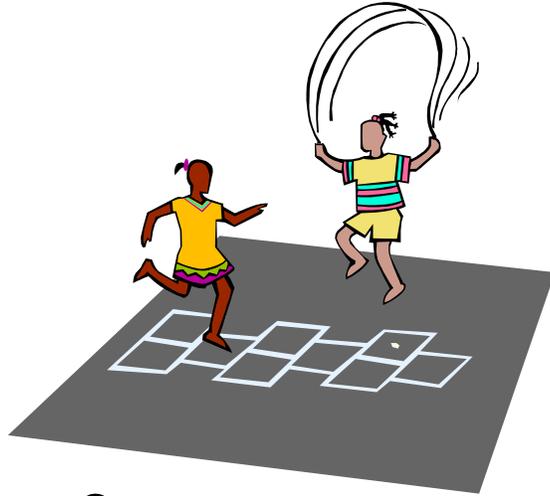
You eat all your vegetables at lunch, even though you do not really like their taste!



You try new fruits you have never tried before!



You try new sports!



You see advertisements on TV and know they are just trying to get you to buy something. They may not be telling the truth.



You realize that you have not eaten anything from the fruit group yet today. So, you eat an apple instead of a candy bar as a snack.



You saved a lot of money by not buying tobacco products. You saved up enough to buy a toy, clothes or book that you really want.

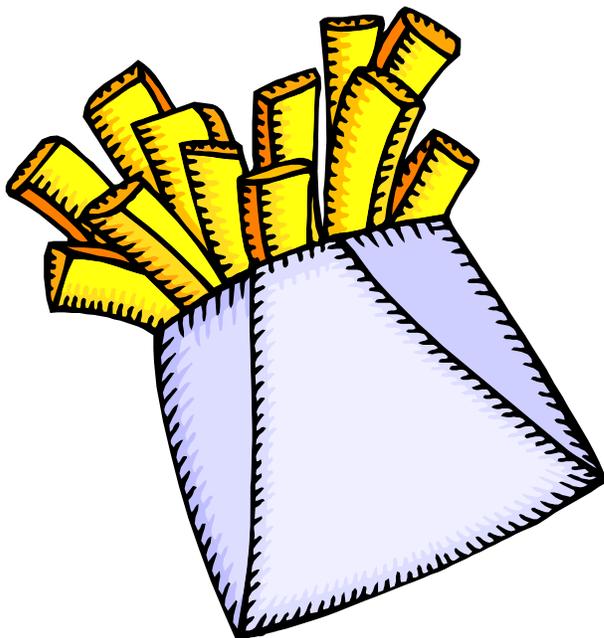


When you go to a fast food restaurant, you order a side salad with your meal instead of French Fries. Salads have lots of nutrients and French fries do not.

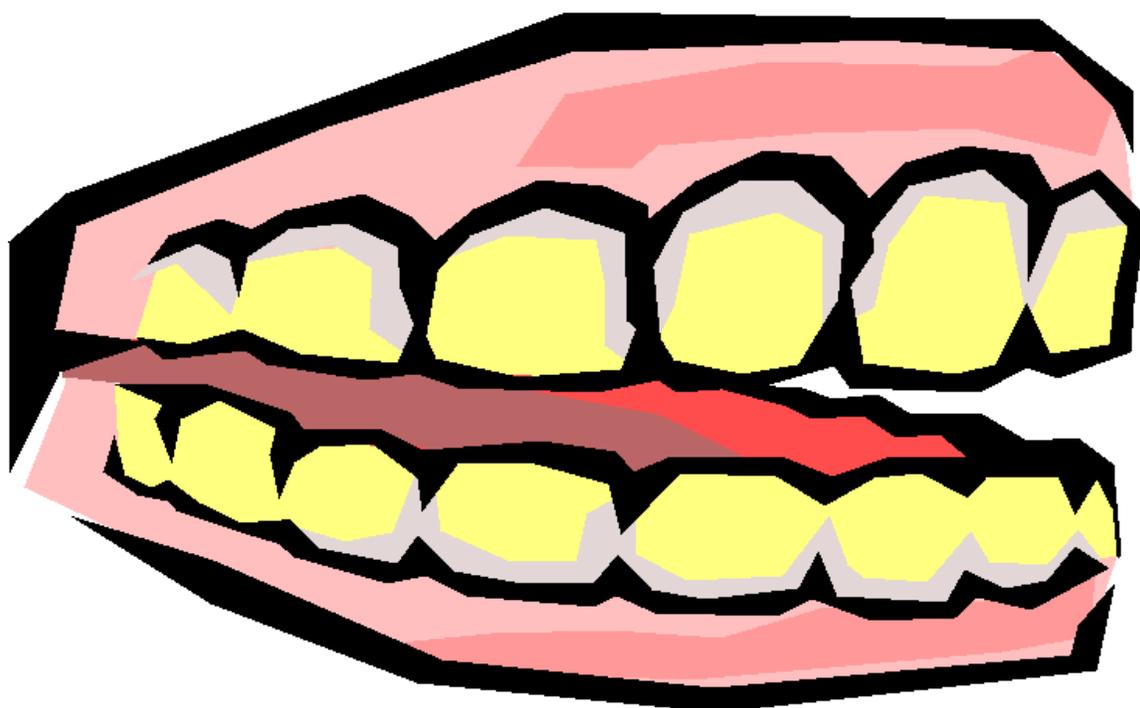
This...



NOT...



Your teeth get yellow.



You smell like smoke.



You spend a lot of money on cigarettes instead of books, toys and games.



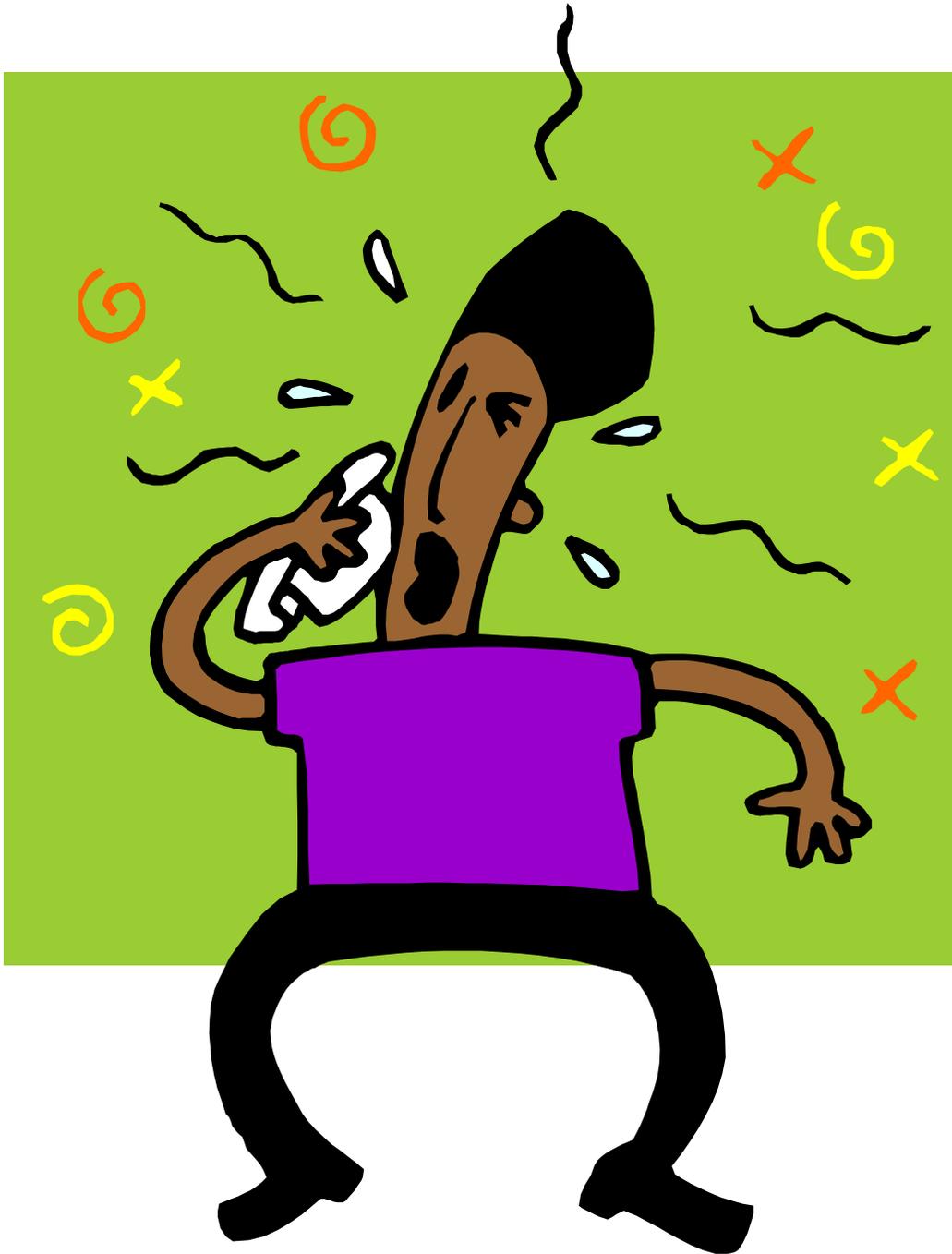
You spend a lot of money on cigars instead of books, toys and games.



You spend a lot of money on chewing tobacco instead of books, toys and games.



You cough a lot--even when you are not sick.



You want to quit but cannot.



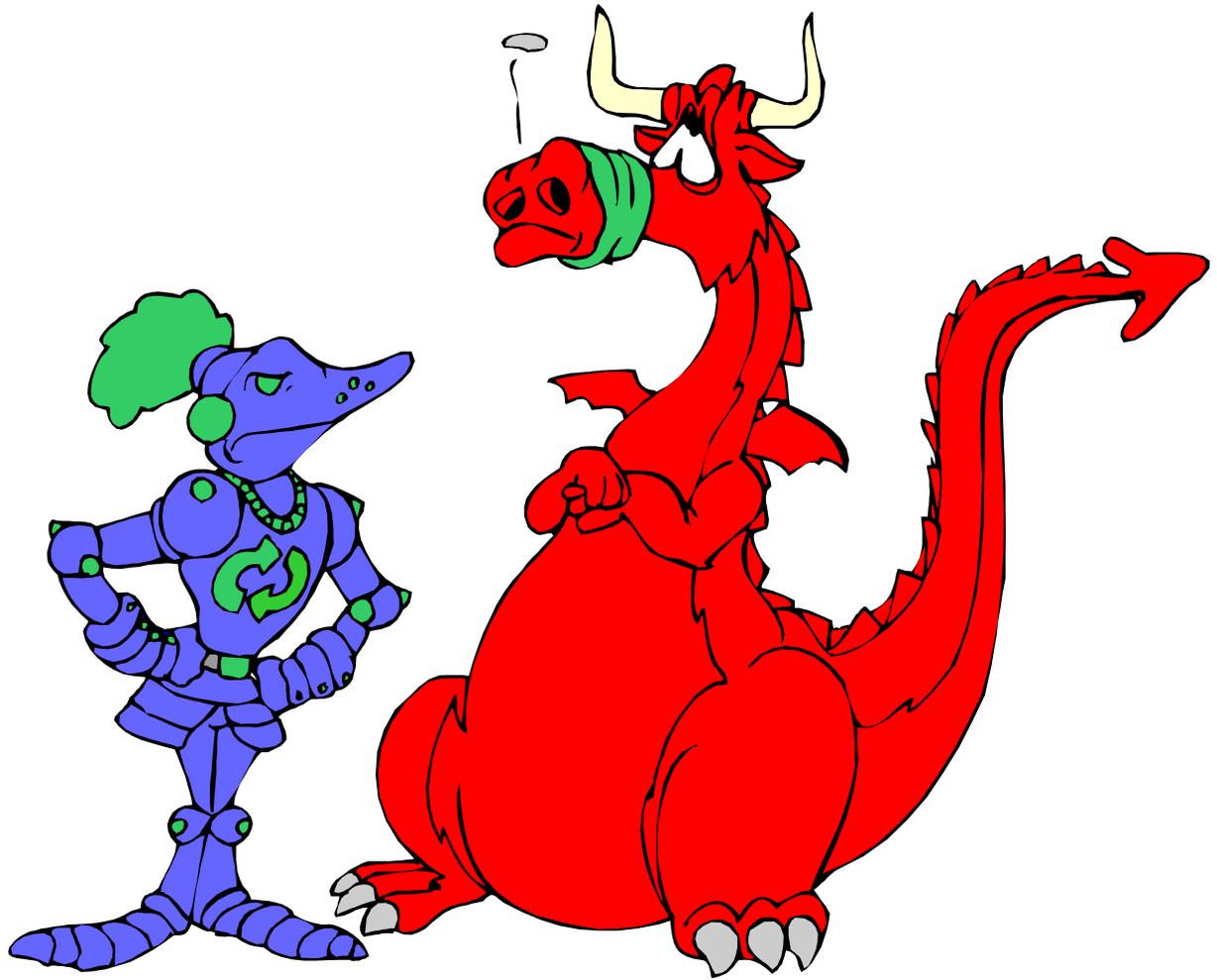
It is hard to run and play.



You get sick more often.



It is hard to breathe.



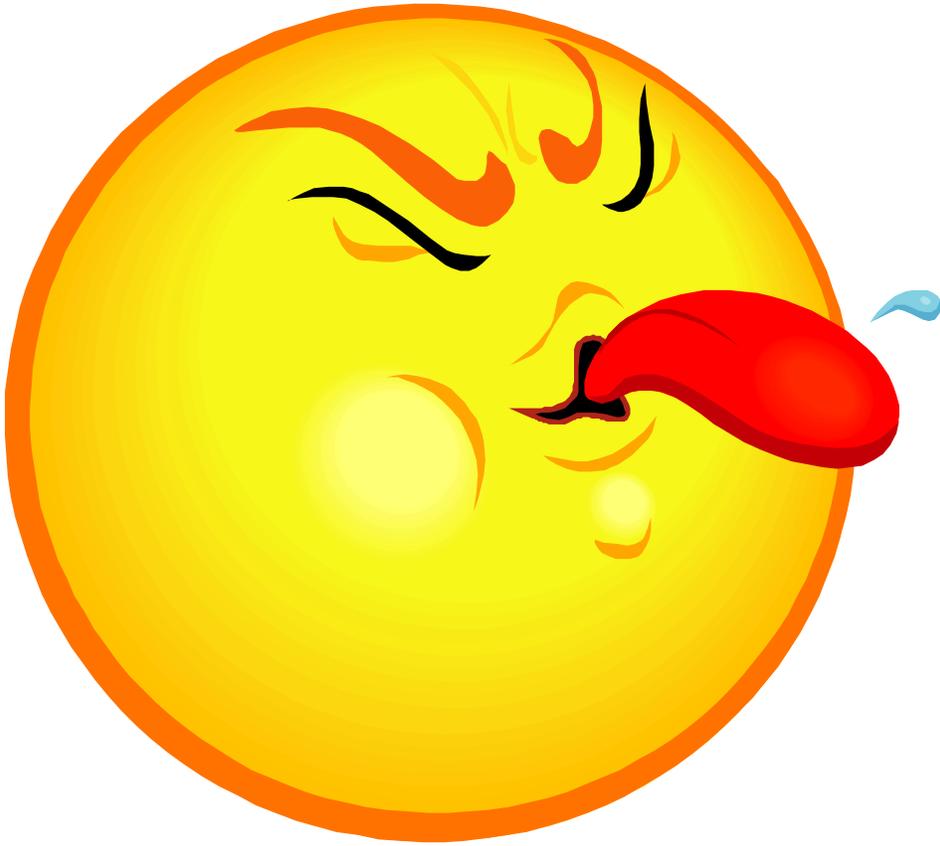
Your breath smells bad.



You get sores in your mouth.



You always have to spit.



Your teeth get more cavities.



You lose your sense of taste, so everything you eat tastes the same.



You lose your sense of smell.



Smoking Affects Physical Activity

Objectives

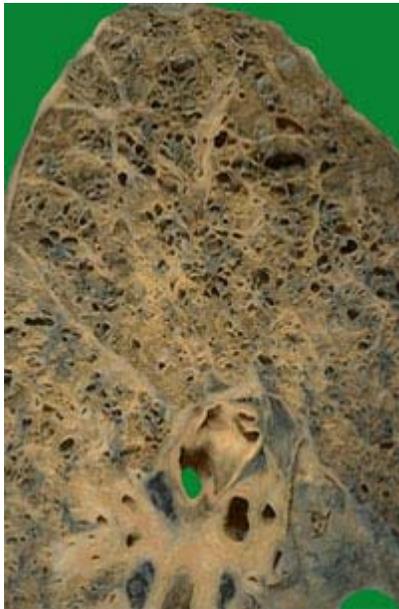
1. Students will understand the breathing process and the function of the respiratory system.
2. Students will understand how your lungs can be affected by smoking.
3. Students will understand how to describe and be able to demonstrate how breathing can be affected by using tobacco products.

Materials needed for this lesson

1. Cotton balls
2. Straws
3. Air Sac Tags
4. Blood Stream labels
5. Yarn or tape, for Air Sac Tags
6. Tables or desks pushed together to make a cafeteria-sized table

Background information and notes

Show the class these pictures of damaged lungs from smoking. Emphasize that smoking can cause irreversible damage to the lungs which leads to trouble breathing.



Presenting the Lesson

Discuss the process of breathing or the respiratory system

- Air is inhaled through the mouth and nose. Ask the students to take in a deep breath first through their mouths and then through their noses to demonstrate this action.
- Once air is inhaled into the mouth and nose, it travels down an air tube called the trachea.
- The trachea is connected to the lungs. Air is carried to the lungs from the trachea to the lungs through two branches called bronchi. These bronchi branch into smaller tubes called bronchioles. At the end of the bronchioles there are millions of smaller air sacs called alveoli.
- Alveoli or air sacs function to exchange oxygen and carbon dioxide within the body.
- The air sacs are connected to the bloodstream. The air sacs release the oxygen into the bloodstream. The air sacs transport the oxygen through the bloodstream. The carbon dioxide in the lungs travels back up the trachea and is exhaled with each breath.
- The diaphragm muscle beneath the lungs helps push air in and out of the body

Review the breathing process as previously outlined above. Have students recall the different steps.

Ask students about the affects of smoking on lungs. Explain that smoking can damage the air sacs in lungs making it harder to breathe. Breathing becomes difficult for smokers because the air sacs in the lungs are damaged and do not function properly. This means that smokers also have a much harder time playing sports, singing, dancing and doing other activities which require controlled breathing and endurance. Have the students complete the Air Sac Game. The purpose of this game is to provide students with a visual representation of how smoking tobacco products damage the air sacs within the lungs making it more difficult to breathe.

Learning Activity: Air Sac Game

IMPORTANT NOTES:

- Since the lesson focuses on smoking cigarettes, be prepared for students to possibly pretend to smoke the straws.
- Make sure that students get their own straws and that they do not share or trade straws to prevent the spread of germs.
- Allow children time to catch their breath between rounds.
- If students have been diagnosed with asthma, it is strongly recommended for the participant to serve as the score keeper.

Preparation:

Use cafeteria-style tables. However, if cafeteria-style tables are not available, arrange desks so that they resemble a cafeteria-style table. Divide the class in half and assign each group to a different table. Cut out the “**Air Sac Tags**.” You may either tape them to students’ shirts or use yarn to make necklaces. Lay the “**Bloodstream**” labels on the tables. For a class of 20 students, cut holes or slits in ten of the straws to represent the damaged air sacs of the smoking team.

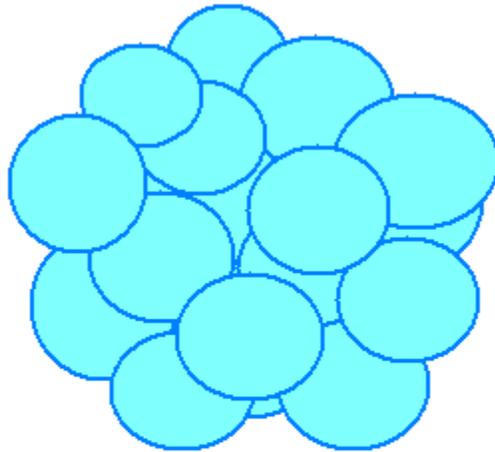
Directions:

1. Divide the class in half and designate students on each team as smokers or non-smokers – one team of each!
2. Explain to the students that the two teams represent the air sacs within the lungs of the person who either smokes or does not smoke. Give each student an **Air Sac Tag** (see below) to help them visualize that they are the air sacs within someone’s lungs.
3. Line both teams up at the end of two tables (lunch room tables, library tables, desks, etc.) all facing the same way. Place the teams apart from one another so that they can distinguish the difference between the teams.
4. Each team is given 15 cotton balls and straws for each team member.
5. Using their straws, each team must blow all of their cotton balls across the table until they fall off the edge of the table. The cotton balls falling off of the table represent the air sacs ability to release the oxygen into the bloodstream.
6. The team that blows all of their cotton balls off the far edge of the table first wins the game.
7. If the smoking team still manages to win, mention that the students on the smoking team are more out of breath than the non-smoking team. This illustrates that they still had to work much harder to win.
8. Start the game over. This time make the other team the smoking team so the students have a chance to experience the game from both perspectives.

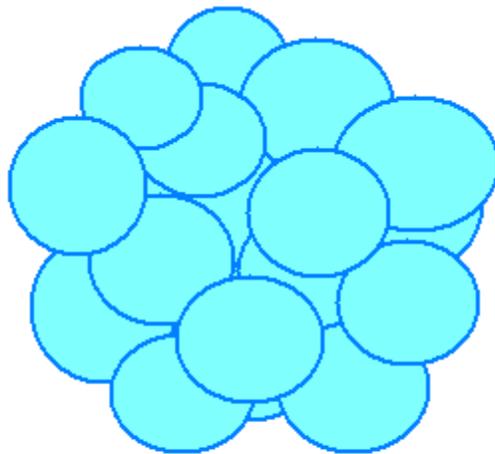
Discussion:

Discuss the following questions with the students. Which team had the harder time blowing the cotton balls off of the table? Why was it harder for the smoking team to blow the cotton balls off of the table? What can you do to prevent yourself from having trouble breathing?

Air Sac Tags



AIR SAC



AIR SAC

Bloodstream

Bloodstream

Negative Consequences: Tobacco Usage

Objectives

1. Students will understand the definition of tobacco and short-term and long-term consequences associated with using tobacco.
2. Students will understand how teeth are discolored during smoking.
3. Students will understand the cost of smoking over various lengths of time.
4. Students will be able to read a selection and identify the appropriate answer.
5. Students will be able to calculate the price of tobacco.

Materials needed for this lesson

1. 5 paper cups with lids
2. Paintbrushes – 1 for every student
3. Brown and yellow food coloring
4. Student Worksheet
5. Chalkboard, transparency or butcher paper
6. Worksheets (one per student)
7. Pencils
8. Calculators (optional)
9. Poster board or butcher paper
10. Art supplies
11. Old magazines
12. Scissors

Background information and notes

Remind students of the reasons why children choose to use tobacco. Children use tobacco because of these reasons.

- To look cool
- To look older
- To be adventurous/rebellious
- To see what smoking is like
- To relax and relieve stress
- Because parents/family are smoking
- Because friends are smoking
- To fit in with friends
- To seem tough
- To feel independent

Students will now learn the negative consequences associated with tobacco usage and the damage that smoking cigarettes or cigars and chewing tobacco can cause.

Presenting the Lesson

Brainstorm with the class the definition of tobacco. Explain to students that tobacco is a type of plant whose leaves are smoked in cigarettes or cigars, or chewed as chewing tobacco. Discuss the contents of a cigarette. Cigarettes contain nicotine, tar, and other harmful chemicals. These chemicals can aid in addiction or cause serious illnesses including lung, mouth, throat, and bladder cancer. Therefore, tobacco can be harmful and dangerous for the body. Have the students read the warning labels from the empty cigarette or tobacco packages.

Explain that these warning labels were created by the Surgeon General who is a health expert. Warning labels must be visible on every package of tobacco to inform the buyer of the negative consequences associated with tobacco use. Warning labels warn about long-term, or continuous, tobacco use. A cigarette contains over 4000 chemicals, over 60 of which increase the risk of cancer, emphysema and other diseases in humans and animals.

Note: *Some people get these diseases even though they are not smokers; however, smoking greatly increases the risks.*

Explain that in addition to these long-term negative consequences, there are also many short-term consequences. Short-term consequences appear rather quickly and can include:

- Yellowing of the teeth and fingertips from tobacco stains
- Smelly smoke-filled hair and clothing
- An increased risk of cavities and gum diseases
- Breathing difficulties
- Financial costs – cigarettes and tobacco cost a lot of money which could be spent on other things.

Teeth discoloration and the financial cost of purchasing tobacco products are the most common short-term consequences of smoking or tobacco use. Therefore, students will participate in an experiment that illustrates the process in which teeth turn yellow from tobacco use. Students will also complete a math worksheet that displays the amount of money spent from buying tobacco products over specified periods of time.

Learning Activity: Teeth Discoloration Experiment

Preparation:

1. Prepare five “unknown solutions” of food coloring and water for each group of students as follows:
 - A.** 20 mL of water and 2 drops of yellow food coloring
 - B.** 20 mL of water and 2 drops of brown food coloring
 - C.** 20 mL of water
 - D.** 20 mL of water and 5 drops of brown food coloring
 - E.** 20 mL of water and 5 drops of yellow food coloring
2. Label the cups with their corresponding letter as listed above in bold.

Note: *Test the solutions on paper before doing the experiment. Slight differences in food coloring may change the amounts needed to create an easy-to-see continuum of “stains.” See the Results Table for descriptions of what color each solution should be when applied to paper.*

Directions:

1. Place the five solutions in five different locations or stations throughout the classroom.
2. Divide the students into groups and have each group rotate to each of the stations to paint the teeth on their worksheet with each solution. The letter beside the teeth should match the letter on the cup of solution they use.
3. When they have finished applying all of the solutions and they have dried, have students guess which solutions match the corresponding type of smoker according to the results table.
4. Next, have the student fill out the reading worksheet using the results from the experiment.
5. Reveal the results to the students and have the students cut out and correctly re-order their teeth. The order should depict the spectrum of smoking, beginning with the non-smoker and ending with the heavy smoker. Students may glue this order on a separate piece of paper, or you may wish to have them write numbers next to the teeth to order them

Discussion:

Discuss the following questions with the students. Which teeth are the most stained and why? How could someone avoid staining their teeth like this? If Ann only used tobacco for a short time, why are her teeth yellow? Explain to the students that Denisha’s teeth are the darkest and most stained from smoking cigarettes and that not smoking is the best defense against discolored teeth. Highlight that Ann’s teeth are slightly yellow because any tobacco use, no matter how little, can yellow teeth. Stains get worse over time, but the stains begin to form right after the start of tobacco use.

Results Table

Light yellow	Solution A (Ann)	Light/Early tobacco use
Dark yellow	Solution E (Ethan)	Moderate tobacco use
Light brown	Solution B (Bobby)	Long, moderate tobacco use
Dark brown	Solution D (Denisha)	Heavy tobacco use
Clear	Solution C (Corrine)	No tobacco use

Teeth Discoloration Worksheet

Directions:

1. Visit each teeth station and color in the teeth.
2. Make sure that you color in the teeth with the same solution.
 - Color in Teeth A with Solution A
 - Color in Teeth B with Solution B
 - Color in Teeth C with Solution C
 - Color in Teeth D with Solution D
 - Color in Teeth E with Solution E
3. Using the colored teeth, fill in the results table so you can see how tobacco affects the color of teeth.
4. Fill in the reading worksheet with the correct names. Use the yellow teeth experiment to help you find the answers.
5. Check your answers with your teacher!!!!!!!

Good Luck

A.



B.



C.



D.



E.



Results:

Light yellow	Solution: Name:	Light/Early tobacco use
Dark yellow	Solution: Name:	Moderate tobacco use
Light brown	Solution: Name:	Long, moderate tobacco use
Dark brown	Solution: Name:	Heavy tobacco use
Clear	Solution: Name:	No tobacco use

Circle of Friends

Once upon a time, there were five best friends named Ann, Bobby, Corrine, Denisha, and Ethan who lived in the same neighborhood. This circle of friends went to the same school, they played at the same park after school, and they were even in the same karate class. One day one of the best friends decided to start smoking cigarettes and this friend wanted everyone in the circle of friends to start smoking too.

Some of the friends started smoking because they thought it made them look older and cool, but one friend never started at all. In fact, _____ wished that no one had started smoking. She knew that it was wrong to smoke and that people shouldn't smoke just to feel cool or look older. She knew that even if there was someone that already smoked in her family, it still wasn't a good thing to do.

She started talking to _____ who had been smoking for only a little while, and told her about some of the short-term consequences, which included smelly breath and nasty yellow teeth. She stopped smoking immediately because she didn't want to ruin her pretty white smile. Recently, _____, who had only been smoking a little longer than the girl who didn't want to ruin her smile, was having trouble keeping up in karate class. This friend could no longer finish the class without taking breaks to catch his breath. The friend that never smoked told him that he was having trouble breathing because he started smoking, so he stopped immediately. _____, who had been smoking almost the longest, realized that he didn't look as handsome as he did before and he couldn't even keep up in karate class anymore because it took too much energy for him to finish the class. Since he didn't have enough energy to breathe, he wasn't able to compete for his yellow belt. He felt awful, but the friend that never smoked told him that all he had to do was stop smoking. So he stopped and continued to practice for the next belt competition.

Finally, the karate tournament was coming up and everyone was prepared for it except _____, who had been smoking the longest and tried to get everyone else to smoke. Not only was she not able to practice because she couldn't breathe, but she also didn't have any money to buy her karate outfit for the tournament. She spent all of her money on cigarettes and didn't have any money left. Ann, Bobby, Corrine, and Ethan were well prepared for the tournament. They looked healthy, had nice smiles, and wore new tournament clothes. As she looked at all of the rest of her friends, she knew that smoking wasn't the smart or cool thing to do. She stopped that day and never smoked again.

Learning Activity: It All Adds Up

Preparation:

Identify the price of a pack of cigarettes in your community, and write the price on a chalkboard, transparency or butcher paper.

Directions:

Calculating Costs of Buying Cigarettes

1. Students will calculate the amount of money a smoker spends on buying cigarettes during different time periods.
2. Explain the conversion process for a day, week, month and year with the students.
3. The cost of smoking increases over time. Therefore, the more that you smoke, the more it costs. Have students complete the Cost of Smoking worksheet.
4. Have students create posters showing objects that could be purchased with the same amount of money calculated on the worksheet.

Discussion:

Discuss the following questions with the students. Were the costs more or less than what you expected them to be? If some people know how much money it costs and how much time they lose by smoking cigarettes and using tobacco products, why do they keep doing it?

Learning Activity Extension: Adding the Extra Health Costs

Explain to students that over time, smokers pay more than non-smokers for doctor's visits and other health costs related to smoking. Some health experts have estimated that just the extra health costs add about \$3.45 per pack of cigarettes. Have the students redo their worksheets and adjust their figures to include the additional costs.

Optional: Losing Time

Warning: This may introduce questions about death or dying. Please discuss this topic carefully and use your discretion when discussing this matter.

Inform students that people who use tobacco products can lose time from their life expectancy. Health experts estimate that every cigarette smoked shortens life expectancy by 11 minutes. Have students calculate the number of minutes reduced by the smoking patterns on their worksheet.

Completed Example

It All Adds Up

1 pack of cigarettes costs: \$4.00

There are 20 cigarettes in a pack, so each cigarette costs: \$0.20
(Cost of pack \div 20 = cost per cigarette)

1 week = 7 days

1 month = 4 weeks

1 year = 12 months

1 cigar = 10 cigarettes

Smoking for ONE WEEK:

**Since there are 7 days in a week, multiply the cost of one cigarette by 7.*

1 cigarette per day for a week = \$1.40

5 cigarettes per day for a week = \$7.00

10 cigarettes per day (half a pack) or 1 cigar per day for a week = \$14.00

1 pack per day (20 cigarettes) for a week = \$28.00

1 $\frac{1}{2}$ packs per day (30 cigarettes) for a week = \$42.00

2 packs per day (40 cigarettes) for a week = \$56.00

Smoking for ONE MONTH:

**Since there are approximately 4 weeks in a month, multiply the responses above by 4.*

1 cigarette per day for a month = \$5.60

5 cigarettes per day for a month = \$28.00

10 cigarettes per day (half a pack) 1 cigar per day for a month = \$56.00

1 pack per day (20 cigarettes) for a month = \$112.00

1 $\frac{1}{2}$ packs per day for a month = \$168.00

2 packs per day for a month = \$224.00

Smoking for ONE YEAR:

**Since there are 12 months in a year, multiply the responses above by 12.*

1 cigarette per day for a year = \$67.20

5 cigarettes per day for a year = \$336.00

10 cigarettes per day (half a pack) 1 cigar per day for a year = \$672.00

1 pack per day (20 cigarettes) for a year = \$1,344.00

1 $\frac{1}{2}$ packs per day for a year = \$2,016.00

2 packs per day for a year = \$2,688.00

Smoking for FIVE YEARS:

**Using the responses above, multiply each by 5, for 5 years.*

1 cigarette per day for five years = \$336.00

5 cigarettes per day for five years = \$1,680.00

10 cigarettes per day (half a pack) 1 cigar per day for five years =
\$3,360.00

1 pack per day (20 cigarettes) for five years = \$6,720.00

1 $\frac{1}{2}$ packs per day for five years = \$10,080.00

2 packs per day for five years = \$13,440.00

Smoking for TEN YEARS:

**Using the responses above, multiply each by 2, since 5 years x 2 = 10 years.*

1 cigarette per day for ten years = \$672.00

5 cigarettes per day for ten years = \$3,360.00

10 cigarettes per day (half a pack) 1 cigar per day for ten years =
\$6,720.00

1 pack per day (20 cigarettes) for ten years = \$13,440.00

1 $\frac{1}{2}$ packs per day for ten years = \$20,160.00

2 packs per day for ten years = \$26,880.00

Smoking for FIFTY YEARS:

**Using responses above, multiply by 5, since 10 years x 5 = 50 years*

1 cigarette per day for fifty years = \$3,360.00

5 cigarettes per day for fifty years = \$16,800.00

10 cigarettes per day (half a pack) or 1 cigar per day for fifty year =
\$33,600.00

1 pack per day (20 cigarettes) for fifty years = \$67,200.00

1 $\frac{1}{2}$ packs per day for fifty years = \$100,800.00

2 packs per day for fifty years = \$134,400.00

It All Adds Up

1 pack of cigarettes costs: \$_____.

There are 20 cigarettes in a pack, so each cigarette costs: \$_____.
(Cost of pack \div 20 = cost per cigarette)

1 week = 7 days

1 month = 4 weeks

1 year = 12 months

1 cigar = 10 cigarettes

Smoking for ONE WEEK:

**Since there are 7 days in a week, multiply the cost of one cigarette by 7.*

1 cigarette per day for a week = \$_____

5 cigarettes per day for a week = \$_____

10 cigarettes (half a pack) or 1 cigar per day for a week = \$_____

1 pack per day (20 cigarettes) for a week = \$_____

1 $\frac{1}{2}$ packs per day (30 cigarettes) for a week = \$_____

2 packs per day (40 cigarettes) for a week = \$_____

Smoking for ONE MONTH:

**Since there are approximately 4 weeks in a month, multiply the responses above by 4.*

1 cigarette per day for a month = \$_____

5 cigarettes per day for a month = \$_____

10 or cigarettes (half a pack) or 1 cigar per day for a month = \$_____

1 pack per day (20 cigarettes) for a month = \$_____

1 $\frac{1}{2}$ packs per day for a month = \$_____

2 packs per day for a month = \$_____

Smoking for ONE YEAR:

**Since there are 12 months in a year, multiply the responses above by 12.*

1 cigarette per day for a year = \$ _____

5 cigarettes per day for a year = \$ _____

10 or cigarettes (half a pack) or 1 cigar per day for a year = \$ _____

1 pack per day (20 cigarettes) for a year = \$ _____

1 $\frac{1}{2}$ packs per day for a year = \$ _____

2 packs per day for a year = \$ _____

Smoking for FIVE YEARS:

**Using the responses above, multiply each by 5, for 5 years.*

1 cigarette per day for five years = \$ _____

5 cigarettes per day for five years = \$ _____

10 or cigarettes (half a pack) or 1 cigar per day for five years \$ _____

1 pack per day (20 cigarettes) for five years = \$ _____

1 $\frac{1}{2}$ packs per day for five years = \$ _____

2 packs per day for five years = \$ _____

Smoking for TEN YEARS:

**Using the responses above, multiply each by 2, since 5 years x 2 = 10 years.*

1 cigarette per day for ten years = \$ _____

5 cigarettes per day for ten years = \$ _____

10 or cigarettes (half a pack) or 1 cigar per day for ten years = \$ _____

1 pack per day (20 cigarettes) for ten years = \$ _____

1 $\frac{1}{2}$ packs per day for ten years = \$ _____

2 packs per day for ten years = \$ _____

Smoking for FIFTY YEARS:

**Using responses above, multiply by 5, since 10 years x 5 = 50 years*

1 cigarette per day for fifty years = \$ _____

5 cigarettes per day for fifty years = \$ _____

10 or cigarettes (half a pack) or 1 cigar per day for fifty years = \$ _____

1 pack per day (20 cigarettes) for fifty years = \$ _____

1 $\frac{1}{2}$ packs per day for fifty years = \$ _____

2 packs per day for fifty years = \$ _____

Talking to Peers about Tobacco

Objectives

1. Students will understand how to say no to tobacco with confidence.
2. Students will understand how to communicate with their peers about the consequences of using tobacco.
3. Students will understand how to name at least one way you can communicate with peers without addressing them face to face.

Materials needed for this lesson

1. One writing a letter to a friend worksheet per student (blank provided)
2. One blank piece of paper
3. A writing utensil
4. Role play scenarios (provided)
5. One tobacco-free pledge per student (blank provided)

Background information and notes

Most students know that using tobacco products is unhealthy. Most students do not *want* to use tobacco products. Many simply don't know how to cope in a situation when they are presented with the opportunity to use a tobacco product. They often succumb to peer pressure. Additionally, they are not taught to discuss other's tobacco use with them. This lesson works on teaching kids effective communication skills. It also provides them with an opportunity to practice how to react in real-life situations.

Presenting the Lesson

Children begin to face the challenge of communicating with peers and family at a very young age. This can be particularly problematic when children experience peer pressure to begin using tobacco products. Children should be equipped with the proper communication skills and tactics for avoiding conflict. If students can communicate effectively, they can say no to using tobacco with confidence and become a role model for their peers.

Ask students to raise their hand if they've ever been misunderstood*. Ask volunteers to tell a story of a situation where they were misunderstood. Following the story or stories, ask the class for ideas on how the person telling the story could have communicated their wants/needs/desires more effectively. Do this to see how much students already know.

**Explain the term misunderstood if necessary. Use this opportunity as an example of unclear communication. You want them to answer a question, but they do not understand the vocabulary you are using. Therefore, the class and the teacher are not communicating effectively.*

Students should understand that communication is not only about the words that you speak or write. Communication includes:

- Your body language
- How well you listen
- How well your actions and your words match
- Your tone of voice

When you are speaking face to face with someone, you should:

- Look them in the eye (make eye contact)
- Use a conversational tone (Do not yell or speak too quietly)
- Speak with confidence. Do not act afraid of the other person or unsure of your response(s).
- Use proper body language. Do not cross your arms, look down or away from the person you are speaking to, roll your eyes or make faces.
- Do not interrupt. Wait until the person speaking has finished.

Most important, do not say one thing and do another! If you say NO, show that you really mean NO.



Dealing with Peer Pressure: How to say NO effectively

Equation for success

Say NO with confidence + give a reason why + Make your action match your words (walk away if necessary) = Saying NO effectively

•**Say NO with confidence:** When someone wants you to do something that you know is wrong, unhealthy or unsafe, say NO as if you really mean it. Use a firm tone without yelling.

•**Give a reason why:** Give a specific reason why you do not want to do what you are being asked to. Show that you care about yourself enough to say NO. Expressing your opinion can be very powerful and you may be saving someone from harming themselves.

•**Make your actions match your words:** If you say no and then proceed to participate in the action/activity that you know is wrong, your peers will not take you seriously. You will be faced with this situation time and time again. Walking away from the situation may be necessary to prove your point and avoid more pressure.

•Reasons to say NO to tobacco

1. All forms (cigarettes, chew, dip and cigars) can cause multiple health problems in the future. This includes gum disease and a variety of cancers.
2. Smoking makes your teeth turn yellow and gives you bad breath.
3. Smoking makes it difficult to breathe.
4. Smoking makes it hard to be physically active.

•Great ways to express your opinion about using tobacco. Simply say:

1. NO thank you, I care about my health.
2. NO thank you, I plan to live a very long time.
3. NO thanks, I like to spend my money on other things.
4. NO thanks, I don't do things that are illegal.
5. NO thanks, I don't want to smell horrible when I have to go home.
6. NO thank you, it will affect my game in soccer (football, baseball, etc) or my ability to dance, do tai chi, karate, etc.
7. NO thanks. I know that once you start it is very hard to stop.

** Always use "I" statements. Keep the situation positive by talking about how you feel about something.

Learning Activity: Writing a Letter to a Friend

Explanation of the activity:

When you are upset or hurt by a friend or family member, or they are doing something to hurt themselves, it can be difficult to talk to them face to face. There are several other ways to communicate with them. Students should learn alternate forms of communication, such as writing a letter.

Writing a letter gives students the opportunity to be heard, without being interrupted or challenged. Taking the time to write a letter shows that you care. You can also revise the letter as many times as you want before giving it to the recipient. That way, it will say exactly what you want it to say.

Directions:

1. Have students write a letter to a friend who has done something to upset them (can be a hypothetical situation). This can be a variety of things, and it does not have to be about tobacco.
2. The letter should be no more than one page.
3. The students should use "I" statements.
4. The students should use the following worksheet and sample letter as a guide.

Writing a Letter to a Friend

Who are you writing to? (Does not have to be a real person): _____

What has this person done to upset you? _____

Why did this bother you? _____

What do you like about the person you are writing to? _____

Why do you care about him or her? _____

What should he or she do differently in the future to avoid hurting you or their self?



Writing a Letter to a Friend

Directions: Write a letter to your friend using the information you filled out on the worksheet. Use correct letter format. Make sure you use “I” statements.

Learning Activity: Role Playing

Explanation of the activity:

Students should be given the opportunity to practice their communication skills with their classmates. Role playing gives the students a chance to say NO in an unthreatening environment. It also gives them the opportunity to give each other feedback.

Note: This activity may be done on a separate day if time is a concern.

Directions:

1. Get three volunteers to do the example scenario for the class. This scenario has the ending written for the students.
2. As a group, the students should give the volunteers feedback on their performance. They should be judging their communication skills: tone of voice, body language, etc. Since the students have no input on the lines of the role play, they can't be critiqued on that aspect of the scenario.
3. Divide the class into groups of six and hand out a scenario to each group.
4. Each scenario uses three people, a narrator and two people interacting. The endings are unwritten. Names may be changed to fit the people playing the roles.
5. Students should be given sufficient time to write the ending(s). After half the group acts out the scenario, then the other three members should be given the opportunity to act it out.
6. Have the students perform the scenarios in front of the class. Students should use the Role Play Feedback form to give positive comments and suggestions for improvement.

Activity Debrief:

The following questions will help to summarize the activity:

Scenario One: How did Brian try to convince Franco to try his brother's cigarettes? What did Franco do that was really good in response? What else could either person have done?

Scenario Two: What was good about the ending the group came up with? What would have happened to the adults if they had been caught buying the cigarettes for the boys? What would have happened if the boys had been caught smoking?

Scenario Three: What was good about the ending the group came up with? Is it true that baseball players use real chewing tobacco? (*No, they are banned from doing so.*) Is chewing tobacco healthier than cigarettes? (*No, it can lead to just as many health problems as cigarettes. No tobacco is safe.*)

Scenario Four: How should you deal with telling an adult about a situation where you find someone you know and love smoking? What was good about the group's ending?



Role Play- Scenario 1

Narrator: *Brian and Franco are hanging out at Brian's house after school. His parents are not home. They go into Brian's older brother's room to look for his football.*

Brian: I will just go into Todd's room to look for his football.

Franco: Ok, I'm going to go get a glass of water before we start to play.

Brian: Wait! Look what I just found- a pack of cigarettes! I didn't know my brother smoked!

Franco: I'd put those back and ask him about them later. Let's go play football.

Brian: We always play football, let's take these cigarettes and sneak down to the creek.

Franco: Brian, you know how bad cigarettes are for you. They'll make it hard for us to play ball.

Brian: Oh, come on, man. How bad can one cigarette be?

Franco: Bad enough! One leads to two and two leads to three. Before you know it, you're addicted!

Brian: If my brother smokes, they can't be that bad.

Franco: Maybe you should talk to him about what we learned at school. If he's not going to stop, you should tell your mom. Smoking can really do damage to your health.

Brian: My brother would not be happy with me if I did that.

Franco: He'll thank you one day!

Brian: Yeah, I guess you're right. Let's just go play football like always.



Role Play- Scenario 2

Complete this scenario. When you act it out, make sure you think about your body language and the equation for successfully saying NO!

Narrator: *Two friends are walking home from school. They stop at a carry-out store to get a snack.*

Jose: Come on, Maxwell! Hurry up and get your snack so we can get to your house! I want to have time to play before dinner.

Maxwell: Hold on, Jose. Look over there by the door.

Narrator: *Maxwell points to two adults standing by the door of the carry-out talking.*

Jose: Yeah, so what? They're just talking. Come on, let's go.

Maxwell: No, wait. They are definitely old enough to buy cigarettes. Let's ask them to buy us some! My mom isn't home yet, so we can try smoking when we get to my house.

Jose: *Try to convince Maxwell to go home and not ask the adults to buy cigarettes for them.*

Maxwell: *Try to convince Jose to stay and ask the adults to buy cigarettes for them.*



Role Play- Scenario 3

Complete this scenario. When you act it out, make sure you think about your body language and the equation for successfully saying NO!

Narrator: *Two friends on a softball team are sitting in the dugout during a practice. Robyn spits out some chewing tobacco. Bethany notices that Robyn isn't spitting out sunflower seeds like everyone else.*

Bethany: Hey girl, that's not sunflower seeds!

Robyn: Ha. Nope, it isn't. It's chewing tobacco, just like real baseball players use.

Bethany: You shouldn't be doing that.

Robyn: Why not? I know smoking cigarettes is bad for you, but chew is much safer. That's why all the baseball players use it. Here, try some and you'll see.

Bethany: *Respond to Robyn's offer of chewing tobacco.*

Robyn: *Try to get Bethany to try the chewing tobacco.*



Role Play- Scenario 4

Complete this scenario. When you act it out, make sure you think about your body language and the equation for successfully saying NO!

Narrator: *A younger brother, Taylor, comes home to find his older sister, Stacey smoking on the back porch.*

Taylor: Stacey! What do you think you are doing?

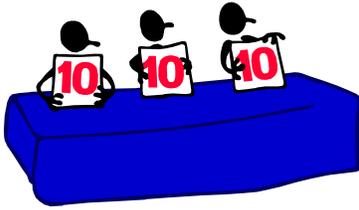
Stacey: Oh come on, Taylor. It's not a big deal. It's just a cigarette.

Taylor: It will be a big deal when mom and dad get home and I tell them!

Stacey: Oh, no, you won't tell them! Everyone at school smokes, Taylor. It really is not a big deal.

Taylor: *Try to convince Stacey not to smoke.*

Stacey: *Try to convince Taylor not to tell their parents and that smoking is not a big deal.*



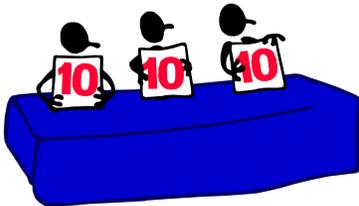
Role Play Feedback

What did you like about the group's ending?

Rate their body language (10 is best): 1 2 3 4 5 6 7 8 9 10

Rate how well their words matched their actions: 1 2 3 4 5 6 7 8 9 10

Did the group use facts and strong comments to defend their reasons for not using tobacco? Yes No



Role Play Feedback

What did you like about the group's ending?

Rate their body language (10 is best): 1 2 3 4 5 6 7 8 9 10

Rate how well their words matched their actions: 1 2 3 4 5 6 7 8 9 10

Did the group use facts and strong comments to defend their reasons for not using tobacco? Yes No

Learning Activity: Signing a Pledge

Explanation of the activity:

Students will sign a pledge that they will remain tobacco-free and use good communication skills to say no to peer pressure. They will attempt to communicate their concerns to other friends and family who use tobacco and/or attempt to use tobacco. Hang the students' pledges in the hallway or around the classroom where others can see them.



Tobacco-Free Pledge

✓ I will remain tobacco free. I will abstain from using:

- Cigarettes
- Cigars
- Chewing Tobacco
- Dip products

✓ I will use good communication skills to say no to people who ask me to use tobacco products.

✓ I will encourage others to not use tobacco products or to quit.

Name

Date

Secondhand Smoke

Objectives

1. Students will understand how secondhand smoke can be avoided.
2. Students will understand the importance of voicing your opinion to legislators.
3. Students will understand how to name the harmful effects of secondhand smoke
4. Students will understand how to identify places in the neighborhood that do not allow smoking on the premises.

Materials needed for this lesson

1. Sources about secondhand smoke
2. Index cards (to use as notes for the presentation)
3. Pictures of public places where smoking is banned in a town with a public smoking ban. Provide at least one picture for each student.
4. CD player and music CD or radio
5. "Secondhand smoke" signs and yarn

Background information and notes

The effect of secondhand smoke has become a hot topic in cities and states across the country. In the 2006 election, citizens in Ohio voted to become smoke-free. Smoking is officially banned in all public places and work places, meaning any location that has an employee or invites members of the public to enter. This was an act of a group called Smoke Free Ohio. Smoke Free Ohio had numerous partners throughout the state of Ohio, both non-profits and businesses. These groups came together to promote action that will benefit the health of all people in Ohio. Secondhand smoke is extremely dangerous. Students should understand that the decision to remain smoke-free should include avoiding exposure to secondhand smoke. Furthermore, students should understand that they, as citizens, can have an active part in making and changing laws. For a summary or full text of the law, please visit www.smokefreeohio.org.

Presenting the Lesson

Discussion: Part I: How does government function in Ohio?

Ohio's State Government models the government of the United States. In Ohio, there are three Branches:

Legislative: *Creates or makes the laws.* In Ohio, this includes the state Senate and House of Representatives, collectively called the Ohio General Assembly. It also includes legislative agencies, or numerous committees and commissions to oversee compliance and ethics.

Executive: *Enforces the laws.* In Ohio, this includes the Governor, Lieutenant Governor, and the Governor's cabinet. Other positions include: Secretary of State, Auditor of State, Attorney General, Treasury of State and the State Board of Education.

Judicial: *Interprets the laws.* The judicial branch includes: the Ohio Supreme Court, Court of Claims and Court of Judiciary bodies. These judiciary bodies include: county common pleas courts, municipal courts and courts of appeal.

All positions in Ohio are elected by the citizens of Ohio, with the exception of the Governor's Cabinet. People who serve in the Governor's Cabinet are appointed by the governor and usually run a variety of state agencies. These people serve at the pleasure of the governor and can be asked to leave at any time.

How is the system listed above similar to the system used at the federal level?

- Our Governor represents which figure in Federal Government? (*The President*)
- Our Lieutenant Governor represents which figure in the Federal Government? (*The Vice President*)
- There is the US Supreme Court and the Ohio Supreme Court. How are they different? (*The Ohio Supreme Court Justices are elected and the US Supreme Court Justices are appointed.*)
- The Ohio General Assembly is similar to what federal body? (*Congress*)

City or local governments can vary significantly. Find the structure for your city, village or township. Present it to the class. Compare how it is similar to State Government. In cities, the executive branch is usually represented by a mayor. The legislative branch is usually represented by city council. The judicial branch is usually made up of judges in municipal, common pleas and/or county courts. We also have local police who help enforce laws.

Discussion: Part II: How can citizens participate in government and the legislative process?

It's the voters and citizens that drive the legislative process in Ohio. If you look at the chart on how a bill becomes a law in Ohio, the very first step claims that the legislator must become aware of the need for legislation. Students should understand that they can be the ones to inform their leaders of a problem or situation that may call for legislation. In order to make leaders aware of an issue, they can do the following:

- Write a letter to their City Council, School Board, State Representative, Senator or House Representative.
- Attend a City Council meeting and present your case
- Attend a School Board meeting and present your case
- Call an elected leader

Our elected officials are supposed to be the voice of the people. We vote for them because we think they will represent our interests. So, it is our responsibility to ask them to act on situations that we care about.

Another way to participate is to get an issue on the ballot. If you have an interest in something in particular, such as a health issue, chances are there are many other people who feel the same way. Often, people come together in what is called an interest group. They want to advocate an important issue, but they can not do it alone. This group of people will gather signatures on a form called a petition. The people who sign the petition must be registered voters. If enough signatures are collected and the signatures are determined to be those of registered voters, then the issue brought forth will appear on the ballot. If voters then vote to pass the issue, it becomes a law.

What is a **ballot**? A ballot is the form in which a vote is recorded.

What is a **petition**? A petition is a formal request that is signed by people who agree with it and is given to a person of authority.

The third way to participate in government and the legislative process is to run for an elected office. This will mean that you will always be able to contribute to the law-making process. You will vote to pass laws that you may have helped create.

Most importantly, adult citizens can vote! Voting is a right that people, including women and minorities, fought very hard to have. Citizens are afforded this right when they reach eighteen years of age. At this point, the government feels that you are old enough to make an informed decision. As an adult, it's your responsibility to be an active part of elections.

Discussion: Part III: Secondhand Smoke

See what students know...

What is **secondhand smoke**? *Secondhand smoke is a combination of the smoke that comes from the end of the cigarette that is burning and the smoke that is breathed out by the smoker(s).*

Who is affected by secondhand smoke? *Everyone!* It does not matter if you are young or old, healthy or unhealthy, secondhand smoke can cause severe health problems.

Why is secondhand smoke dangerous? *Secondhand smoke contains poisons. (In other words, it's toxic)* The same harmful chemicals that are found in cigarettes can be found in secondhand smoke. Breathing in this smoke can damage your health and also lead to certain cancers.

More specifically, it contains:

- Cancer causing chemicals:** Formaldehyde, Benzene, Polonium-210, Vinyl Chloride
- Poison Gases:** Carbon Monoxide, Hydrogen Cyanide, Butane, Ammonia, Toluene
- Toxic Metals:** Arsenic, Lead, Cadmium, Chromium

Other health effects besides cancer that secondhand smoke can cause:

- Heart Disease
- Heart Attack
- Itchy, watery eyes
- Onset of Asthma attacks (for those with Asthma)
- Irritated skin, nose and throat

What should people do to avoid secondhand smoke?

1. Avoid being around smokers. Do not allow smoking in your home, car or any other enclosed area.
2. Do not hang around people who smoke.
3. Do not go to restaurants or other public places where smoking is allowed.

What is being done?

- Smoking is banned in most public places.
- Ohio is one of 15 states to enact a full, state-wide smoking ban. This issue was voted on in the November 2006 election. The law went into effect December 7, 2006. This took the place of many city-wide smoking bans. (State law supersedes city law.) This means that any place with an employee is not allowed to have smokers indoors, with very few exceptions to the rule.

Learning Activity: Mock City Council Meeting and Presentation

Preparation:

Students will prepare a presentation for the members of City Council. They will research secondhand smoke in more detail, and try to convince the members of City Council that they should enact a smoking ban in the city. (This is regardless of the fact that a statewide ban is already in effect.)

Directions:

1. Each student will prepare a one-minute speech in support of the smoking ban, in hopes of improving the community's health.
2. Students should use the information that you collected and any other sources that they find. Encourage students to interview a parent or person that works in a smoke-filled environment. Find out why people do not want to work in a smoky environment.
3. Depending on how much time you have for this activity, students may work on their speeches in class or at home.
4. For the presentation, divide the class into community members and council members. Find out how many people are on city council for your school's town. Each student should have a chance to be a council person and a community advocate.
5. The students acting as council members will use the peer judging sheet to give the presenter a score on his or her presentation.
6. At the end of each "council session" the council members should vote on whether or not they want to enact a smoking ban based on the "community advocates" presentations.

Activity Debrief:

The following questions will help to summarize the activity:

- How will people benefit from a smoking ban?
- How does presenting at a city council meeting impact the way of life for the people in the community?
- What facts about secondhand smoke were most convincing when you were acting as a council member?



Peer Judge Form
Mock City Council Meeting

Your Name _____

Presenter's Name _____

Did the presenter discuss the harmful effects of secondhand smoke? YES NO

Did the presenter speak for no more than one minute? YES NO

Was the presenter confident in what s/he was saying? YES NO

Did the presenter do anything extra to convince you to vote for a smoking ban? YES NO

If YES, what? _____

After hearing the presenter's speech, would you vote for a smoking ban? YES NO



Peer Judge Form
Mock City Council Meeting

Your Name _____

Presenter's Name _____

Did the presenter discuss the harmful effects of secondhand smoke? YES NO

Did the presenter speak for no more than one minute? YES NO

Was the presenter confident in what s/he was saying? YES NO

Did the presenter do anything extra to convince you to vote for a smoking ban? YES NO

If YES, what? _____

After hearing the presenter's speech, would you vote for a smoking ban? YES NO

Learning Activity: Public Smoking Ban Tag Game

Public Smoking Ban Tag Game

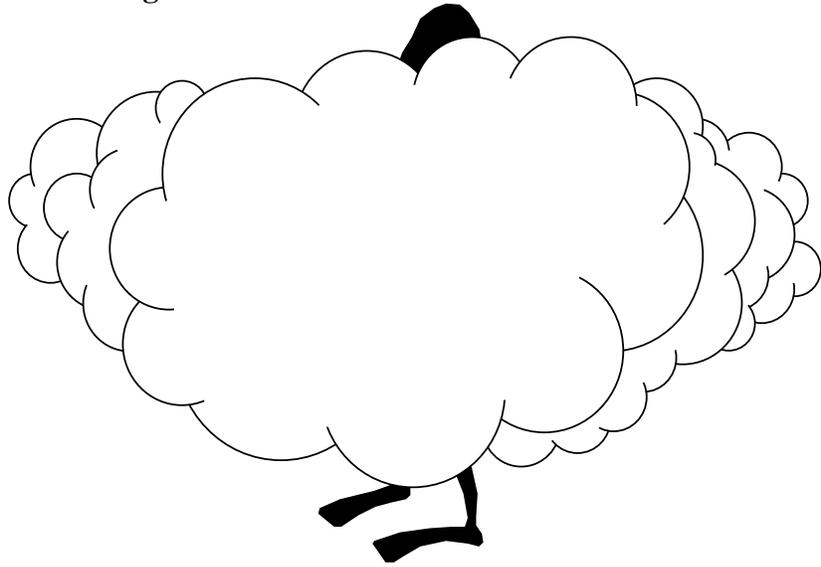
Preparation:

Scatter the pictures of public places on the floor. The bigger the space, the better. Create the “secondhand smoke” signs for the students that will be “it” to wear.*

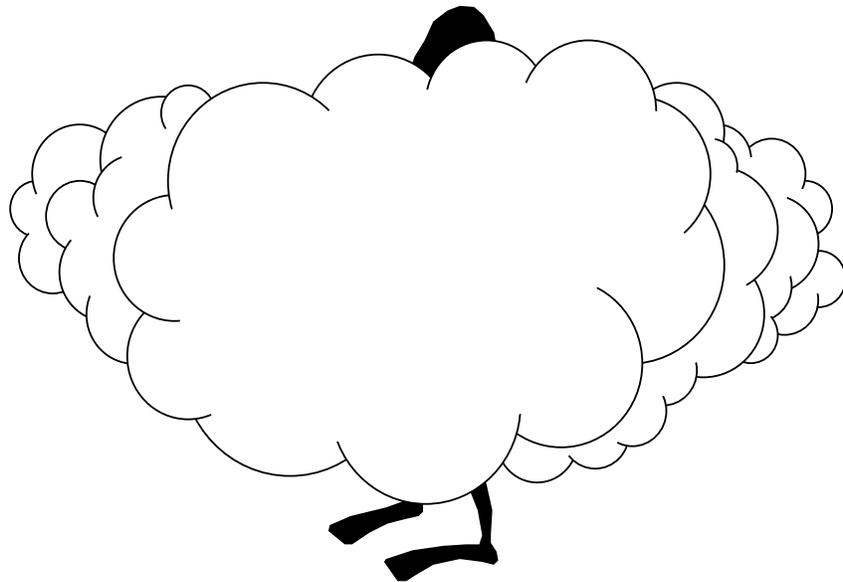
Directions:

1. Choose 3-4 students to be “it,” or in this case the “secondhand smoke.” The rest of the students are the nonsmokers. Alternately, the mentors can be the “secondhand smoke.” Have those who are “it,” or the “secondhand smoke,” wear the secondhand smoke signs.
2. While the music is playing, the nonsmokers and “secondhand smoke” will walk around the space, among the pictures, in any direction they want.
3. When you turn the music off, the secondhand smoke is free to tag the nonsmokers.
4. The nonsmokers must run to a picture of a smoke-free zone and place a foot on it. Only two students can have their foot on the same picture.
5. Once their foot is on the picture, the nonsmoker is safe and cannot be tagged by the secondhand smoke.
**A picture of a house is included as a “trick,” since a house is not a public place and one can still legally smoke there, even in a place that has enacted a public smoking ban.*
6. If the secondhand smoke tags a nonsmoker, the nonsmoker is “out” and must sit out the rest of the game.
7. The last nonsmoker remaining wins the game.

Secondhand Smoke Signs



secondhand smoke



secondhand smoke

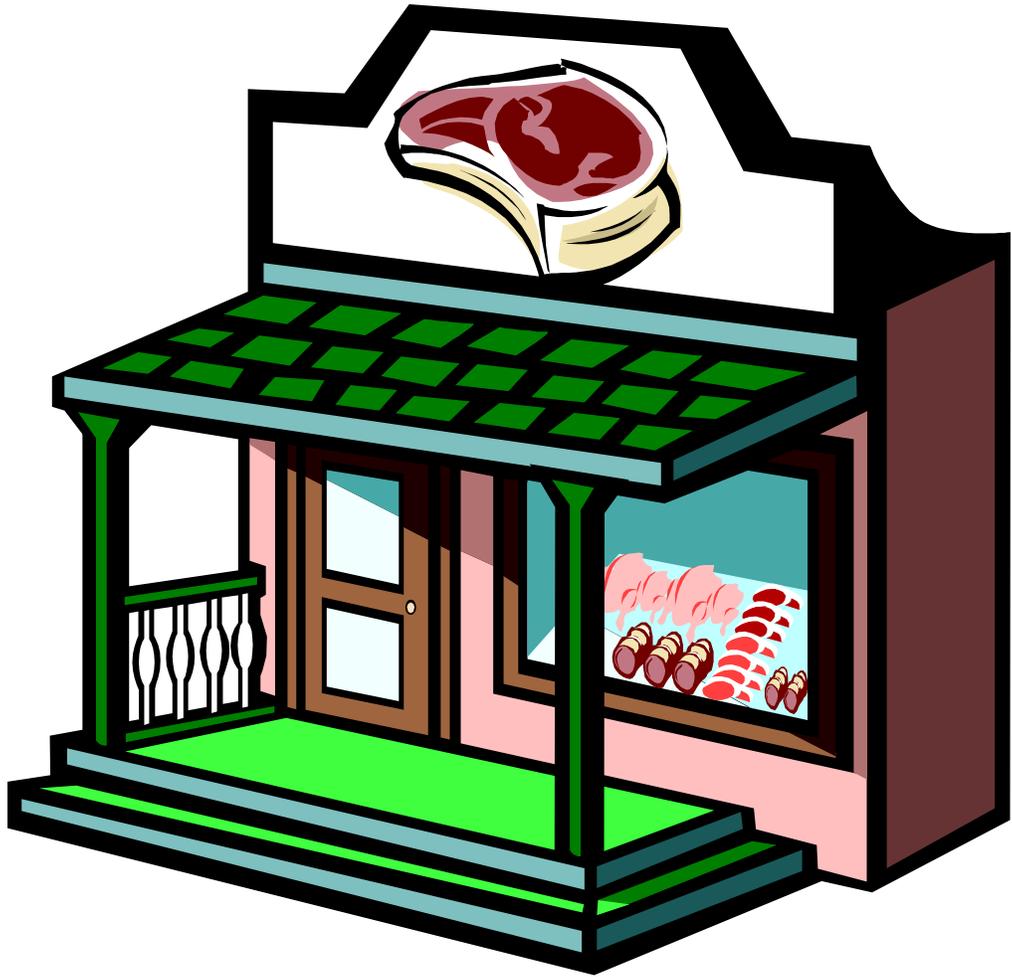
Pictures of Public Places



House



Deli



Butcher Shop



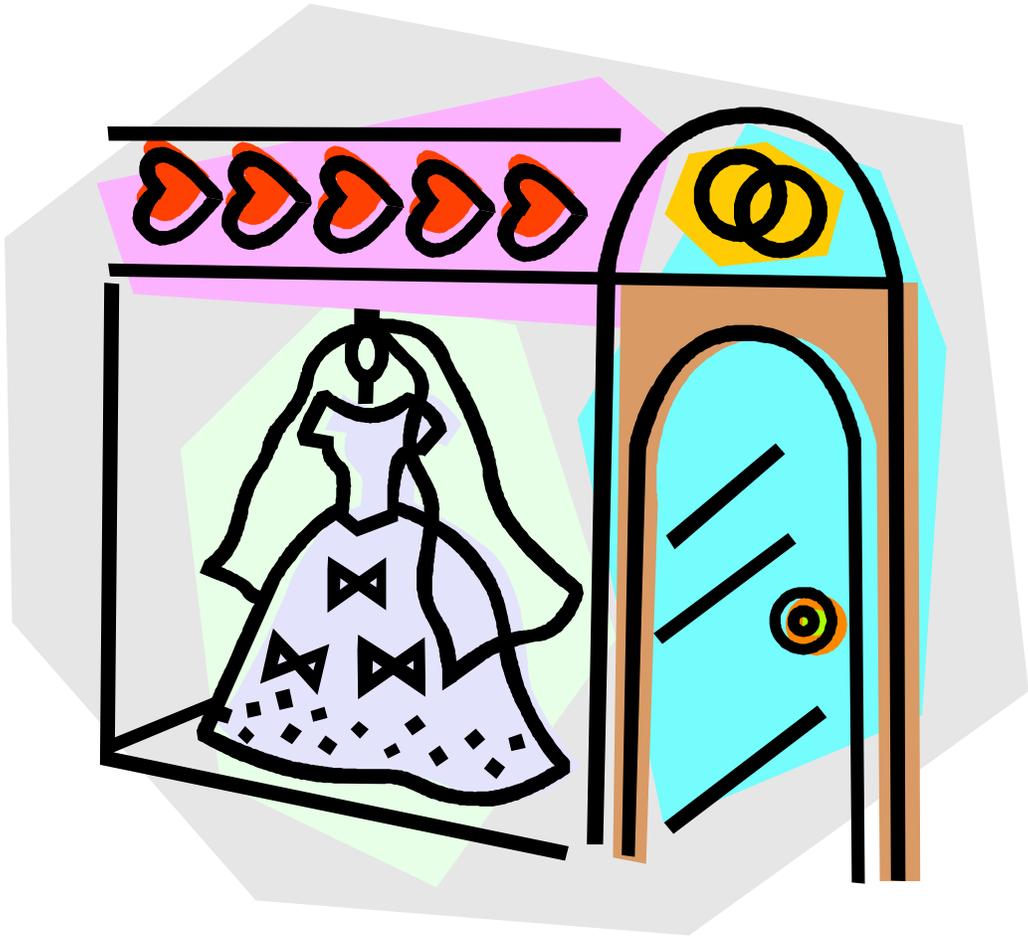
Pet Store



Airport



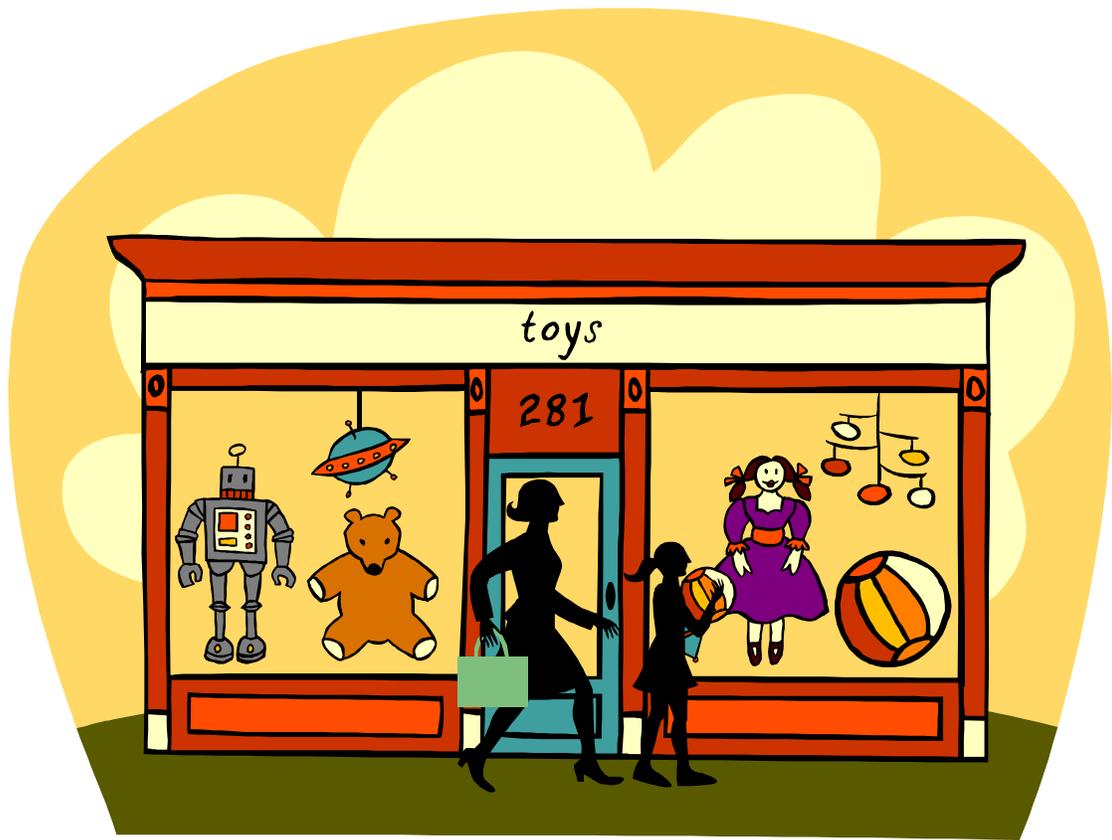
Coffee Shop



Dress Shop



Book Store



Toy Store



Hair Salon



Farmer's Market



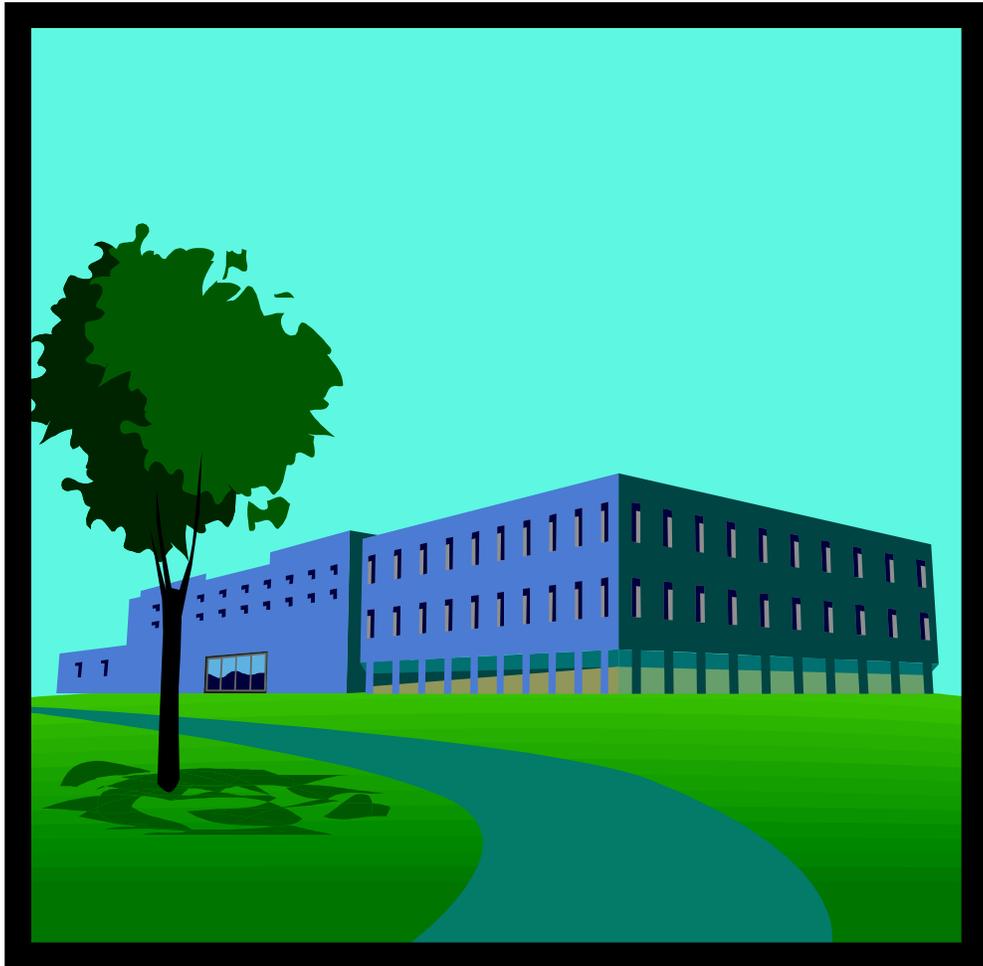
Dentist



Movie Theater



Bank



Shopping Mall



Office Building



Restaurant

Conclusion: Pot-Luck Dinner with Parents and Students

Objectives

1. Students will understand the impact that poor nutrition, lack of physical activity, and tobacco use has on our health.
2. Students will understand the diseases that they are at risk for due to family history.
3. Students will be able to discuss one disease that is affected by nutrition, physical activity or tobacco use.
4. Students will be able to discuss the importance of a healthy lifestyle and how the choices we make can either prevent disease or increase our risk.
5. Students will be able to discuss what a person can do to become healthier.

Materials needed for this lesson

1. Writing Materials (Paper, pencils, and pens)
2. Markers
3. Art supplies
4. Internet access
 - <http://www.hhs.gov/familyhistory/> - US Surgeon General's Family History Initiative
5. Family Member Interview Sheet
6. Parent Participation Form
7. Family Contract

Background information and notes

What we choose to do or not do or even eat has a tremendous impact on our health. The impact is so great that it can cause, contribute to or worsen a health condition. It is important for students to understand that the decisions that they make now may not be problematic next week, but they can cause serious problems in the future. Many health conditions are influenced by genetics. If your mother has high blood pressure, you are at a higher risk for having it. Therefore, controlling your diet, exercising and refraining from using tobacco products now may prevent the problem. Students often do not talk about these issues with their families. They do not know that someone in their family has a health condition. If they do know, they are often not educated about its causes, symptoms and affects on a person's life. This lesson is meant to help children learn about their family health histories. It will provide them with the opportunity to research a disease that has affected their family and/or is a disease that they may be at risk for. They will see how nutrition, lack of physical activity, and using tobacco impacts this disease and they will discuss what a person can do to be healthy. They will also create a healthy dish based on the knowledge they've learned in previous nutrition lessons.

Presenting the Lesson

The students have already learned about how essential nutrients are to our health (*To Drink or Not to Drink* and *Growing Essentials*). They help our bodies function normally and healthily. They learned that to get all the nutrients our bodies need, we have to:

- Eat a variety of foods from all five of the foods groups (*Food Groups and the Food Guide Pyramid*)
- Eat a variety of fruits and vegetables and get 5 to 9 servings a day (*Fruits and Vegetables Inside and Out & 5 to 9 a Day*)
- Eat a healthy breakfast and eat breakfast every day (*The Importance of Breakfast*)
- Choose healthy snacks (*Snack Math*)
- Read the nutrition label to ensure that the foods we eat provide nutrients (*Reading Nutrition Labels*)
- Drink Vitamin C-rich drinks, milk and 100% fruit juice instead of sugary drinks (*To Drink or Not to Drink*)
- Hydrate our bodies with water (*The Importance of Water*)

What happens when we do not get the nutrients we need?

- Example: Without enough Vitamin C, our immune system will be weak. We can't fight off viruses or bacteria, such as the common cold or an ear infection.
 - Example: Without protein, we can't build strong muscles.
- There are lots of other examples. What do the kids remember?

What happens when we don't eat unhealthy foods in moderation? In other words, what happens when we eat too much sugar, salt, fat and cholesterol?

- Example: If we eat unhealthily and do not exercise, we become overweight. Being overweight can lead to a variety of health problems such as diabetes and heart disease.
- Example: Not eating a diet low in sodium and cholesterol can lead to high cholesterol, high blood pressure and heart disease.

Are all diseases caused by or a result of poor nutrition?

- NO! Many diseases have no relation to nutrition. Eating healthily simply helps us survive and fight diseases if we contract them.

Some diseases are caused by a lack of physical activity or using tobacco products. In the previous physical activity and tobacco lessons, students have learned how it is everyone's responsibility to stay healthy. They learned that to be healthy, we have to:

- Try to do high energy activities everyday and in every season (*Active Every Day*)
- Learn how to create a fitness program so that we can include exercises that will help us to reach our target heart rate (*Cardiovascular Health*)
- Do stretching as a low energy activity as well as an exercise before or after high energy activities (*Stretching*)

- Refrain from using tobacco because it has terrible outcomes (*Why People Use Tobacco Products, Negative Consequences of Tobacco Usage, and Talking to Peers about Tobacco*)
- Not smoke and refrain from being in places where people are smoking (*Smoking Affects Physical Activity and Secondhand Smoke*)

What happens when we do not get enough exercise?

- Example: Without enough exercise, our body doesn't move enough to get a good workout. We can become overweight or obese.
- Example: Without exercise, we do not work our hearts hard enough to reach the target heart rate.

What happens when we use tobacco products?

- Example: In other words, what happens when we smoke cigarettes or cigars and chew tobacco?

There are lots of examples. What do the kids remember?

Determining risk for diseases: Prevention

Explain to the children that eating well, being physically active, and not using tobacco now can mean less chance for health conditions in the future. Look at your parents or grandparents; do they have any health conditions? Genetics can play a part in our chances for getting certain disease. Genetics are characteristics that we inherit from our parents. For example, your eye color, hair color and height are probably similar to your parents'. Health conditions also run in families. Parents pass on certain health risks to their children. Being as healthy as possible can help us lower our chances for many diseases. *It's important to know your risk factors and understand how eating healthy, being physically active, and not using tobacco can help you now and later in life.* To help with this, students will do the family tree exercise and then research a condition that someone in their family has that is affected by nutrition, physical activity, or tobacco usage. Students will also participate in creating a dish with their parents and present their research at the pot-luck dinner.

Learning Activity: Family Tree Drawing



Step 1:

Family Tree Drawing

Students will create a family tree. They should include:

- Themselves
- All Siblings, including half-brothers and sisters
- Their mother and father
- Their grandparents on both their mother's side and their father's side
- Any other family members that are alive or that are accessible (aunts, uncles, great grandparents, cousins, etc)

Students should include siblings, parents and grandparents at a minimum, even if they have passed away. Students do not have to indicate on their tree that any of their relatives have passed away if they do not want to. The trees will be shared, and any information that students might be sensitive about should be omitted. Students should draw a tree with the names and birthdates of their family members. There are numerous trees that can be found on the web if you prefer to provide a ready-made outline for your students.



Step 2:

Family Member Interview

Students should use the interview sheet provided to find out information about their family members' health histories. If a parent is knowledgeable about all the members in their family, they can use them as a single source. If a parent is unfamiliar with the health history of a family member, the student can ask that relative directly. If a family member is not accessible or information is not readily available, this should not be counted against the student.

Family Member Interview Sheet

Name _____

Directions: Ask as many family members as possible about their health history. If a family member is not available or has passed away, ask another family member about them. If there is no information, leave those questions blank. If a family member is too young to answer the questions, ask someone to help you.

Start with you....

1. Do you have any health-related conditions? If so, what are they? _____

Questions for your Mother

1. How old are you? _____
2. Do you have any health conditions? _____
3. How does this affect your life? _____

Questions for your Father

4. How old are you? _____
5. Do you have any health conditions? _____
6. How does this affect your life? _____

Questions for your Brother or Sister, Half-Sister or Half-Brother (circle one)

7. How old are you? _____
8. Do you have any health conditions? _____
9. How does this affect your life? _____

Questions for your Brother or Sister, Half-Sister or Half-Brother (circle one)

- 10. How old are you? _____
 - 11. Do you have any health conditions? _____
 - 12. How does this affect your life? _____
-

Questions for your Brother or Sister, Half-Sister or Half-Brother (circle one)

- 13. How old are you? _____
 - 14. Do you have any health conditions? _____
 - 15. How does this affect your life? _____
-

*If you have more brothers, sisters, half-sisters or half-brothers, add their information under the "other" section.

Questions for your Grandmother (your mom's mother)

- 16. How old are you? _____
 - 17. Do you have any health conditions? _____
 - 18. How does this affect your life? _____
-

Questions for your Grandfather (your mom's father)

- 19. How old are you? _____
 - 20. Do you have any health conditions? _____
 - 21. How does this affect your life? _____
-

Questions for your Grandmother (your dad's mother)

- 22. How old are you? _____
 - 23. Do you have any health conditions? _____
 - 24. How does this affect your life? _____
-

Questions for your Grandfather (your dad's father)

25. How old are you? _____

26. Do you have any health conditions? _____

27. How does this affect your life? _____

OTHER:

Questions for my _____

28. How old are you? _____

29. Do you have any health conditions? _____

30. How does this affect your life? _____

Questions for my _____

31. How old are you? _____

32. Do you have any health conditions? _____

33. How does this affect your life? _____

Questions for my _____

34. How old are you? _____

35. Do you have any health conditions? _____

36. How does this affect your life? _____



Step 3:

Making the Connection: *Researching how food affects a disease*

Students should choose one health condition (disease) that has affected their family. They will research the disease and it's relation to nutrition (if applicable). They will try to find out:

- Is this disease caused by poor nutrition, lack of physical activity, or tobacco use?** (i.e. Type II diabetes, heart disease, obesity, etc)
- Does nutrition, lack of physical activity, or tobacco use affect a person while they have this disease?** (i.e. People with high blood pressure must watch their diet to improve their condition.)
- Does nutrition, lack of physical activity, or tobacco use on this disease have a short term or long term effect?** In other words, does eating poorly, not exercising, or using tobacco cause this problem in the near future (6 months, 1 year) or in the distant future (20 years).

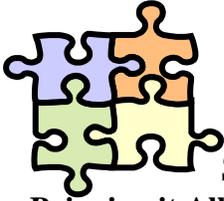
If there are no diseases in the student's family they can choose a disease that is affected by nutrition, lack of physical activity, or tobacco use. Further, if there is a disease that the student does not feel comfortable discussing, they may choose an alternative condition to research.

Students should write a brief summary of their findings, answering the questions listed above. In addition, they should write an "action plan" for someone who wants to prevent the disease. This will be a list of 5 to 10 specific actions a person can take to be healthy and prevent a disease or lessen their chances for facing disease later in life. See a sample list below:

Sample Action Plan for Nutrition:

1. Eat foods from the five food groups and use the food guide pyramid to tell you how many servings you need.
2. Eat a variety of fruits and vegetables. Eat from the 5 color groups.
3. Eat 5 to 9 fruits and vegetables per day.
4. Limit how many sodas and sugary drinks you have each day.
5. Read nutrition labels to make sure the foods you eat have nutrients.
6. Eat the recommended serving size on the nutrition label.
7. Drink lots of water.
8. Eat enough food to have energy, but make sure you balance how much you eat with how much physical activity you get.
9. Eat fruit or other healthy foods for snacks.
10. Drink 100% fruit juice with your breakfast.

Students will present this information at the Pot-Luck Dinner!!!!!!!!!!!!!!



Step 4:

Bringing it All Together and Seeing the Bigger Picture: *Participating in a Pot-Luck Dinner*

Preparation:

Explain to the students that they are going to participate in creating a dish with their parents using a healthy recipe. Therefore, they have to ask their parents if they would be willing to make a dish using a healthy recipe and ultimately participating in a pot-luck dinner for all the students and the parents. The recipes that each parent-student team uses to make the dish will be collected at the pot-luck dinner and turned into a recipe/presentation book for the entire class. Note: Parents can turn in their recipe early to make sure that the dish that they would like to prepare is healthy.

Directions:

1. Have the students take home the “***Parent Participation Request Form***” to their parents stating their willingness to participate in each aspect of the project. The parents are responsible for finding a healthy recipe, making the dish with the student, and bringing the recipe in for the student on the pot-luck day. The student is responsible for helping the parent make the dish, and discussing their research project as well as the recipe and the dish on pot-luck day.
2. In preparation for pot-luck day, students should design the layout for the class’s recipe/presentation book. A cover can be designed together as a class, or each student can design a cover and the class can vote on which one to use.
3. On pot-luck day, students should give a brief presentation (2 minutes) about their family tree, their research concerning a health condition, and their recipe. Make sure the student summarize how they created the dish, what is the nutritional value of their dish (i.e. the fat content, sugar content, the fruit and vegetable servings), and whether or not they recommend their dish.
4. After presentations, have students and parents vote on the best presentation and the healthiest dish. Award the winning parent and student teams.
5. Have the student and family member fill out the “Family Contract” which will detail a change in the home environment the student and family member can make to be healthier. The change will be something the student has learned from one of the health lessons (example: not smoking, buying more fruits and vegetables, etc.)
6. Assemble the health condition research presentations into a binder making sure that all recipes from every student are included. Make copies of the class’s recipes and give them to students to make their very own recipe books to share with their families. Keep the original binder as a reference for students to view in years to come.

Parent Pot-Luck Dinner Participation Request Form

Name _____

Directions: Please read the entire document, circle the appropriate responses, and sign your name at the end of the document stating that you will participate in the events. Thank you in advance for your consideration in this matter.

Investing in your health now can mean less chance for health conditions in the future. Look at your parents or grandparents; do they have any health conditions? Genetics can play a part in our chances for getting certain disease. Genetics are characteristics that we inherit from parent to child. For example, eye color, hair color and height are all determined by the parent's attributes. Health conditions also run in families. Parents pass on certain health risks to their children. Eating well, being physically active, and not using tobacco can help us lower our chances for many diseases.

It's important to know your risk factors and understand how being healthy can help you now and later in life.

The Parent Pot-Luck Dinner is a program designed to get children involved in creating a healthy meal. It also serves as an event to inform parents about different health issues that can affect their family tree. Parents are responsible for finding a healthy recipe, making the dish with the student, and bringing the recipe and the dish in for the student on the Parent Pot-Luck Day. The student is responsible for helping the parent make the dish, discussing their research project concerning the family tree and summarizing the cooking process for the healthy dish. The final student presentation will be given on the night of the Parent Pot-Luck Dinner. Each parent-student team will be judged based on the best presentation and the healthiest dish. The winning team will be awarded.

This year the Parent Pot-Luck Dinner will be held on:

(Date) _____, _____ at (Time) _____.

Would you be willing to participate in the Parent Pot-Luck Dinner and create a dish with your child to be shared during the Parent Pot-Luck Dinner?

Yes

No

Please remember to bring in a copy of the recipe on the day of the Parent Pot-Luck Dinner.

Signature: _____ Date: _____

Family Contract

I, _____, have decided to work with my student
_____, to make a healthy change in our home environment.

Our change is:

I have decided to make a reasonable change in our home environment. I understand that by making the change above I will help my student to be healthier and happier. I promise to work hard to make this change permanent.

Family member Signature

Date

Student Signature

Date