



Health Education
Resource
Center

Health Promotion Division

Nutrition and You



Eating a healthy diet is very important so that you can be healthy and strong. Some foods contain the energy that your body needs to grow and keep your bones and muscles strong. Without those foods you might feel tired, sick, or weak.

If you eat fruits, vegetables, whole grains, and other foods that are rich with the vitamins and minerals you will have the energy that you need to go to school and play and get a good night sleep.

For additional resources, contact the Health Education Resource Center (HERC) at 734-647-5645 or online at <http://www.med.umich.edu/mfit/herc>



Information for Teachers and Parents & Take-home Activities for Kids

The following materials have been included to supplement the in-class activities. Please use them at your discretion. It is up to you to decide if the take-home materials are appropriate for your class's age. Please feel free to adapt any and all of the materials included. Web sites have been included for you to gain further knowledge and expand upon the presented ideas on your own.



The Importance of Nutrition, Exercise and Sleep

The human body is a phenomenal thing. Each of its systems work together to protect us from diseases and illnesses. To keep our bodies working at their highest capacity, it is important to eat well, participate in physical activity, and get adequate amounts of rest.

Eating Well

The foods we eat have a great effect on how our bodies function. In order to function properly, our bodies need certain nutrients – vitamins, minerals, water, fats, proteins, carbohydrates, and cholesterol. When the body does not get enough nutrients several things can occur, including diseases related to certain vitamin deficiencies, such as scurvy (lack of Vitamin C) or anemia (lack of iron). When the body is lacking something that it needs, it will slow down causing you to feel tired and become ill. On the other hand, too much of certain nutrients can also cause problems. For example, too much cholesterol causes your arteries to clog and harden which makes it difficult for blood to flow to your vital organs. Your body requires a certain amount of energy to function each day. Energy is measured in calories, and the amount of calories you should consume is directly related to how active you are.

Physical Activity

The benefits of physical activity are: decreased risk of heart disease, diabetes, high blood pressure, and obesity, increased flexibility and strength, decreased stress, decreased depression, and increased quality of sleep. If you do not participate in enough physical activity your body becomes weak and has a harder time fighting off disease. It is also very likely that you will gain excess adipose tissue, or fat, which can lead to many complications including the conditions mentioned above. Physical activity is related to caloric intake in that physical activity burns calories. Therefore, the more active you are, the more calories you can consume without gaining weight. In order to maintain the weight that you are at, you need to burn and consume an equal amount of calories. Physical activity increases your metabolism and burns fat, which also helps maintain a healthy weight. When you are not active, any extra calories that you consume are stored as fat. The more fat that you carry, the more likely you are to become diabetic, have heart disease, cancer, and high blood pressure.

Sleeping Well

Having a good night's sleep is essential for your body to function at its best. When you sleep your body heals from the daily wear and tear that it goes through. Without adequate sleep, you will feel fatigued and it is likely that you will not be able to think as clearly or perform your daily tasks as efficiently. Lacking in quality and quantity of sleep is also highly related to immune function, or fighting off illness because your body is ill-equipped to protect and repair itself. Quality of sleep is directly related to nutrition and physical activity. If you eat better, and participate in enough physical activity, you are more likely to get a better night's rest.



Go, Slow, Whoa

We Can! is a national education program designed for parents and caregivers to help children 8-13 years old stay at a healthy weight. **We Can!** stands for **W**ays to **E**nhance **C**hildren's **A**ctivity & **N**utrition. Part of this initiative is identifying foods as "Go" foods, "Slow" foods, or "Whoa" foods.

GO foods are the lowest in fat and added sugar. They also are "nutrient dense," which means that they are rich in nutrients (vitamins, minerals, and other components important to health) and relatively low in calories. Enjoy GO foods almost anytime.

SLOW foods are higher in fat, added sugar, and calories than GO foods. Have SLOW foods sometimes, at most several times a week.

WHOA foods are the highest in fat and added sugar. They are "calorie dense" (high in calories), and many are low in nutrients as well. Have WHOA foods only once in a while or on special occasions. And, when you do have them, have small portions.

Translating GO, SLOW, and WHOA into daily food choices means:

- Emphasizing fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products.
- Including lean meat, poultry, fish, beans, eggs, and nuts.
- Cutting back on foods and drinks that are high in fat and added sugar.

***For more information about the WeCan! program or for downloadable nutrition and activity resources, go to <http://www.nhlbi.nih.gov/health/public/heart/obesity/wecan/whats-we-can/>



Food Guide Pyramid Information for Teachers

The United States Department of Agriculture has recently updated and altered the Food Guide Pyramid to better meet the needs of our nation. The pyramid includes exercise in addition to six food groups – grains, vegetables, fruits, oils, dairy, and meats and beans. The following is a brief explanation of each section of the pyramid. You can find more detailed information at www.mypyramid.gov. The new pyramid gives specific food intake recommendations according to age, sex, and activity level, instead of recommending the same amount of food for everyone. Therefore, this material represents the pyramid's general guidelines.

Inside the Pyramid

Exercise

Exercise is essential for maintaining a healthy lifestyle. It is recommended that adults partake in at least 30 minutes of physical activity on most days of the week. Children should partake in 60 minutes of activity every day.

Grains

Foods made from wheat, rice, cornmeal, barley, oats, and other cereals are considered grains. There are whole grains and refined grains. Most of your grain intake should be whole grains because they contain fiber and other important vitamins that you need. Look for the word “whole” before the grain name on the ingredient list. Common whole grains are brown rice, whole wheat products, oatmeal, and popcorn.

Vegetables

It is important to eat a variety of vegetables so that your body gets an adequate amount of vitamins and minerals. Dark green vegetables, orange vegetables, and dry beans and peas are especially important.

Fruits

It is also important to eat a variety of fruits. Limit the amount of fruit juice that you intake and only drink 100% fruit juice to avoid added sugars.

Oils

Most of your fat intake should come from fish, nuts, and vegetable oils. Use solid fats, such as butter, shortening, and lard sparingly.

Dairy

Dairy products are essential for proper body functioning, but can be very high in saturated fat. Choose reduced or no-fat dairy products. If you are lactose intolerant, make sure that you are getting calcium from other sources.

Meats and beans

Choose low fat or lean meats and poultry. Bake, broil, or grill meats as much as possible. Substitute fish, nuts, beans, and seeds for meat for variety and essential, healthy, oils.



Information for Parents

(from <http://www.mayoclinic.com/invoke.cfm?objectid=40439628-A901-4432-A088B7DA0721BEC7>)

Childhood obesity: What parents can do

By Mayo Clinic staff

Over the past 30 years, the rate of obesity in the United States has more than doubled for preschoolers and adolescents, and it has more than tripled for children ages 6 to 11. Obese children get a head start on health problems such as diabetes and heart disease, often carrying these problems into an obese adulthood. If this trend continues, obesity may soon top smoking as the nation's most preventable cause of death. The reasons for a child's obesity are complex. But the most common factors combine too much screen time — including television, computers and video games — with too much junk food. And the best solution is to reduce your entire family's intake of both.

Good For Everyone

Don't single out the overweight members of your family for lifestyle changes. Eating healthier foods and getting more exercise is good for everybody. Children tend to mimic their parents, so it pays to be a good role model. If you don't want your children eating french fries, don't eat them yourself. Play basketball with the kids after dinner, or take a family walk. Organize family outings that involve physical activity — such as bike riding, skating or hiking.

Parents Have Control

Parents are the ones who buy the food, cook the food and decide where food is eaten. Even small changes can make a big difference in your family's overall health.

- When buying groceries, choose fruits and vegetables over convenience foods high in sugar and fat. Always have healthy snacks available. And never use food as a reward or punishment.
- Limit sweetened beverages, including those containing fruit juice. These drinks provide little nutrition in exchange for their high calories. They also can make your child feel too full to eat healthier foods.
- Select recipes and methods of cooking that are lower in fat. For example, bake chicken instead of frying it.
- Put colorful food on the table: green and yellow vegetables, fruits of various colors, and brown (whole-grain) breads. Limit white carbohydrates: rice, pasta, bleached bread and sugar (desserts).
- Sit down together for family meals. Make it an event — a time to share news and tell stories. Eating in front of the television fosters mindless munching.
- Limit your children's recreational screen time to fewer than two hours a day.
- During your child's physical exams, ask the doctor to show you the growth curves giving percentiles for height, weight, and body mass index (BMI). These allow you to compare your child with the norms for age and sex.



Don't Make It a Battle

Parents often must balance on a tightrope between giving too much and too little attention to their child's obesity. Because many overweight children already feel bad about themselves, you should make sure they know you love them unconditionally.

Offer healthy food to your children, but don't force it on them. Avoid fad diets. In many cases, simply maintaining a child's present weight is good enough — providing the opportunity for the child to grow into his or her pounds.

Minorities Are at Higher Risk

Although the obesity rate has increased dramatically for all U.S. children, certain ethnic minorities — blacks, Hispanics and American Indians — have been experiencing the highest rates of increase. Nearly 25 percent of children in these ethnic groups are obese by medical standards.

Poverty is another risk factor. Between 1986 and 1998, the cost of fresh fruits and vegetables increased substantially more than did the cost of carbonated drinks, meat, sweets and snacks. So it's literally cheaper to eat unhealthy foods.

Improve School Food

To help make ends meet, some schools have installed vending machines selling soft drinks and snacks. The schools typically receive a percentage of the sales from these machines. Parents can request that their local school boards require all food and beverages served or sold at school to meet accepted nutritional standards.

Parents also can advocate for daily physical education (PE) classes for all students. PE classes have been reduced or even eliminated in many schools because of budget constraints. Latchkey children often aren't allowed to play outside their homes until their parents get home, so exercise time at school is even more important.

Worth The Time

Many families feel they don't have the time it takes to prepare healthier meals and exercise more. Shopping, cooking, sharing a meal and cleaning up do take longer than zipping into the drive-through lane at a fast-food restaurant. But the dangers of childhood obesity are real, and they are starting to take a toll. Helping set your kids on the path to a healthy future is one of the most important things you can do for them. Your investment in time will pay big dividends throughout their entire lives.





www.5aday.com

Eating fruits and vegetables every day is an excellent way for your body to get the nutrients it needs. A diet that includes lots of fruits and vegetables can also help decrease your risk of heart disease, obesity, and cancer. “5 A Day – The Color Way”^{*} challenges you to eat five servings of different colored fruits and vegetables each day.

There are five color groups:

Blue/Purple, Green, White, Yellow/Orange, and Red

In the calendar below, make a mark in each day with a crayon or marker that is the color of the fruits and vegetables that you eat. Are there five marks in each day? Is there a rainbow in each day?

Month _____						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

^{*} “5 A Day – The Color Way” is a campaign initiated by Produce for Better Health



Classroom Activities – Pre-K – 4

Nutrition Egg Hunt

(from <http://www.eduref.org/cgi-bin/printlessons.cgi/Virtual/Lessons/Health/Nutrition/NUT0014.html>)

Purpose of Activity:

Unhealthy foods are frequently advertised to children. Parents and teachers desire to encourage children to choose healthy alternatives to snack foods containing high sugar and fat content. Students in early elementary grades can learn about nutrition through story-telling, songs, and a familiar hunting game. The purpose of this activity is for students to identify healthy foods for daily meals and snacks, and develop basic reading and communication skills.

Suggested Grade Levels: Pre-K, K, 1, 2

Materials Needed:

1. Teacher resource textbook, e.g., "Comprehensive School Health Education: Second Edition" by Linda Meeks, Philip Heit, & Randy Page (1996), Meeks Heit Publishing Co., or pamphlet or videotape on nutrition education.
2. Children's book about foods and eating, e.g., "My Eating Book" by Jane Gelbard and Betsy Bober Polivy (1989), Grosset & Dunlap, or "Berenstain Bears and Too Much Junk Food" by Stan and Jan Berenstain.
3. 3-4 dozen hollow plastic Easter eggs.
4. 3-4 dozen small slips of paper.
5. Photographic, magazine, or clip art illustrations of foods.
6. Crayons and markers.
7. Small paper lunch bags.
8. Glue or tape.
9. "Healthy Foods Songsheet"
10. A healthy snack food, e.g., juice or milk, apples, raisins, or carrots.
11. Coloring sheets featuring healthy and unhealthy food choices.
12. Healthy Foods Song" (sung to the tune of London Bridge is Falling Down). Prepare as a large-print songsheet to be taken home to parent-guardian.

Healthy Foods Song

*"Healthy foods are good for me, good for me, good for me.
Healthy foods are good for me, each and every day."*



Description

Preparation:

1. Review teacher resource material on nutrition education obtained from the library, county health department, extension agent, or pediatrician.
2. Adapt content by selecting key messages to write on small pieces of paper. Sample messages include:
 - “I can eat 5 fruits and vegetables each day!”
 - “Crunchy foods like carrots and celery build healthy teeth.”
 - “Milk helps me to grow tall and strong!”
 - “It is fun to take care of myself by eating healthy foods.”
3. Insert these printed messages into plastic Easter eggs as fortunes hidden inside of fortune cookies. Hide the filled eggs around the classroom, or outside in the school yard.

Procedures:

1. Select an early elementary book that emphasizes healthy eating habits to read aloud at the beginning of the lesson. Begin class by introducing the topic of nutrition and good health. Read the children’s book aloud, including key messages about healthy foods.
2. Provide students with paper lunch bags, crayons, markers, glue or tape, and illustrations of healthy foods. Include a variety of foods, those that are familiar to most children, e.g., bananas, strawberries, bread, chicken, and less common foods, e.g., kale, kiwi, fish filet. Omit foods with high sugar and fat content, e.g., frosted cereals, potato chips, bacon. Invite students to decorate their paper bags using hand-made drawings and illustrations of healthy foods they would like to eat.
3. Sing the “Healthy Foods Song” while boys and girls seek and find the hidden eggs with surprise messages. Direct students to return to an assigned starting point when time is called. Students will open their eggs and remove the nutrition message. Read aloud messages while serving a healthy snack of water, milk, or fruit juice and sliced vegetables or fruits to reinforce the concepts covered in this lesson. Distribute the “Healthy Foods Songsheet” and sing together with students. Encourage students to bring the plastic eggs, nutrition facts, lunch bags, and songsheet home to share with parents or guardians and siblings.

Assessment Ideas:

Devise a coloring sheet for students to complete with adult supervision featuring paired selections of healthy and unhealthy foods, (e.g. baked chicken versus fried chicken).

Assist students to consider choices and circle only healthy foods. This activity could be completed at home together with parents or guardians.

Measuring Dinosaurs

(from <http://www.nutritionexplorations.org/educators/lessons/chef-combo/chef-act-measuringdino.asp>)

Purpose of Activity:

Students will be able to identify and compare the length of four dinosaurs and state that dinosaurs needed food to grow and that food helps us to grow too.

Suggested Grade Level: Pre-K/K

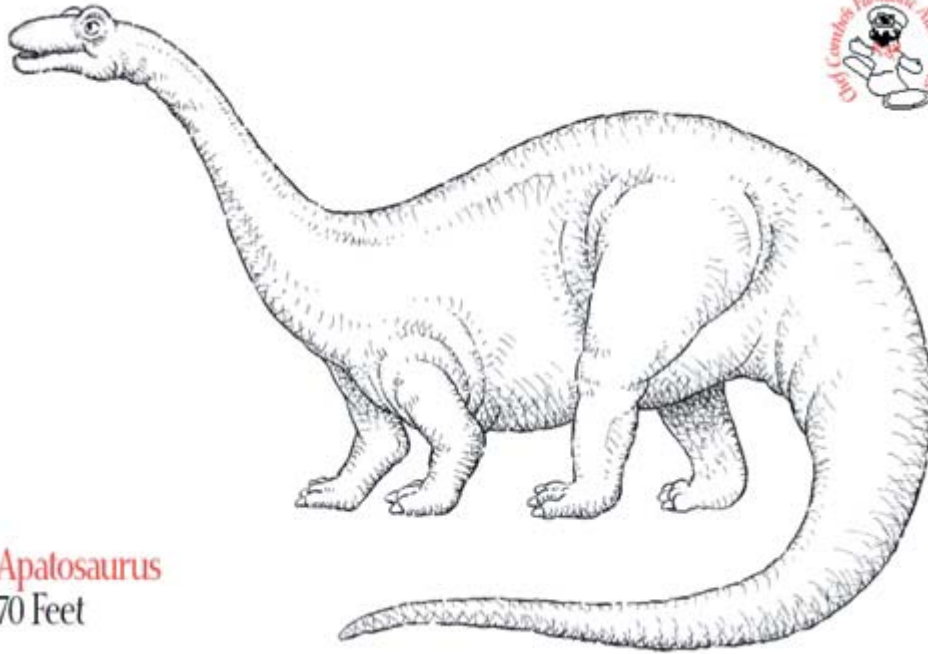
Materials Needed:

- Prepared Dinosaur Cards (see following pages)
- Cut 144 feet string to the length shown on each dinosaur card.
- Attach and wrap length around each card as follows:
 - 70 feet for Apatosaurus
 - 40 feet for Tyrannosaurus Rex
 - 25 feet for Stegosaurus
 - 9 feet for Protoceratops

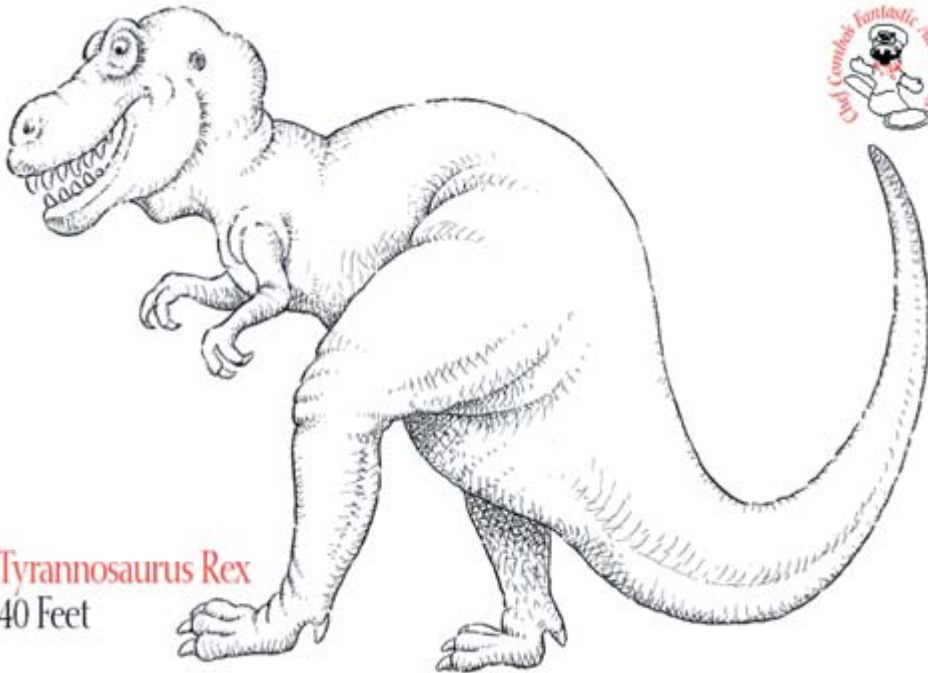
Description

Procedures:

1. Take the children out to the playground or into the hall. One at a time, show children the dinosaur cards. If students can read numbers, have them identify how long each dinosaur was. For each card, have one child hold the end of the string. Have another child unwind the string and walk forward to show the full length of the dinosaur.
2. Let the other children form a chain by holding hands. Have them stretch out the chain, arms length, and count how many children it takes to reach from the head to the tail of each dinosaur.
3. When you are done measuring, explain that in order to grow so big, dinosaurs had to eat nutritious foods. Point out that eating nutritious foods also helps children grow.
4. Optional: Send home a copy of the Food Matters Family Matters Newsletter with each child.

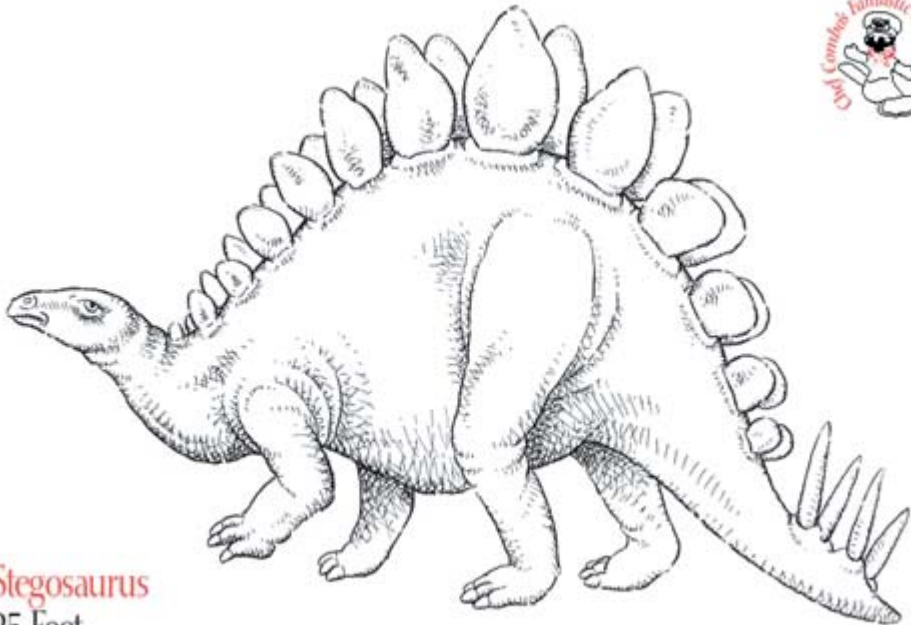


Apatosaurus
70 Feet

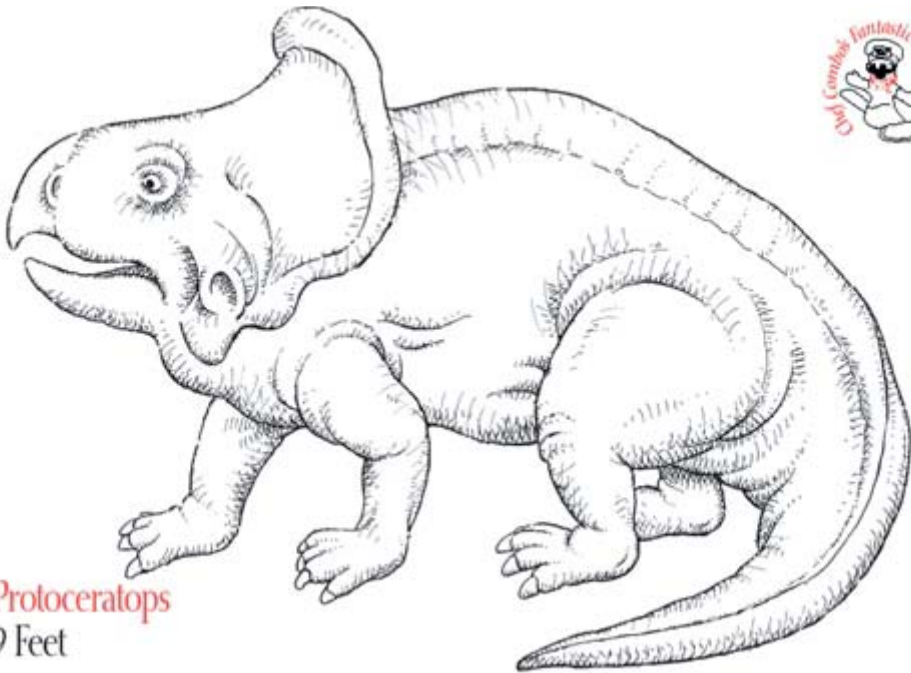


Tyrannosaurus Rex
40 Feet

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Stegosaurus
25 Feet



Protoceratops
9 Feet



Classroom Activities – Grades 4-8

Fit For Life

(from <http://www.eduref.org/cgi-bin/printlessons.cgi/Virtual/Lessons/Health/Nutrition/NUT0001.html>)

Purpose of Activity:

This lesson will make students more aware of the importance of a wellness lifestyle. It will also make them aware of the things they can do to develop a wellness lifestyle. The students will be able to identify at least two ways that their diet and exercise affects their health.

Suggested Grade Level: 4

Materials:

- Wire clothes hangers
- Colored yarn
- Colored poster board
- Markers
- Scissors
- Paper punch

Description

Procedure:

1. Talk to the students about how a healthy lifestyle will improve their lives. Give them an example of how their diet affects their health and an example of how their exercise habits affect their health (see Parent/Teacher/Take-home section for more information).
2. Hand out all materials to the students. Have at least seven different colors of poster board for them to use.
3. With a red or pink piece of poster board have the students each cut out a heart shape and have them write their names on it; then, have them tie the heart shape from the center of the top wire on the hanger.
4. Next, have the students cut out a long rectangle that will hang directly from the bottom wire of the hanger. On this piece have them write, “My Wellness Lifestyle.”
5. The students will use the remaining poster board to cut out shapes that they will write an option on about what they can do to develop their wellness lifestyle. Two examples are walking, and eating fruits.

Assessment Idea:

To assess students’ comprehension have them share their mobiles with the rest of the group and tell what options they have used. After they have shared their mobile hang it up in the classroom as a reminder of the things that they can do to improve their health.



Food Groups: The Food Pyramid

(from <http://www.eduref.org/cgi-bin/printlessons.cgi/Virtual/Lessons/Health/Nutrition/NUT0016.html>)



Purpose of Activity:

In this activity, students learn about the basics of nutrition, the five food groups, and how to use the food pyramid as their guide. By the end of the lesson the student will be able to list the 5 food groups that make up the food pyramid, explain orally and in writing the purpose of the food pyramid, define and give an example of each food group, and separate a group of mixed food into the proper food groups.

Suggested Grade Level: 4, 5

Materials:

- poster of food pyramid
- dictionaries
- chalk or dry erase markers
- chalkboard or dry erase board

Description

Procedure:

1. Teacher will hold up a candy bar and an apple and ask students which do they think is better and healthier for their bodies.
2. Teacher will then ask the students if they ever think about what they are putting in their bodies before they eat something.
3. Teacher will then explain that in order to be healthy children should be eating more of certain foods and less of others.
4. Teacher will then list the seven categories shown on the food pyramid – exercise and 6 food groups: grains, vegetables, fruits, oils, milk, and meats and beans - on the board.
5. Teacher will then ask six students to get a dictionary and look up each word, the definitions will then be put on the board.
6. Teacher will then provide many examples and explain why they are examples of each group.
7. Teacher will then display the food pyramid poster located at the front of the room (mini-poster and other resources can be downloaded at www.mypyramid.gov).

Food Guide Pyramid Continued

8. Teacher will explain to the class the purpose of the food pyramid (see teacher information section for more information).
9. Teacher will then hold up more examples and ask what food groups they should be in, either asking if they are in a certain group, or asking what group they should be in a and why. (for example: hold up a bagel and ask if it is in the protein group and why or why not.)
10. Teacher will then restate the definitions and ask the children what they think should be added to the definition and why.
11. The students will then write each definition with 2 examples in their notebooks.

Assessment Idea:

Teacher will divide the class into 3 groups and give them each a box of assorted food products; the groups will then divide the products into the correct 6 categories and list them on a separate sheet of paper.