

BEST
BILINGUAL ENVIRONMENTAL
SCIENCE TRAINING



Grades 1 - 2
ACTIVITIES TO DO AT HOME

MASTER

BEST BILINGUAL ENVIRONMENTAL SCIENCE TRAINING

Grades 1 - 2

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OBSERVATION

B.E.S.T.

1

OBSERVATIONAL SKILLS OVERVIEW

The development of observational skills is very important for every individual in many ways. Well developed observational skills in animals increases their chances of survival. This is also true for humans and you. If you try to "sneak up" on an animal their keen senses alerts them of your presence and they will either run away or defend their territory. Senses (sight, hearing, feeling, smelling, and tasting) are a part of the observational skills that a person uses in every day life. The more developed the senses are, the better the chances are of that individual's or your survival.

The field of science requires a keen sense of observing what is occurring in the experiment or activity. The development of observational skills in science and other subjects or careers ensures a persons success in accomplishing their life objectives.

In the following activities you will explore, learn and develop your observational skills through the use of your senses. These senses are touch (tactile), smell (olfactory), hearing (auditory), sight (visual) and taste. The use of your senses enables you to recognize pleasant compared to unpleasant things; to warn you of danger or harmful things.

The **visual sense** is one that is very important in the development of good observational skills. We learn to avoid dangerous things from visual experiences and knowledge that has been given to us by other humans.

The **hearing sense** works with the visual in alerting us to good or bad situations (environments). The more knowledge we have about the sounds of pleasant, compared to unpleasant settings, increases our healthy survival.

The **sense of smell** is very important in alerting us also to pleasant and unpleasant environments, rooms or areas. Things that are harmful to our health and safety which we may not be able to see or hear, but can be detected by their smell, enables us to avoid danger.

The **sense of touch** is also important in alerting us to harmful and good situations. The skin has various areas that are sensitive to different things. The skin has pain, temperature, texture (smooth, rough) etc. receptor sites. These send messages to the brain via nerve cells to activate the necessary motor nerve cells to respond to the situation.

The **sense of taste** is the fifth sense that tells us if the food, drink or other materials that are placed in the mouth are pleasant, unpleasant or harmful. We learn to like or dislike the foods that we eat through the use of taste, smell and sight. However, the taste buds are situated on the tongue such that the objects that are placed in the mouth can be tested for their pleasing or unpleasing taste.

OBSERVATIONAL SKILLS OVERVIEW (cont.)

Scientists use most of the senses in the majority of activities that are termed experiments or investigations. The one sense that's used more than the others is the visual or observational sense. You will have opportunities to develop your observational skills in a variety of science activities. However, you should not only use these skills for science activities, but you should improve them for all activities that you engage in daily, weekly, monthly and throughout your life. Observational skills are fundamental to your survival as a human being. The refinement of all the senses are important to you and others in this world as we know it.

LIQUIDS H₂O SURFACE TENSION

Lesson 1

OBJECTIVE:

Develop observation, arithmetic, oral, and language skills.

MATERIALS:

Dropper, drinking glass, pennies, pepper, soap, paper clips.

BACKGROUND INFORMATION:

Materials are formed by the interaction of molecules or small units of substances. Water molecules have certain properties, one of which is an attraction called cohesion. Cohesion is the attraction of like molecules for each other. Surface tension is one example of cohesion. Water molecules on the surface hold together very well to support various objects.

SCIENTIFIC PROCESS:

In this activity the children will observe the number of drops of water required to break the surface tension using a penny as the vehicle. A second experiment is to observe the effects of detergent on surface tension.

PROCEDURES:

A

- 1) The child will be provided a container in which water will be added up to the rim of the container.
- 2) The child will carefully place a penny on the surface of the water (H₂O). Care should be taken not to cause the penny to sink by breaking the surface tension.
- 3) The child begins to drop the water-H₂O using a dropper on the top of the penny very slowly.

- 4) The parent count the number of water drops needed to break the surface tension. Breaking the surface tension occurs when the penny sinks to the bottom of the container.

This experiment can be repeated using paper clips. One paper clip is carefully layered on top of another until the surface tension is broken. The child records the number of paper clips required to break the surface tension.

B

- 1) Another container is filled as before. This time pepper is sprinkled onto the surface. The child observes that pepper floats. One drop of a liquid detergent is placed in the middle of the glass/container. Observation to be made is that the detergent breaks the surface tension and the pepper sinks to bottom of the container.

VOCABULARY:

| | |
|-----------------|------------------|
| cohesion | average |
| surface tension | equal |
| dispersal | most |
| least | H ₂ O |

LIQUIDS H₂O SURFACE TENSION (continued) Lesson 1

LESSON HIGHLIGHTS

Goal: To develop observational, math and language skills.

Location: Indoors.

Vocabulary: cohesion, surface tension, dispersal, most, least, average, equal, graph, curve, H₂O

Subject Integration: Science, Language Arts, Math

Theme: Scale and Structure

Environment: Built.

BUCKET GARDENS

Lesson 2

OBJECTIVE:

The child will be introduced to the life cycles of plants.

the buckets three-fourths of the way with soil and position the seeds.

MATERIALS:

- 2 5-gallon plastic buckets
- soil
- seeds flowers and/or vegetables
- trowels

4) The parent and child discuss the needs of the seeds and the requirements needed for growth.

5) Buckets are positioned in sunlight daily.

6) The child records his/her observations of plant growth in graphs and journals.

BACKGROUND INFORMATION:

The focus of this lesson is to introduce the students to the life cycle of plants. This lesson addresses the life needs of plants (soil, light, water, and CO₂). This lesson is designed for the house or apartment in mind, where gardening space may be limited or non-existent. Bucket gardening insures success because buckets can be moved indoors and secured each evening.

VOCABULARY:

carbon dioxide
life cycle
germination
journals
soil
seeds
light

SCIENTIFIC PROCESS:

The child will observe the life cycle of plants and record the process through journals, illustrations and/or graphs.

PROCEDURE:

- 1) The parent displays a variety of different colored and sized seeds. This is followed by a discussion to determine what the child knows about seeds and the life cycle of plants.
- 2) The child is given a bucket, soil, and the opportunity to select their seeds.
- 3) Following the parent modeling this same procedure, the child will fill

LESSON HIGHLIGHTS

Goal: The students will illustrate the life cycle of a plant.

Location: Indoors and outdoors

Vocabulary: Seeds, germination, life cycle, soil, light, carbon dioxide.

Theme: Scale and structure, evolution

Subject Integration: Science, Math, Language Arts

Environment: Built and natural

SCALE AND STRUCTURE

B.E.S.T.

SKELETAL SYSTEM OVERVIEW

The Skeletal System is a well-perceived and enjoyable activity especially when conducted during the month of October.

The Skeletal System gives support to the vertebrate organisms. The vertebrate skeleton provides support for the body, attachment sites for muscles, and protection for internal organs. The Skeletal System consists of bone and cartilage.

- 1) Bone is the most rigid form of connective tissue. Bone is formed from a protein called collagen with deposits of calcium phosphate as a hardener.
- 2) Bones produce red blood corpuscles, white blood cells and platelets. In adults, these cells are produced by red bone marrow found in the sternum, ribs, upper arms, legs and hips. There is also yellow bone marrow which makes blood cells only when the red marrow becomes damaged.
- 3) The Skeletal System serves as a storage site for the minerals calcium and phosphorus. Ninety-nine percent (99%) of body calcium and ninety percent (90%) of body phosphorus is stored in the bones. Vitamin D aids in movement of those two chemicals (calcium and phosphorus). These two chemicals are found in milk.
- 4) Bones of the ear have a special function in producing sound vibrations within the inner ear.

The human skeleton consists of 206 bones which are placed into two categories: axial skeleton and appendicular skeleton. The axial consists of the head, vertebral column and rib cage. Appendicular consists of extremities and their attachment to axial.

MUSCULO SKELETAL

Humans and animals have an endoskeleton.

Muscles are important in the movement of the skeleton around joints. In the human and similar organisms, these joints are thigh, knee, ankle, arm, elbow, wrist, etc.

Muscles are attached to bones on either side of the joint by a fibrous connective tissue. This fibrous connective tissue is called tendons.

The bones of the joints have a coating of cartilage that enables these bones to slide past one another.

SKELETAL SYSTEM OVERVIEW (continued)

The bones of the joints are joined by another type of fibrous connective tissue called ligaments. There are joints in the body that move in two dimensions. These joints are hinge joints of the elbow, knee, and fingers.

We also have ball and socket joints located in the hip and upper arm. Ball and socket joints allow movement in several directions.

OTHER SKELETAL TYPES

Exoskeletons are found in such organisms as crab, lobsters, and crayfish. These creatures have a hard outer covering of a material called chitin (glucose).

Hydrostatic Skeleton is found in worms and marine (sea) "animals" such as clams, snails, squid, sea anemone, etc. These "animals" have a fluid filled sac skeletal system.

SKELETON-PROTECTIVE FUNCTION

Lesson 3

OBJECTIVE:

To teach the child the protective function of the skeleton. The skeleton as it is constructed protects the heart, lungs, brain, reproductive organs, some parts of the Digestive System, and the spinal cord.

MATERIALS:

Tracing paper; picture of a child-size skeleton; pencils; crayons; stapler; picture of brain, heart, lungs, Reproductive and Digestive Systems.

BACKGROUND INFORMATION:

One of the functions of the skeleton is to protect certain organs of the human body. The cranium protects the brain; the rib cage protects the heart, lungs, esophagus and part of the stomach; the pelvis provides some protection for the urogenital systems; and the spinal column protects the spinal cord. The brain, heart, spinal cord, and lungs are very vital organs that if injured can result in death; or limit the physical and/or mental ability of the individual. Therefore, the skeletal structure has multiple roles for the human and animal bodies.

SCIENTIFIC PROCESS:

This activity will give the child insight into the protection that the Skeletal System provides to internal vital organs. The nature of the skeletal system has been designed to give support and protection to the brain, the control center for the body; the spinal cord that carries messages to and from the brain; the heart, the nutrient supplier and waste mover for the body; and the lungs, the provider of oxygen for energy production for the individual cells of the body.

PROCEDURE:

- 1) The child will review the names of the bones learned in the earlier lesson on the Skeleton and identify the bones on a skeleton or in his/her body.
- 2) There should be a question, answer, and comments session with the child on the Skeletal System.
- 3) The protective function of the skeleton is introduced and the activities for this lesson are explained.

ACTIVITY:

Prepare an overlay picture.

- 1) The parent will trace the body of his/her child over a picture of a skeleton which is beneath the tracing paper.
- 2) The child will make or cut out pictures of the brain, heart, lungs, etc., and place them between the overlay and the skeleton (drawing).

VOCABULARY:

| | |
|-----------------|---------------|
| brain | reproductive |
| spinal cord | urinary |
| heart | injury |
| lungs | cranium |
| nutrient (food) | rib cage |
| energy | spinal column |
| protect | |
| urogenital | |

SKELETON-PROTECTIVE FUNCTION

(Continued)

Lesson 3

LESSON HIGHLIGHTS

Goal: Learn about the organ protected by the skeleton.

Location: Indoors

Subject Integration: Science and language Arts

Theme: Systems and Interactions

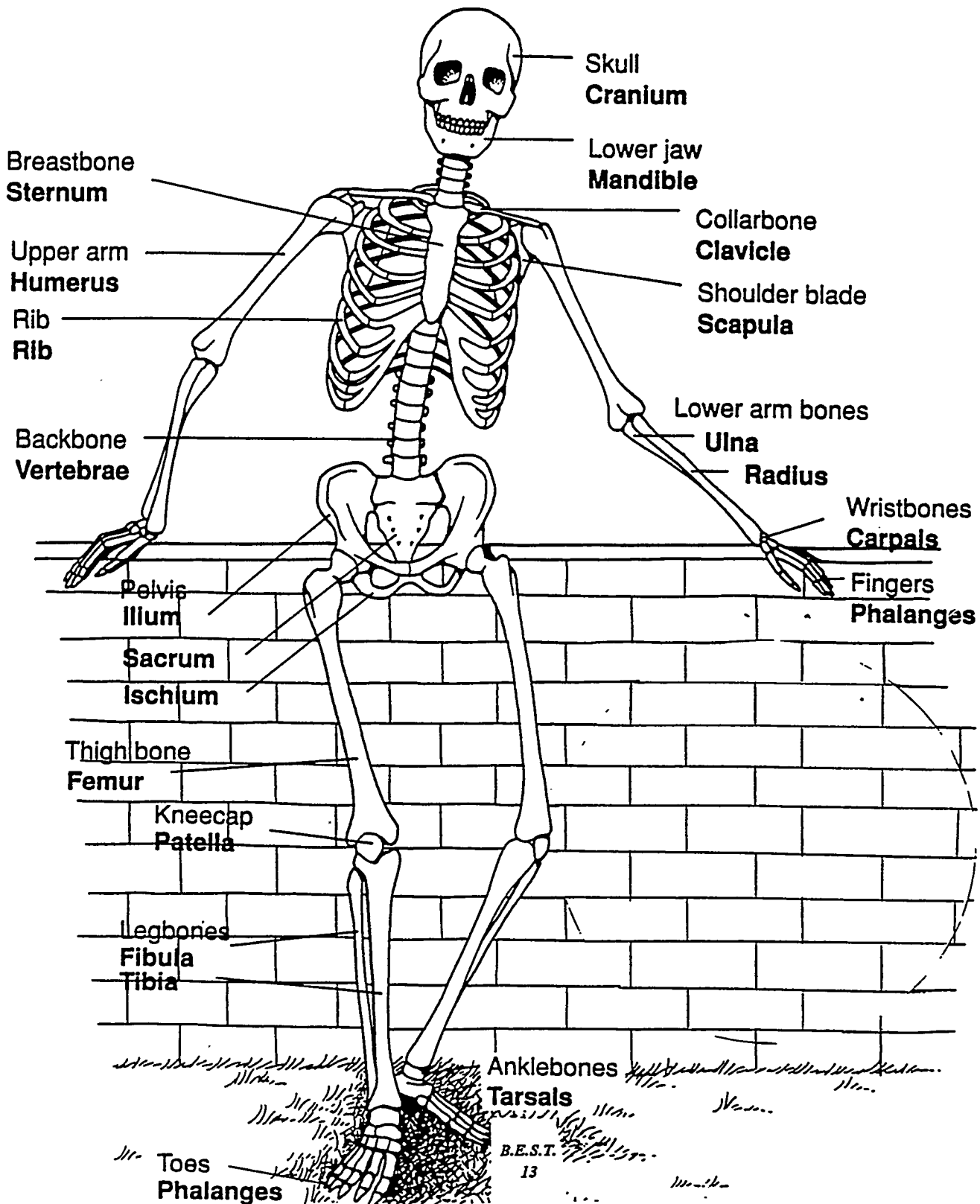
Vocabulary: See above

Environment: Built

SKELETON-PROTECTIVE FUNCTION

(Continued)

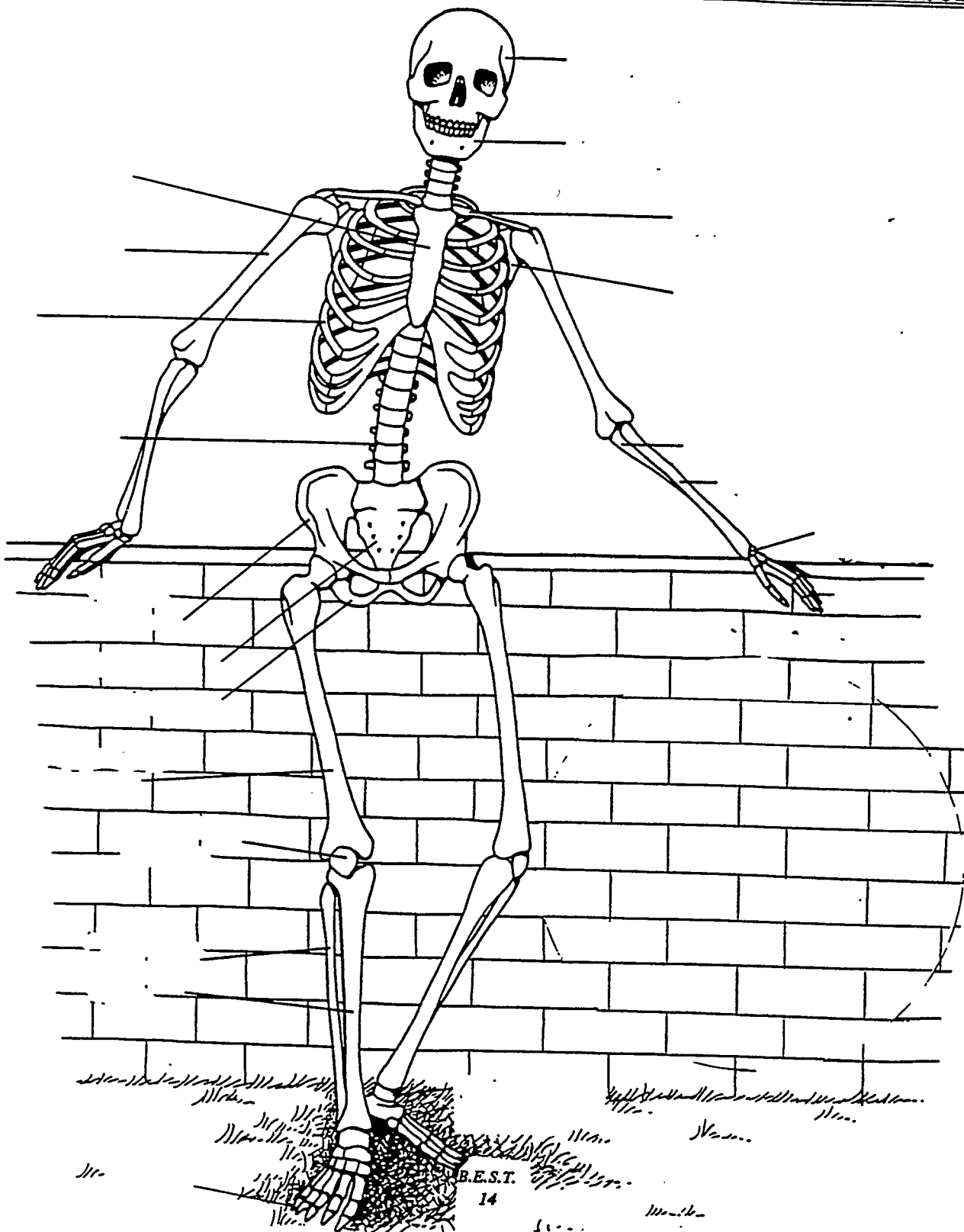
Lesson 3



SKELETON-PROTECTIVE FUNCTION

(Continued)

Lesson 3



OBJECTIVE:

Measure the rate of heart beats and the flow of blood through the arteries.

MATERIALS:

Blood pressure cup and stethoscope, stopwatch or watch with second hand, (model of heart, chicken heart, picture or drawing of heart).

BACKGROUND INFORMATION:

The heart is the central organ in the Circulatory System and plays a vital function in animals. Early and continual knowledge about one's heart can prevent serious life threatening problems as you grow older. Proper diet, exercise, and knowledge reduces the risk or chance of having circulatory problems. Other activities related to the heart will deal with what is considered healthy dietary intake. A component of nutrition will include what the risk factors are for heart disease.

This current lesson will focus on the child learning how to take and monitor his/her blood pressure and heart rate. Young children are not "free" of suffering circulatory disorders. Therefore information presented at an early age and reinforced throughout the educational process will reduce the possibilities of having serious circulatory problems.

The child will be instructed on the correct ways of taking his/her pulse in the neck and the wrist. The parent should also demonstrate to the child the correct method for taking blood pressure. The "normal" rate for children in the age group of the

parent's child should be listed as a reference guide for him/her to refer to. In the case of blood pressure, the two readings should be explained to them. The systolic pressure is the contraction of ventricles of the heart pushing blood through the aorta and pulmonary artery. The diastolic pressure is the dilation and relaxation of the heart chamber as the chambers fill with blood. The normal (average) blood pressure for an adult is 120/90.

SCIENTIFIC SIGNIFICANCES:

The children will learn some functions of the Circulatory System, how to measure the activities of the Circulatory System, and the effects of different physical activities on the Circulatory System.

PROCEDURE:

- 1) The parent will work with the child taking his/her blood pressure and noting the results. Afterwards the child will take the parent's blood pressure.
- 2) They can also take the pulse rates of other members of the family.

If a stethoscope is unavailable, they can do other activities such as taking their own pulse rate or examining the heart of a chicken.

- 3) Home activity involvement of parents in monitoring their pulse and blood pressure.

For each of the activities related to the Circulatory System, the child and parent will do the following activities: the pulse and blood pressure will be taken while sitting, while standing, and after alternate sitting and standing ten (10) times.

After these activities, the parent and child will then go outside and do various activities such as jog for five (5) minutes after which they will take and record their readings for their pulse; run a short distance; then take their pulse and record the results.

If selected, the activity related to the chicken heart will illustrate to the children the texture and morphology (shape, size, and structure) of an example of an animal heart.

Other members of the family will share and compare their heart rates with each other.

VOCABULARY:

| | |
|----------------|-------------|
| heart | systolic |
| diastolic | stethoscope |
| heart rate | pulse |
| blood pressure | auricle |
| ventricle | veins |
| aorta | arteries |

LESSON HIGHLIGHTS

Goal: Learn about body symptoms.

Location: Indoors and outdoors.

Subject Integration: Science Health

Theme: Scale and Structure

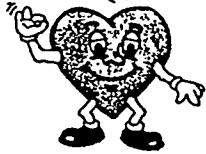
Vocabulary: heart, systolic, diastolic, stethoscope, heart rate, pulse, blood pressure, auricle, ventricle, aorta, arteries, veins

Environment: Natural

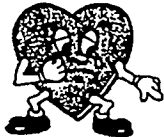
HEART HEALTHY RATING KEY



• **Excellent**



• **Good**



• **Poor**

SYSTEMS INTERACTION

B.E.S.T.

19

FOOD AND YOU OVERVIEW

When Pablo eats a salad, what do you think happens before he takes his first bite of this food? (His mouth becomes moist from the thought of eating). The process of saliva entering the mouth is controlled by a part of your brain. The saliva contains a particular type of substance that will begin to digest carbohydrates (sugars and starches), a lubricating substance and salts. The tongue is very important in the digestion of food. The tongue helps to move the food around in the mouth and in swallowing of the food. There are glands in the mouth that secrete digestive substances. One of these glands becomes infected in many children and causes what is called "mumps". (Have you ever had the mumps?) This gland is called the parotid (salivary) gland. (Look at the diagram showing the digestive tract and find the parotid gland in the mouth.)

After you chew your food very well, the food ball (bolus) passes into the esophagus. If you swallow too much food at once, you can choke. **WHAT WOULD YOU DO IF YOU OR SOMEONE NEAR YOU WAS CHOKING?** The food passes through the esophagus and into the stomach.

In the stomach the food undergoes a churning action to soften and continue the breakdown of food. There are also digestive substances secreted into the stomach. These substances are: an acid (hydrochloric), a substance that helps to break down protein (an enzyme=en-zyme), salts, and hormones. Hormones are chemicals that function as messengers to communicate with other parts of the body such as the brain, the small intestine, the liver, the pancreas, the gall bladder, the stomach itself, etc.

YOU WILL BE ABLE TO SEE THESE PARTS OF THE BODY ON A REPLICA AND IN A DIAGRAM. YOU WILL ALSO BE ASKED TO CUT OUT, DRAW, COLOR, OR LABEL THESE DIFFERENT PARTS OF THE DIGESTIVE SYSTEM.

After the food is mixed and partially digested in the stomach it passes into the small intestine. The food that you eat is broken down mostly in the small intestine and after it is broken down it is absorbed into your body by means of the blood system. The blood will transport the very small pieces of food into the different cells and tissues of the body. An example of a tissue that will receive these small pieces of food is the muscle cells. The small intestine is also served with a rich supply of digestive materials. These digestive materials will help in digesting fats, protein and carbohydrates. These digestive materials include enzymes, hormones, minerals and water.

FOOD AND YOU OVERVIEW (continued)

Some of the water is reabsorbed (taken back into the body) in the small intestine. However a larger amount of this water is absorbed in the large intestine. The large intestine, also called the colon, is the part of the Digestive System that is responsible for the production of a very important vitamin, Vitamin K, and for bacterial breakdown of the undigested food. This action of the bacteria on waste food is what gives the odor to the material that passes out of you as waste (feces).

The large intestine, because of the large amounts of bacteria and the presence of waste materials, is the area where many people get a form of cancer called COLON RECTAL. If this cancer is not corrected early, it can kill you. One way of preventing this cancer from occurring in your body is to eat foods that have a high fiber content such as green beans, carrots, celery, whole grain cereals and green leafy vegetables, etc. We call these foods a type of complex carbohydrates such as whole wheat, cereals, and oats.

The final journey of the undigested food from the large intestine is into the rectum and out of the body to the sewage treatment plants.

THE DIGESTIVE SYSTEM

Lesson 5

OBJECTIVE:

To introduce and teach to the child the organs, structures, and functions of the Digestive System.

MATERIALS:

8 x 11 pages to be colored of Digestive System; labels for digestive regions; names of general food groups, protein, fatty acids, carbohydrates, vitamins and minerals.

BACKGROUND INFORMATION:

The Digestive System has an important role in the maintenance of a good functioning body. The process of digestion, provided there are no other malfunctions, is the key to providing nutrients (food) to the cells of the body. These nutrients are necessary for production of energy, repair or replacement of cell components, and the overall function and structure of the cell, organs and body. Different foods are digested in various regions of the digestive tract. Digestion of foods in humans and other animals is an extra-cellular process. This means that digestion occurs outside of the cells. In fact, the digestive tract is basically a hollow tube inside the body cavity.

SCIENTIFIC PROCESS:

The child will learn the mechanisms and processes involved; the names and functions of organs involved in digestion from the time he/she places food in the mouth to when the undigestible part passes out of the body. The activities will focus on what foods are digested chemically versus mechanically in the mouth, the stomach, the small intestines; the role of the liver and the pancreas in the breakdown of food; and process of absorbing the food into the body.

PROCEDURE:

The child is read to or he/she reads a story on what happens he/she eats certain foods such as a carrot, salads, or a hamburger.

- 1) A diagram will be used to point out the different organs and tissues used in the digestive process.
 - a) Oral cavity=mouth--There is some chemical (enzyme) digestion. Has mechanical breakdown (chewing) of food by using teeth, tongue and hard palate. Starches from plant and animal are broken down chemically in the mouth. A lubricant and an enzyme are secreted by the "salivary glands" (parotid, sublingual and submaxillary).
- 2) The child will next color the different regions of the digestive tract on the handout the parent gives him/her, and will label these regions such as mouth, esophagus, stomach, small intestine (duodenum, jejunum, ileum) large intestine, rectum, pancreas and liver.
- 3) The child will learn that he/she has "good" bacteria which under ideal conditions assists in the digestive process. Lesson

THE DIGESTIVE SYSTEM (continued)

Lesson 5

VOCABULARY:

chemical
enzyme
mechanical
carbohydrate
protein
fatty acid
salivary glands
parotid
submaxillary
sublingual
tongue
hard palate
epiglottis
esophagus
stomach
small intestine
duodenum
jejunum
large intestine
colon
liver
gall bladder
pancreas

Salivary Glands--secretes saliva

Parotid--secretes an enzyme and a lubricant (mucin)

Submaxillary--jaw secretes lubricant

Sublingual--lubricant secreted under tongue

Tongue--hard palate

Epiglottis--flap at back of mouth controls direction of food.

Esophagus--tube connects mouth to stomach

Stomach--pyloric cavity protein

Small Intestine

duodenum--chemical breakdown of food

jejunum--absorption of food

ileum

Large Intestine--colon - bacteria action on waste procedures, certain vitamins b₂, K, riboflavin, H₂O and vitamins absorbed in this region.

Liver--produces bile salts - a filtering detoxifying organ

Gall bladder--stores bile salts

Pancreas--makes and secretes enzymes and hormones that assist in digestion.

VOCABULARY DEFINITIONS:

Chemical

Enzyme--protein assistance in digestion

Mechanical--physical as chewing

Carbohydrate--sugars, starches

Protein--meat

Fatty acid--fat

LESSON HIGHLIGHTS

Goal: Students introduced to areas of the Digestive System.

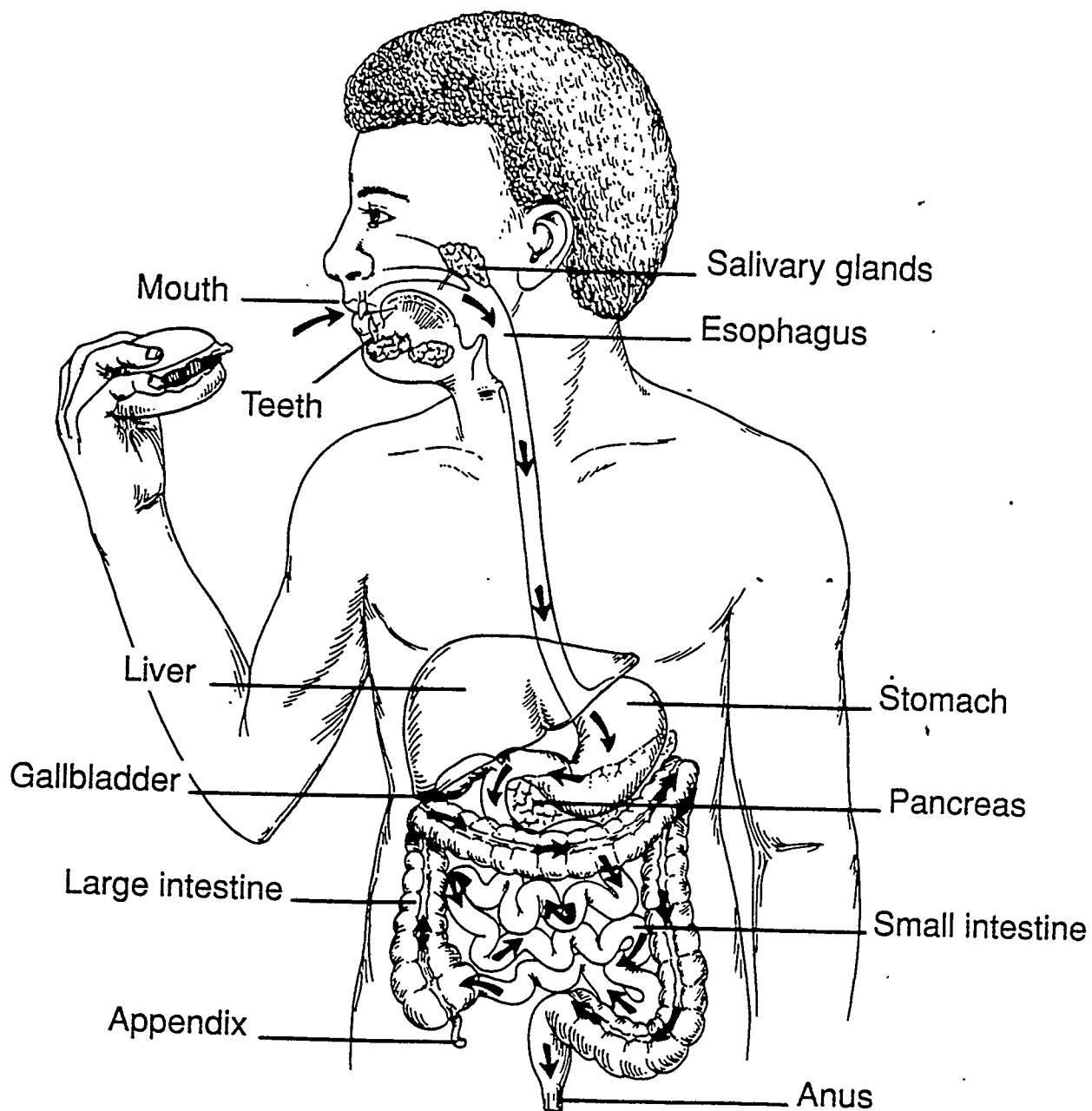
Location: Indoors.

Subject Integration: Science and Language Arts

Theme: Health

Vocabulary: See above.

Environment: Built



CHAIN OF FOOD

Lesson 6

OBJECTIVE:

The child will be introduced to the concept of simple food chains.

MATERIALS:

- A sample lunch (containing: fruit, bread, a vegetable, meat and dairy product)
- Pets. Need one carnivore and one omnivore.
- Magazine pictures of plants, omnivores and carnivores.
- Construction paper with drawing of a chain with four large links.

BACKGROUND INFORMATION:

This lesson will introduce the child to the simple food chain and to the concept that all food energy comes from the sun. It will also illustrate the fact that humans are part of the food chain.

PROCEDURE:

1) This lesson begins with the parent sharing his/her lunch with his/her child. As each object is shown, the parent asks the child if he/she knows where it came from.

2) When the parent displays the next product, he/she should emphasize that at one time it was a live animal. At this point the parent should ask for names of other animals that eat meat. The parent introduces the term carnivore. (He/she may show examples.)

3) The parent displays pictures of omnivores such as cows, chickens, pigs, mice and fish. The child concludes that these are all animals that other animals eat. Next, the types of foods that these animals eat are introduced. The term herbivore is defined.

4) The fact that the sun provides the energy for plants to grow is discussed.

5) The parent demonstrates a food chain that begins with the sun and includes plants, herbivores and carnivores.

6) The child should be given construction paper with a drawing of a four-linked chain. In addition, magazine pictures depicting plants, herbivores, carnivores, and the sun are distributed.

7) The child arranges the pictures on the chain depicting the energy flow from the sun to the carnivore.

VOCABULARY:

| | |
|------------|--------------|
| herbivore | carnivore |
| omnivore | solar energy |
| food chain | fruit |
| vegetables | |

LESSON HIGHLIGHTS

Goal: The students will be able to assemble a simple food chain.

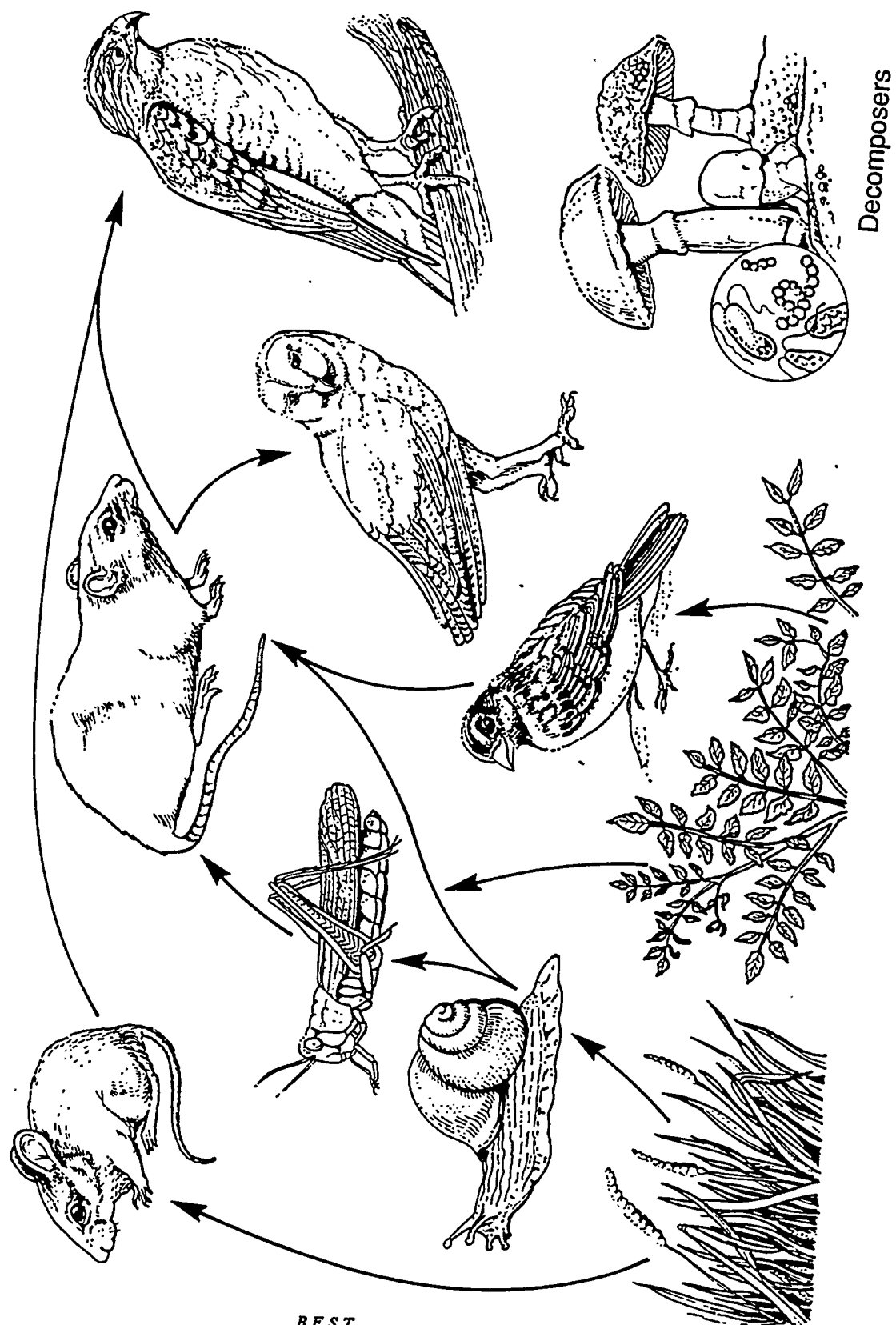
Location: Indoors

Subject Integration: Science

Vocabulary: herbivore, carnivore, omnivore, energy food chain

Theme: Scale and structure, change

Environment: Natural



WHAT ARE WE EATING?

Lesson 7

OBJECTIVE:

The child will be introduced to the concept that many foods come from a variety of plant parts.

MATERIALS:

A variety of foods representing various plant parts, i.e., apple-fruit, potato-tuber, carrot-root, celery-stalk, lettuce-leaves, artichoke-flower, nuts-seeds.

BACKGROUND INFORMATION:

This lesson examines common foods and identifies them as particular plant parts. It provides students with information to make broad generalizations in the grouping of plant parts according to basic qualities. This lesson also stresses human dependence on plants.

SCIENTIFIC PROCESS:

Within this activity the child will use his/her observation skills to categorize a variety of plant parts.

PROCEDURE:

- 1) The parent will display a collection of foods that represent different plant parts.
- 2) The parent will ask for similarities and differences between the foods.
- 3) The parent displays a basic diagram of a plant, directing the child's attention to the variety of parts.

- 4) Some parts may be difficult to identify such as fruits. The parent should provide some examples of fruit; those that are sweet and those that are not. The parent should call to the child's attention that the one thing all fruits have in common is that they all possess seeds.

- 5) The child is given the task to create a collage from magazine pictures that depicts their plant parts.

VOCABULARY:

tuber
root
stalk
leaves
flowers
seeds

LESSON HIGHLIGHTS

Goal: The students will identify foods as plant parts.

Location: Indoors

Subject Integration: Science, Art

Theme: Scale and Structure

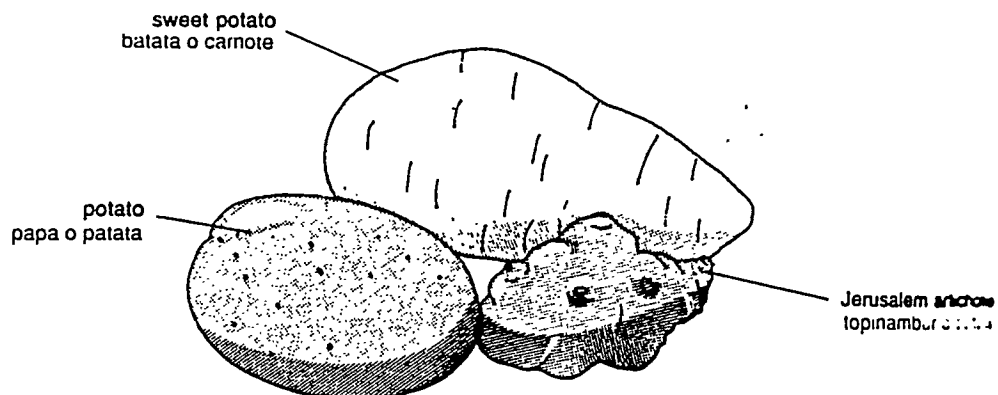
Time: 1 hour

Vocabulary: Tuber, root, stalk, leaves, flowers, seeds (and names of selected foods)

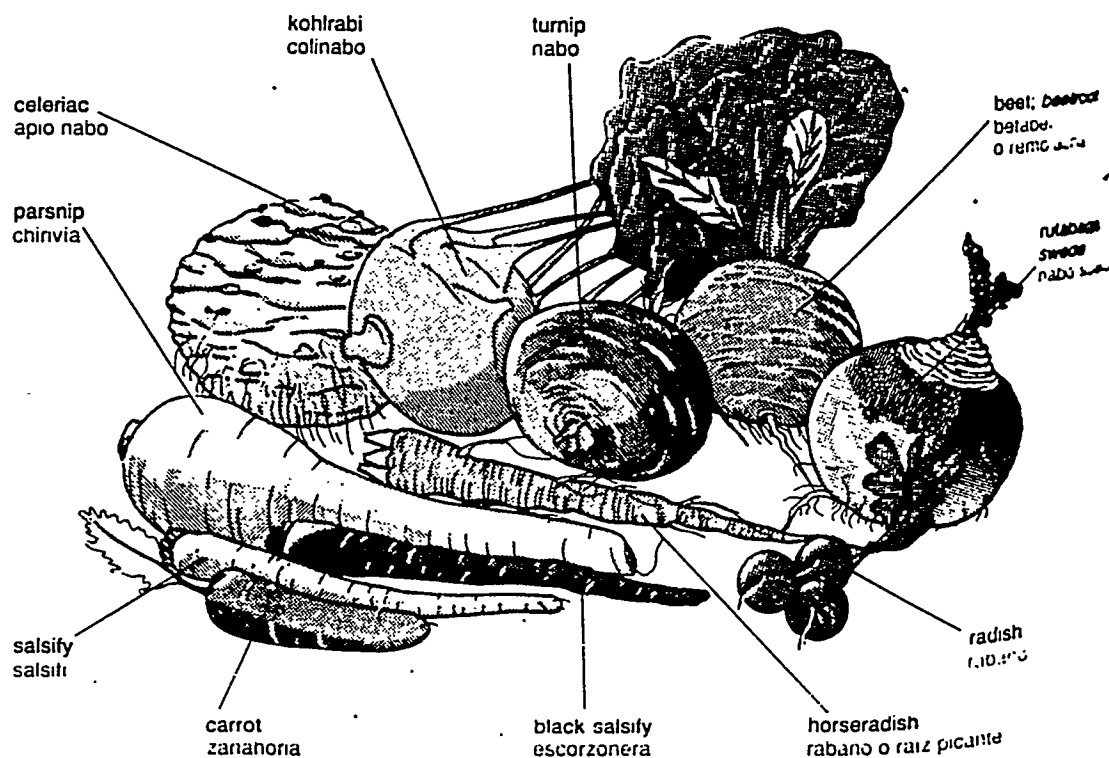
Environment: Natural

vegetables hortalizas/vegetales

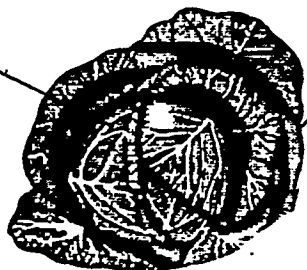
tuber vegetables tubérculos



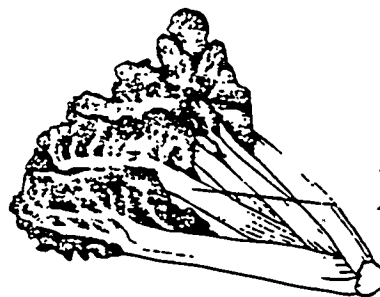
root vegetables raíces



Repollo
Cabbage



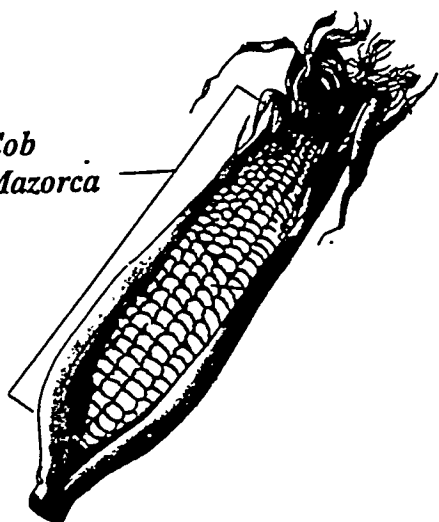
Swiss chard
Acelga



Spinach
Espinaca



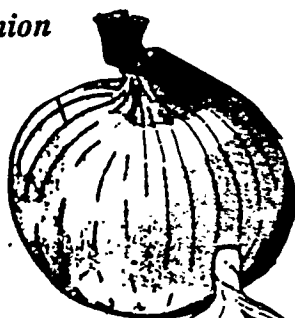
Cob
Mazorca



Spring onion
Cebolla Verde



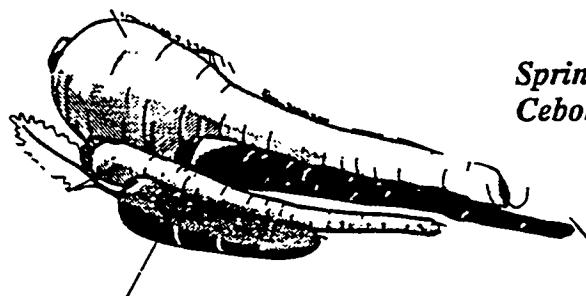
Spanish onion
Cebolla



Garlic
Ajo



Carrot
Zanahoria



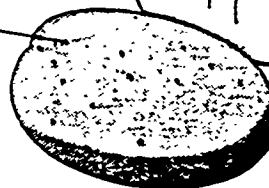
Green peas
chícharos



Sweet potato
Batata o camote



Potato
Papa



NUTRITION

Lesson 8

OBJECTIVES:

To teach the child the importance of a good diet (good eating habits).

MATERIALS:

Nutrition chart, booklets and handouts; scale model of foods from the different food groups; charts of diseases related to nutrition; cut-outs or drawings of different foods; and vitamin and mineral chart. (Note: The depth of the material presented will depend on the grade level.)

BACKGROUND INFORMATION:

Good nutrition underlies good health, which in turn reduces the "risk factors" leading to chronic or acute health problems later in life. Nutrition should be introduced early in the learning process as a preventative measure in developing and maintaining a healthy body. Students should be exposed to current trends in health education, and that nutrition is a major issue for all humans.

SCIENTIFIC PROCESS:

The child will begin the formal process of learning the names and some functions of the water soluble vitamins and some specific foods of the four major food groups: Dairy, Carbohydrate, Protein and Fat. The parent will read the labels placed on food packages to the child. An association between certain foods and certain diseases will be introduced.

PROCEDURES:

1) The parent will lead a discussion on people's eating habits.

- 2) A food and vitamin chart will be shown and discussed with the child.
- 3) The child will color or cut out pictures of his/her selected choice of a good sound diet.
- 4) The parent and child will discuss some of these diets as to their nutritional merits.
- 5) The parent will discuss the relationship of high-fat, low-fiber diets and heart/cancer diseases.

VOCABULARY:

cardiovascular diseases, colon cancer, diet, disease, healthy body, heart attack, minerals, nutrition, cancer, pyramid of foods, stroke, vitamins

EXTENSION ACTIVITIES:

The child can make a collage of foods by grouping them according to type, and vitamin and mineral content.

LESSON HIGHLIGHTS

Goal: To continue the learning process concerning good nutritional habits.

Group size: Class and small groups of four.

Location: Indoors

Theme: Health

Subject Integration: Science and Language Arts

Time: 50 minutes

Vocabulary: Attached

The Food Guide Pyramid

A Guide to Daily Food Choices

Fats, Oils, & Sweets
USE SPARINGLY

Milk, Yogurt, & Cheese Group
2-3 SERVINGS

Vegetable Group
3-5 SERVINGS

Meat, Poultry, Fish,
Dry Beans, Eggs,
& Nuts Group
2-3 SERVINGS

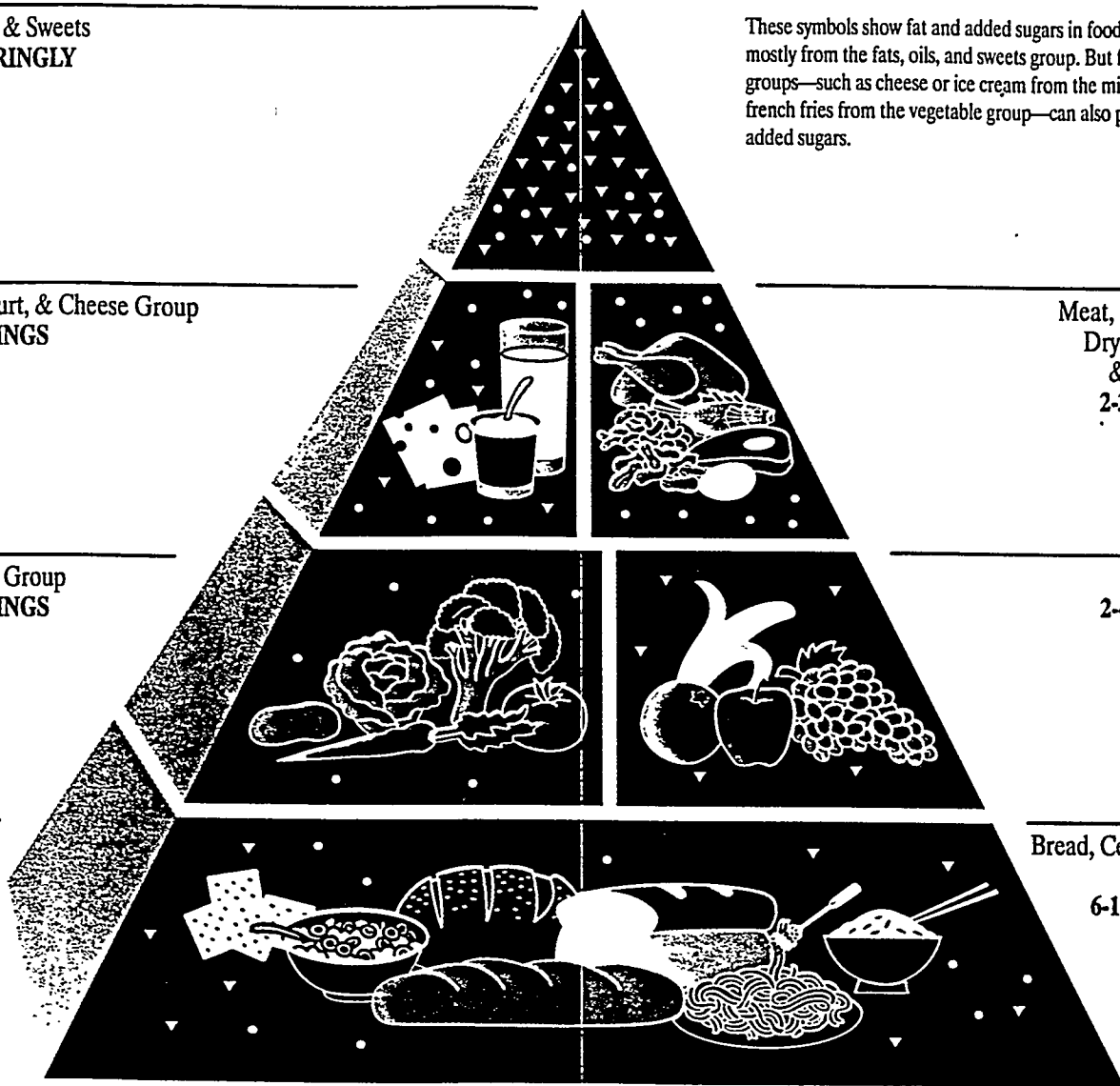
Fruit Group
2-4 SERVINGS

Bread, Cereal, Rice,
Pasta Group
6-11 SERVINGS

Key

- ◻ Fat (naturally occurring and added)
- ◼ Sugars (added)

These symbols show fat and added sugars in foods. They come mostly from the fats, oils, and sweets group. But foods in other groups—such as cheese or ice cream from the milk group or french fries from the vegetable group—can also provide fat and added sugars.



Looking at the Pieces of the Pyramid

The Food Guide Pyramid emphasizes foods from the five major food groups shown in the three lower sections of the Pyramid. Each of these food groups provides some, but not all, of the nutrients you need. Foods in one group can't replace those in another. No one of these major food groups is more important than another—for good health, you need them all.

ENVIRONMENT-ECOSYSTEMS

B.E.S.T.

36

ECOSYSTEM OVERVIEW

An ecosystem is an ecological community; a complex interrelated network of living organisms and their non-living surroundings. An ecosystem can be extremely large, as the ocean, or as small as a puddle of water. Numerous physical, chemical, and environmental factors will influence the ecosystem. Humans are a part of many smaller ecosystems. You live in an ecosystem that may differ slightly from a relative who lives in the country or mountains.

In the next set of science activities you will explore and learn about animals and other organisms that inhabit an ecosystem. You will also investigate the affects of environmental factors on species found in certain ecological systems. But first let us discuss some of the factors and terms that are part of an ecosystem.

Ecosystems involve the interactions and inter-relationships of the organisms that make their home in this environment. These organisms must play a survival game with other organisms in their ecological niche within the overall ecosystem. This ecological niche includes the habitat, physical environmental factors, food web, and predator relationships. There may be competition for food and space between organisms that live in the ecosystem. Organisms that cannot be seen with the "naked" eye, that is without the use of magnifying systems as a microscope, can have devastating effects on larger organisms. Bacteria, viruses, and parasites can wipe out a population of organisms. Chemicals and other toxins that are released into the environment will affect the survival of the organisms in the ecosystem. Humans are perhaps the most dangerous inhabitants of an ecosystem. Through their actions, humans have caused severe damage to the vegetation, food sources, and animal life in many ecosystems. It is this damage to the ecosystem that you should be concerned about because it, in turn, will affect your survival on this planet. Concern about the environment is very important for the future of life as we know it. Humans have made many animal species extinct and have endangered the survival of many others. This endangerment and disappearance of the species comes about by means of a number of factors. Among these factors are:

- improper disposal of waste materials, as car oil, house paints, household cleaning agents;
- release of untreated human waste;
- excessive garbage, materials that cannot be degraded (non-biodegradable) or recycled; the over-use of land areas and the introduction of uncontrolled predators; over-population of species in certain areas;
- human encroachment into delicate ecosystems through process of land development.

In the following activities, you will began to explore the nature of these ecosystems and environmental factors that affects them.

OBJECTIVE:

In this activity students will categorize living and non-living things.

MATERIALS:

- Magazine pictures of 5 living and 5 non-living things.
- Butcher paper chart 3 1/2' x 6', folded in half lengthwise. Columns labeled yes and no.
- Magazines for collage.

BACKGROUND INFORMATION:

This lesson uses concept attainment, an instructional strategy, to help children distinguish between living and non-living things. Although simple in concept, this information is part of a basic foundation for further scientific study.

PROCEDURE:

- 1) After locating pictures of living and non-living things, it is necessary to arrange them in preparation for the presentation. Care should be taken so that photos are not arranged in an obvious pattern.

- 2) As a culmination to this activity, the child finds magazine pictures of 3 living and 3 non-living things. The pictures are glued on construction paper that is divided into two sections and titled: "Non-Living" and "Living".

VOCABULARY:

living
non-living
animate
inanimate

LESSON HIGHLIGHTS

Goal: The students will categorize living and non-living things

Theme: Scale and Structure

Environment: Natural and Built

Location: Indoors

Subject Integration: Science and Art

Vocabulary: Attached

HOME COMPOSTING

Lesson 10

OBJECTIVE:

The child will be introduced to the benefits of composting.

MATERIALS:

- Small hard plastic wading pool or wooden box
- Organic garbage
- Soil
- Worms and isopods
- Shovel

BACKGROUND INFORMATION:

Organic material can be composted by placing it in soil with worms and isopods. The worms and isopods breakdown the organic garbage into material that enriches the soil. Organic material should consist of plant products only. Garbage such as meat scraps, cheese and bread should be avoided because they attract ants and often give off a fowl odor when decomposing. Composting material needs to be stirred or turned occasionally.

Composting has two benefits:

The first is that it reduces the amount of garbage that we produce. The second is that it enriches the soil.

SCIENCE PROCESS:

This activity will require the child to use his/her observation and recording skills. Students will not only observe the breakdown of the organic material, but also observe the life cycle of the organisms.

PROCEDURE:

- 1) The parent starts this activity with a discussion about what lives in soil and

the material they eat.

- 2) The parent and child construct their composting pile.
- 3) The pile begins with placing the plastic wading pool or box in an area in the house or yard where it will not become a nuisance.
- 4) A three to four inch bed of soil needs to be added.
- 5) Organic garbage is added to the soil. The child uses hard trowels to cover the material.
- 6) Arthropods and worms are introduced and added to the pile.
- 7) The pile needs to be moist but care needs to be taken because of lack of drainage.
- 8) Soil and garbage need to be mixed on a weekly basis. It is during this time that the child can make observations about the decomposition of material and the activity of the organisms.
- 9) This pile can be ongoing for the entire year. As the level of material within the pool or box increases, soil can be removed and used for planting and gardening purposes.

HOME COMPOSTING - (continued)

Lesson 10

VOCABULARY:

compost arthropods worms
organic isopods

LESSON HIGHLIGHTS

Goal: The children will be introduced to the concept of composting.

Location: Indoors

Subject Integration: Science and Language Arts

Theme: Scale and structure, evolution, change

Environment: Built, personal, and natural

Vocabulary: compost, arthropods, worms, isopods

GLOSSARY

B

Bar graph: A pair of horizontal or vertical parallel lines drawn on paper to illustrate results or findings in math or science.

Barra gráfica: *Un par de líneas paralelas o verticales trazadas en papel para ilustrar resultados o conclusiones en matemáticas o ciencias.*

Biodegradable: Decomposable (breakdown) by natural biological processes.

Biodegradable: *Descomposición (debilitamiento) por procesos biológicos naturales.*

Blood pressure: The pressure of blood within the arteries.

Presión sanguínea: *Presión de la sangre dentro de las arterias.*

Brain: The portion of the Central Nervous System that receives and interprets sensory impulses, coordinates and controls bodily activities and regulates emotion and thought processes.

Cerebro: *La porción del sistema central nervioso que recibe e interpreta impulsos sensoriales, coordina y controla actividades corporales y regula procesos de emoción y pensamientos.*

C

Carbohydrate: Group of chemical compounds as sugars, starches and cellulose. The sugars and starches are food fuels.

Carbohidratos: *Grupo de compuestos químicos como azúcares, almidones y celulosa. Los azúcares y almidones son productos alimenticios.*

Carbon dioxide: A colorless, odorless, incombustible gas, formed during respiration, combustion, and organic decomposition.

Dióxido de carbono: *Un sustancia gaseosa incolora, inodora, formada durante la respiración, combustión, y descomposición orgánica.*

Carnivore: Flesh eating organisms as birds of prey, animals.

GLOSSARY

GRADES 1 - 2/GRADOS 1 - 2

A

Animate: To give life to; living.

Animado: *Dar vida a; viviente.*

Aorta: The main trunk of the Circulatory System carrying blood from the heart to the arteries.

Aorta: *El tronco principal del sistema circulatorio que lleva sangre del corazón a las arterias.*

Arteries: Muscular tubes that carry blood from the heart.

Arterias: *Tubos musculares que llevan sangre del corazón.*

Arthropoda: Numerous organisms without backbone that includes insects, spiders, isopods and crustaceans.

Artrópodos: *Numerosos organismos sin espinazo que incluye insectos, arañas, isópodos y crustáceos.*

Auricle: An atrium of the heart; also the external part of the ear.

Aurícula: *Un atrio del corazón; también es la parte externa de la oreja.*

Average: The arithmetic mean; typical; usual.

Promedio: *La media aritmética; típico; usual.*

| | |
|------------------------------|--|
| <u>Carnívoro:</u> | <i>Que come carne, como pájaros de rapiña, animales.</i> |
| <u>Carpals:</u> | Bones of the wrist. |
| <u>Carpo:</u> | <i>Huesos de la muñeca.</i> |
| <u>Cell Wall:</u> | The rigid outermost layer of a plant cell composed of cellulose. |
| <u>Pared celular:</u> | <i>La capa rígida externa de una célula vegetal compuesta de celulosa.</i> |
| <u>Chemical:</u> | Substance produced by or used in chemical reaction. |
| <u>Químico:</u> | <i>Substancia producida por o usada en reacciones químicas.</i> |
| <u>Chickens:</u> | The common domestic fowl (bird). |
| <u>Pollos:</u> | <i>El ave común doméstico (pájaro).</i> |
| <u>Chloroplast:</u> | A part of photosynthetic plant cells that contain chlorophyll for making a sugar. |
| <u>Cloroplasto:</u> | <i>Una parte de la célula vegetal fotosintética que contiene clorofila para hacer un azúcar.</i> |
| <u>Clavicle:</u> | Bone that links the sternum and scapula; a bone of the shoulder-upper chest region. |
| <u>Clavícula:</u> | <i>Hueso que une el esternón y el omóplato; un hueso del hombro superior de la región del pecho.</i> |
| <u>Coccyx:</u> | Tailbone. |
| <u>Cóccix:</u> | <i>Hueso de la cola.</i> |
| <u>Colon:</u> | Section of the large intestine that extends from the cecum to the rectum. |

Colon: *Sección del intestino grueso que se extiende del intestino al recto.*

Communication: To make known; have an interchange, to impart.

Comunicación: *Hacer conocimiento de; hacer un intercambio, impartir.*

Complex carbohydrate: Sugars and starches that contain high amounts of fiber in the form of cellulose.

Complejo de carbohidrato: *Azúcares y almidones que contienen cantidades altas de fibra en forma de celulosa.*

Compost: A mixture of decaying organic matter used as fertilizer or humus.

Abono: *Una mezcla de materia orgánica deteriorada usada como fertilizante o mantillo.*

Conservation: Act of conserving; protecting from loss or depletion.

Conservación: *Acto de conservar; protegiendo de una pérdida o agotamiento.*

Consumer: One who eats or drinks up. A heterotrophic organism in a food chain that ingests other organisms or matter.

Consumidor: *Quien come o bebe. Un organismo heterotrofo en una cadena de alimenticia que ingiere otros organismos o materia.*

Control center: The nucleus of the cell. Controls activities.

Centro de control: *El núcleo de la célula. Que controla actividades.*

Cotyledons: A leaf of a plant embryo; very young leaf of plant.

Cotiledón: *Una hoja de un embrión de la planta; hoja muy tierna de planta.*

Cranium: The part of the skull that encloses the brain.

| | |
|-----------------------------|---|
| Cráneo: | <i>La parte del cráneo en que está contenido el cerebro.</i> |
| <u>Curve:</u> | A line that deviates from straightness, rounded part. |
| Curva: | <i>Una línea que se aparta de la figura recta, tramo curvo.</i> |
| <u>Cytoplasm:</u> | Protoplasm (jelly like material) outside the nucleus and confined by a cell membrane. |
| Citoplasma: | <i>Protoplasma (material gelatinoso) parte externa del núcleo y limitada por una membrana de la célula.</i> |
| <u>D</u> | |
| <u>Damage:</u> | Harm; impairment of usefulness or value of item. |
| Daño: | <i>Dañar; deterioro de utilidad o valor de un artículo.</i> |
| <u>Dead:</u> | No longer alive or living. |
| Muerte: | <i>Ya no vivo o viviente.</i> |
| <u>Diastole(ic):</u> | The lower of the two blood pressure readings. Portion of the cardiac (heart) cycle in which the ventricles are relaxed and fills with blood. |
| Diastólico: | <i>La baja de las dos lecturas de la presión de la sangre. Porción del ciclo cardíaco (corazón) en el cual se relajan las ventrículas y se llenan con sangre.</i> |
| <u>Dispersal:</u> | Distribution; dissemination; break up and scatter in different directions. |
| Dispersión: | <i>Distribución; diseminación; disuelve y dispersa en diferentes direcciones.</i> |
| <u>Duodenum:</u> | Beginning portion of the small intestine. |
| Duodeno: | <i>Porción inicial del intestino delgado.</i> |

E

Ecosystem: An ecological community together with its physical environment viewed as a unit.

Ecosistema: Una comunidad ecológica junto con su ambiente físico vista como una unidad.

Energy body: Mitochondria; site where energy is produced in the cell.

Cuerpo energético: Mitocondria; sitio donde se produce energía celular.

Environment: Your surroundings; combination of external physical conditions that influence the growth and development of organisms.

Medio ambiente: Su alrededor; combinación de condiciones externas físicas que influyen en el crecimiento y desarrollo de organismos.

Enzyme: Any of a numerous proteins produced by living organisms that function as catalysts in the cells.

Enzima: Cualquiera de muchas proteínas producidas por organismos vivientes que actúa como catalizador sobre el metabolismo celular.

Epiglottis: A flap of cartilage at back of mouth that prevents food from entering the windpipe (larynx) during swallowing.

Epíglotis: Cartílago sujeto a la parte posterior de la lengua, el cual tapa la glotis (laringe) al tiempo de la deglución.

Equal: Having the same quantity, value or measure as the other.

Igual: De la misma naturaleza, forma, cantidad, valor o medida de otra cosa.

Esophagus: A muscular passageway for food connecting the pharynx to the stomach.

Esófago: Conducto del aparato digestivo que une la faringe con el estómago.

Explore: To examine; investigate very carefully.
Explorar: *Examinar; investigar muy cuidadosamente.*

Exploration: The act of exploring.
Exploración: *El acto de explorar.*

F

Fatty Acid: A large group of monobasic acids obtained from animal tissue; is a secondary source of food energy for the cells of the body.

Acido graso: *Un grupo grande de ácidos monobasicos obtenido del tejido animal. Es una fuente secundaria de energía de la comida para las células del cuerpo.*

Femur: The bone situated between the pelvis and knee in humans.

Fémur: *El hueso situado entre la pelvis y la rodilla en seres humanos.*

Fibula: The smaller outer bone of the lower leg in humans, located between the knee and the ankle.

Peroné: *El hueso exterior más pequeño de la pierna inferior en humanos, localizado entre la rodilla y el tobillo.*

Flower: The reproductive structure of seed-bearing plants.

Flor: *La estructura reproductiva de plantas producidas por semillas.*

Food chain: A chain of organisms in a community in which an upper member feeds on a lower member of the chain in obtaining food energy. Transfer of food energy from prey to the predator.

Cadena alimenticia: Una cadena de organismos en una comunidad en la que un miembro superior se alimenta en un miembro más bajo de la cadena obteniendo energía de la comida. Traslado de energía de la comida de la presa al depredador.

Fruit: Ripened ovary of a seed-bearing plant. An edible, usually sweet and fleshy part of the plant.

Fruta: Ovario maduro de una planta fructífera. Un comestible, usualmente la parte dulce y carnosa de una planta dulce de una planta.

G

Gall bladder: A small, pear-shaped muscular sac beneath the liver that stores bile that is secreted by the liver.

Vesícula biliar: Un saco muscular pequeño en forma de pera situado abajo del hígado que guarda bilis secretada por el hígado.

Genetic: The biology of heredity. The genes found in plants and animals. They determine who you are.

Genético: Biología de herencia. Los genes encontrados en plantas y animales. Determina quien eres.

Germination: To begin to grow; to sprout.

Germinación: Empezar a crecer; brotar.

Graph: A drawing that shows the relationship of numerical values or information.

Gráfica: Un dibujo que muestra la relación de valores numéricos o información.

Grouping: To arrange in a group.

Agrupación: *Organizar en un grupo.*

H

H₂O: Water; a clear colorless, almost odorless and tasteless liquid (taste in some areas is potent because of mineral content).

H₂O: *Agua; un líquido claro, incoloro, casi inoloro e insípido (en algunas áreas su sabor es fuerte por el alto contenido de minerales).*

Habitat: Area or type of environment where an organism or population normally live.

Hábitat: *Area o tipo de ambiente donde un organismo o población normalmente vive.*

Hard palate: The bony anterior portion of the roof of the mouth.

Paladar duro: *La porción anterior huesuda de la cavidad bucal.*

Heart: The hollow muscular organ in vertebrates that pumps blood through the Circulatory System.

Corazón: *Organo cóncavo muscular en vertebrados que bombea sangre a través del sistema circulatorio.*

Heart rate: The single complete pulsation of the heart counted for a period of one minute.

Ritmo cardíaco: *La pulsación completa del corazón que se cuenta por un período de un minuto.*

Herbivore: Animal that feeds on plants or vegetation.

Herbívoro: *Animal que se alimenta de plantas o vegetales.*

Humerus bone: Long bone of the upper part of the arm, extends from the shoulder to the elbow.

Hueso del húmero: *Hueso largo de la parte superior del brazo, que se extiende del hombro al codo.*

I

Inanimate: Not alive or living; not active.

Inanimado: *No vivo o viviente; no activo.*

Industrial: Commercial production and sale of goods and services.

Industrial: *Producción comercial y venta de mercancías y servicios.*

Inhabitants: Permanent resident; reside in; live in.

Habitantes: *Residente permanente; reside en; vive en.*

Injury: Damage to something, damage to a living thing.

Lesión: *Daño a algo, daño a una cosa viviente.*

Isopods: Group of crustaceans which includes the sow bug.

Isópodos: *Grupo de crustáceos en el cual se incluye la cochinilla.*

I

Jejunum: Section of small intestine between the duodenum and ileum.

Yeyuno: *Sección del intestino delgado entre el duodeno y el ileon.*

L

Landfill: Practice of filling in low-lying ground with garbage and trash to build it up. This waste is covered with dirt.

Tierra rehabilitada: *La práctica de llenar un terreno con basura y desperdicios para construirlo. Esta basura es cubierta con tierra.*

Large Intestine: Extends from the small intestine to the anus and includes the cecum, colon, rectum and anal canal.

Intestino grueso: *Se extiende desde el intestino delgado al ano e incluye el ciego, el colon, el recto y el canal anal.*

Liver: Vertebrate gland that secretes bile and aids in formation of blood and breakdown of foods.

Hígado: *Glándula vertebrada que secreta bilis y ayuda en la formación de la sangre y en el metabolismo de los alimentos.*

Lungs: Sac like respiratory (breathing) organs located in the chest area that functions to remove carbon dioxide and to take in oxygen.

Pulmones: *Organos respiratorios ubicados en el área del pecho que funcionan para remover el dióxido de carbono y para tomar oxígeno.*

M

Marrow: Soft material that fills bone cavities (inside).

Médula: *Material suave que llena las cavidades óseas (adentro).*

Measurement: To determine the dimension or quantity of objects.

Medida: *Para determinar la dimensión o cantidad de objetos.*

Migratory: Roving, nomadic; move from place to place.

Migratorio: *Errante, nómada; se mueve de lugar a lugar.*

N

Natural: Present or produced by nature.

Natural: *Actual o producto de la naturaleza.*

Non-organic: Not organic; not of living matter.

Inorgánico: *No orgánico; no es una materia viviente.*

Nutrient: Nourishing ingredient in food. Provide nourishment.

Nutriente: *Ingrediente nutritivo en alimentos. Proporciona valor alimenticio.*

Nutrition: Process of living organism assimilates food for growth and maintenance of body cells, tissues.

Nutrición: *Proceso de organismos vivientes que asimilan comida para el crecimiento y mantenimiento de los tejidos y células del cuerpo.*

O

Oblong: Elongated; one side longer than the other.

Oblongo: *Alargada, una orilla más larga que la otra.*

Observation: Observing, recording, watching, perceiving some event or thing.

Observación: *Observar, grabar, mirar, percibir algún evento o cosa.*

Odor: That which is perceived by or affects the sense of smell.

Olor: *Aquél que se percibe por o afecta el sentido del olfato.*

Odorous: Having a distinctive odor.

Oloroso: *Tiene un olor distinto.*

Olfactory: Sense of smell.

Olfato: *Sentido de oler.*

Omnivore: Eating both animal and vegetable substances.

Omnívoro: *Quien come ambas sustancias animales y vegetales.*

Organic: Pertaining to or derived from living organisms. No use of chemicals.

Orgánico: *Pertence a o se deriva de organismos vivos. Sin uso de químicos.*

P

Pancreas: A gland near the stomach that secretes digestive enzymes and other proteins as insulin.

Páncreas: *Una glándula cercana al estómago que secreta enzimas digestivas y otras proteínas como la insulina.*

Parotid: A salivary gland situated at base of each ear that secretes an enzyme and mucin (a lubricant).

Parótida: *Una glándula salivar ubicada en la base de cada oído que secreta una enzima y mucina (un lubricante).*

| | |
|---------------------------|--|
| <u>Patella:</u> | Kneecap; bone in front of the knee joint. |
| <i>Patela:</i> | <i>La rótula; el hueso en frente de la articulación de la rodilla.</i> |
| <u>Patterns:</u> | Natural or chance marking, configuration; distinctive model, form or style. |
| <i>Patrones:</i> | <i>Una marca o configuración natural o por casualidad; un modelo, una forma o un estilo característico.</i> |
| <u>Perception:</u> | Awareness of; understanding; to envision. |
| <i>Percepción:</i> | <i>El conocimiento de; el entendimiento de; imaginar.</i> |
| <u>Preserve:</u> | To keep alive or in existence; keep safe. |
| <i>Preservar:</i> | <i>Mantener vivo o en existencia; mantener fuera de peligro.</i> |
| <u>Predator:</u> | Prey upon other animals or things. |
| <i>Presa:</i> | <i>Un animal que es cazado o perseguido como comida.</i> |
| <u>Protect:</u> | To defend or guard from attack; injury or harm. |
| <i>Proteger:</i> | <i>Para defender o estar alerta contra un ataque, lesión o daño.</i> |
| <u>Protein:</u> | Group of nitrogenous organic compounds that can yield amino acids that are required by all life forms. |
| <i>Proteína:</i> | <i>Un grupo de compuestos orgánicos nitrogenados que pueden producir aminoácidos que son necesarios en todas las formas vivientes.</i> |
| <u>Pulse:</u> | Rhythmic throbbing of the arteries caused by beat of the heart. |
| <i>Pulso:</i> | <i>Pulsaciones rítmicas de las arterias debido a los latidos del corazón.</i> |

Pyramid of foods: Formally the food groups but arranged according to human nutritional needs.

Pirámide alimenticia: Los grupos de alimentos; pero organizados de acuerdo a necesidades nutricionales de los seres humanos.

R

Raptor: Birds or animals preying on other animals; claspings, seizing appendage such as a claw or bill.

Rapiña: Los pájaros o animales que cazan otros animales; apéndice para agarrar o para asir como la garra o el pico.

Record: To set down in writing; to state or indicate.

Récord/anotación: Poner por escrito; manifestar o indicar.

Residence: Place where animal or plant is found or lives.

Residencia: Lugar en el cual un animal o una planta vive o se encuentra.

Ripple: Form small waves or undulations.

Rizo/onda: Olas u ondulaciones pequeñas.

Rodents: Gnawing, nibbling group of mammals that include mice, squirrels, beavers.

Roedores: Grupo de mamíferos roedores, que muerden: ratones, ardillas y castores.

Rough: Coarse or uneven surface.

Aspero: Superficies burdas, desiguales.

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| <u>Round:</u> | Ring or hoop-shaped. |
| <i>Redondo:</i> | <i>En forma de un anillo o de un aro.</i> |
| <u>Rubbing:</u> | Move, spread or apply by pressure and friction over something else. |
| <i>Sobando:</i> | <i>Mover, regar o aplicar por medio de presión y de fricción sobre otra cosa.</i> |
| <u>Rural:</u> | Country. |
| <i>Rural:</i> | <i>Perteneciente al campo.</i> |
| <u>S</u> | |
| <u>Salivary gland:</u> | Any of three pairs of glands that secrete saliva. |
| <i>Glándula salivar:</i> | <i>Cualquiera de los tres pares de glándulas que secretan saliva.</i> |
| <u>Scent:</u> | A particular smell. |
| <i>Olor/aroma:</i> | <i>Un olor muy particular; el sentido olfatorio.</i> |
| <u>Salty:</u> | Tasting of salt, saline. |
| <i>Salado:</i> | <i>Que sabe a sal, salino.</i> |
| <u>Secondary color:</u> | A color as orange, green, violet that is produced by mixing two primary colors. |
| <i>Color secundario:</i> | <i>Un color como el anaranjado, el verde, el morado que resulta de la mezcla de dos colores primarios.</i> |
| <u>Seeds:</u> | Fertilized, matured ovule of flowering plant containing the embryo. |
| <i>Semillas:</i> | <i>El óvulo maduro, fertilizado de una planta floreciente que contiene el embrión.</i> |

Sensation: Function of the senses; perception or awareness of stimuli through the senses.

Sensación: *La función de los sentidos; la percepción o el conocimiento de un estímulo a través de los sentidos.*

Skeleton: Bones of human or animal forming framework of body.

Esqueleto: *Huesos de humanos o animales que forman el armazón del cuerpo.*

Skills: Ability coming from a person's knowledge; aptitude to do something well.

Capacidades/ destrezas: *La habilidad de una persona que proviene de su conocimiento; de su capacidad para hacer algo bien.*

Skin: External covering of an animal body.

Piel: *Cubierta exterior del cuerpo de un animal.*

Small intestine: Intestine that connects the stomach to the large intestine and responsible for digestion of foods.

Intestino delgado: *El intestino que conecta el estómago con el intestino grueso, y es el responsable de la digestión de alimentos.*

Smear: To spread or dab on or over something.

Manchar: *El extender, o embadurnar en o sobre algo.*

Smell: Perceive odor or scent through the nose by the olfactory nerves.

Oler: *La percepción de un olor o aroma a través de la nariz por medio de los nervios olfatorios.*

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| <u>Smooth:</u> | Free from projections or graininess of surface. |
| <i>Liso:</i> | <i>Una superficie libre de protuberancias o granulaciones.</i> |
| <u>Soft:</u> | Not hard, easily changed in shape; not sharp. |
| <i>Suave:</i> | <i>Que no es duro; puede fácilmente cambiar de forma; no es puntiagudo.</i> |
| <u>Solar Energy:</u> | Energy obtained from the sun, especially for plant growth. |
| <i>Energía Solar:</i> | <i>La energía obtenida del sol, especialmente para el crecimiento de las plantas.</i> |
| <u>Sour:</u> | Having an acid taste as lemon juice; unpleasant. |
| <i>Agrio:</i> | <i>El tener un sabor ácido como el jugo de limón; desagradable.</i> |
| <u>Spinal column:</u> | The vertebrae protects the spinal cord; backbone. |
| <i>Columna Vertebral:</i> | <i>La columna protege la médula espinal; la espina dorsal.</i> |
| <u>Spinal cord:</u> | Nerve tissue passing through the spinal canal. |
| <i>Médula espinal:</i> | <i>Un tejido nervioso que pasa a través del canal vertebral.</i> |
| <u>Square:</u> | Rectangle having all four sides of equal length. |
| <i>Cuadrado:</i> | <i>Un rectángulo que tiene cuatro lados iguales.</i> |
| <u>Stalk:</u> | To pursue prey. |
| <i>Acechar:</i> | <i>En busca de caza.</i> |

Systole: Normal rhythmical contraction of heart pumping blood away from heart.
Sistólico: *Contracción rítmica natural del corazón cuando bombea la sangre hacia el cuerpo.*

T

Tactile: Affecting the sense of touch.

Táctil: *Que tiene que ver con el sentido del tacto.*

Tarsal: Pertaining to bones of the foot.

Tarsal: *Perteneciente a los huesos del pie.*

Texture: Characteristic physical structure of material or object. The feel or appearance of objects.

Textura: *Estructura física característica de un material u objeto. La apariencia o la sensación de objetos.*

Tibia: Inner of the two lower bones of the leg.

Tibia: *El hueso interno de los dos huesos en la pierna.*

Tongue: Organ located in floor of mouth used for taste, eating and speaking (humans).

Lengua: *Organo localizado en el piso de la boca, utilizado para el sabor, comer y hablar (los humanos).*

Tuber: Fleshy, oblong or round outgrowth of a root/stem.

Tubérculo: *Una protuberancia carnosa, oblonga o redonda de la raíz/tallo.*

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| <u>Starch:</u> | A white tasteless, solid carbohydrate found in plants. |
| <i>Almidón:</i> | <i>Un carbohidrato blanco sin sabor, sólido que se encuentra en las plantas.</i> |
| <u>Sternum:</u> | Breastbone; in humans, a flat narrow bone of the skeleton. |
| <i>Esternón:</i> | <i>El hueso del pecho; en los seres humanos, un hueso delgado y plano del esqueleto.</i> |
| <u>Stethoscope:</u> | Instrument used to convey sounds in chest to examine. |
| <i>Estetoscopio:</i> | <i>Un instrumento utilizado para llevar los sonidos en el pecho al examinador.</i> |
| <u>Structure:</u> | Way of organizing or building; arrangement of tissues or organs in the body. |
| <i>Estructura:</i> | <i>Manera de organizar o construir; la distribución de los tejidos o de los órganos en el cuerpo.</i> |
| <u>Sublingual:</u> | Salivary gland that lies under the tongue. |
| <i>Sublingual:</i> | <i>Glándula salivar que se encuentra debajo de la lengua.</i> |
| <u>Submaxillary:</u> | Salivary gland lying under the lower jaw. |
| <i>Submaxilar:</i> | <i>Glándula salivar que se encuentra debajo de la mandíbula.</i> |
| <u>Sweet:</u> | Taste or flavor characteristic of sugar, honey. |
| <i>Dulce:</i> | <i>Sabor característico del azúcar, miel.</i> |
| <u>Symbiosis:</u> | Living together from two dissimilar organisms. |
| <i>Simbiosis:</i> | <i>Dos organismos diferentes que viven juntos.</i> |

U

Ulnar bone: Bone of the forearm opposite to the thumb.

Hueso cubital: *El hueso del antebrazo opuesto al dedo pulgar.*

Unpleasant: Displeasure, offensive, disagreeable.

Desagradable: *Disgusto, ofensivo.*

Urinary: Organs that discharge urine; kidney, bladder.

Urinario: *Los órganos que secretan la orina; riñones, vejiga.*

Urinogenital: Organs of the urinary and genital systems.

Urogenital: *Los órganos de los sistemas urinarios y genitales.*

V

Veins: System of tubes that conveys blood from body to heart.

Venas: *El sistema de tubos que transporta la sangre del cuerpo al corazón.*

Vegetable: Part of herbaceous plant that is eaten as food.

*Vegetales/
verduras:* *Parte de la planta herbácea que se consume como alimento.*

Ventricle: Lower chambers on each side of heart that pump blood.

Ventrículo: *Las cámaras inferiores de cada lado del corazón, las cuales bombean sangre.*

Vertebrae: Bones or segments of the spinal column.

Vértebras: *Los huesos o segmentos de la columna vertebral.*

Vocabulary: Words used by particular people, class or member.

Vocabulario: *Palabras pertenecientes a un idioma.*

Y

Yellow Marrow: Bone marrow that is mostly fat cells and found in long bones.

Médula amarilla: *Médula del hueso constituido de células grasosas y se encuentran en los huesos largos.*

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