BEST

BILINGUAL ENVIRONMENTAL SCIENCE TRAINING

Grades 3 - 4

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## NATURE

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## ENVIROMENTAL AWARENESS

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OBSERVATION SKILLS
COLOR SEARCH

LESSON 1

OBJECTIVE:
Using a color code card, the child will identify the various colors found in the yard or park.

MATERIAL:
• One fan of paint swatches per child. (The swatches need to represent the primary and secondary colors.)

BACKGROUND INFORMATION:
A variety of colors are present in structures and plant life found within the yard or park. The parent should set boundaries for this activity to guarantee the child’s success. An area that provides a variety of plant life is recommended.

Color fans can be assembled using sample paint swatches, available free at most hardware stores. Laminating the swatches will ensure longevity. Attaching the swatches with a braid at one end will create a color fan that provides easy handling for the child.

SCIENTIFIC PROCESS:
This lesson requires the child to closely examine the natural and manmade features of his/her yard or park. By using his/her observation and comparison skills, the child will match color samples to objects he/she finds. Through this activity, the child will develop an understanding and appreciation for the diversity of colors found within his/her yard or park.

PROCEDURE:
1) The parent will demonstrate how to use the color fan when comparing different paint samples to objects on the playground.
2) The parent monitors for the child’s understanding.
3) The parent sets the boundaries for this activity.
4) Ample time is allowed for thorough exploration.

VOCABULARY:
primary and secondary colors
COLOR SEARCH  (continued)  LESSON 1

LESSON HIGHLIGHTS

Goal: The child will locate different colors in their environment.
Location: Outdoors
Subject Integration: Science, Art
Environment: Built and natural
Vocabulary: Primary and secondary colors
Theme: Scale and Structure
OBJECTIVE:
The child will sort foods according to the basic food tastes of sweet, sour, bitter, and salty.

MATERIALS:
• One laminated card per child
• Various foods representing the four basic tastes ((Examples: sweet/banana, sour/lemon, bitter/grapefruit, salty/soda crackers, peanuts, potato chips)

BACKGROUND INFORMATION:
This activity is based on the four basic tastes: sweet, sour, bitter, and salty. The lesson will require the child to taste foods and sort them according to their basic taste. The parent should be aware that some children have food allergies and may have to be careful not to use those foods, but seek alternates.

SCIENTIFIC PROCESS:
This activity requires the child to use his/her sense of taste to make comparisons between a variety of foods. The child will record his/her observations by placing food samples under appropriate headings.

PROCEDURE:
1) The parent provides the child with samples of food and identifies the taste quality of each. A sample of each basic taste should be represented during this lesson introduction.
2) The child is provided with a taste card that contains labels and illustrations of the four basic tastes. (The parent may find it necessary to review the four tastes before commencing the activity.)
3) The child is provided with an ample amount of foods to taste. Time should be provided so that he/she can record the results.
4) The child records his/her results by placing the food samples on the appropriate taste square.

VOCABULARY:
sweet    sour
bitter    salty
LESSON HIGHLIGHTS

Goal: The child will sort foods according to basic tastes
Location: Indoors or outdoors
Subject Integration: Science
Environment: Built and personal
Vocabulary: Sweet, sour, bitter, salty
Theme: Scale and Structure
<table>
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**B.E.S.T.**
\[ \text{6} \]
NATURE
OBJECTIVE:
Through exploration of yard or park plant life, the child will discover the variety of colors that can be made when crushing plant parts. The child will use plant parts to create a design or picture on tagboard.

MATERIALS:
- One sheet of paper, spiral table

BACKGROUND INFORMATION:
Numerous plants found on the school playground release their pigments when crushed and pressed against paper or cloth. Different plant parts such as leaves, stems, and flowers, will release different colors. Other materials found in the yard or park grounds, such as soil and tan bark can be used for earth-tone colors.

Prior to beginning this activity, the child should be taught the proper way of removing a leaf from a plant. To remove a leaf, the leaf should be pulled back from the stem. A plant should have at least ten leaves remaining after picking. The leaves should never be removed from the new growth of the plant. The new growth consists of the small leaves at the end of the branch. Adults should be aware that some plants are toxic. The parent should be advised not to place the leaves in their mouths and to wash their hands after the activity.

SCIENTIFIC PROCESS:
The intent of this activity is to provide the child with an introduction to the scientific method. This activity requires the student to make a hypothesis (Does this leaf make a light green color?), to test the hypothesis (when the child smears the leaf), and to draw a conclusion (No, it doesn’t make green; it makes dark red).

In addition, the child is provided with an opportunity to increase his/her observational skills and develop an awareness of the variety of plant types located on the school site. The child will also develop an appreciation for the aesthetic attributes of nature.

PROCEDURE:
1) The child is provided with a piece of tagboard and is instructed to draw a picture or design outside using at least four different colors.
2) The child is instructed that he/she will not be allowed to use crayons, pencils, or anything that they normally write with.
3) Next, the parent will demonstrate the proper way to pick a leaf and rub it to make a smear. The child should also be informed that other materials in the yard or playground could be used for the smears.
4) Set controllable boundaries for the playground.
5) Time is allowed for creating.
Goal: The child will explore playground plant life.
Location: Outdoors
Subject Integration: Science, Art
Theme: Scale and Structure
Vocabulary: smear, hypothesis, toxic
Environment: Natural
HAND LENS HIKE

OBJECTIVE:
The child will discover the variety of animal life present in common soil.

MATERIALS:
- 1 container of moist humus
- 1 hand lens
- 1 large spoon
- newspaper

BACKGROUND INFORMATION:
Children have a natural curiosity of the contents of soil. This activity allows them to examine and discover that soil is home to a variety of animals and consists of decomposing organic materials. In order to ensure the success of this activity, the parent may wish to carefully select the soil to be examined. (Soil collected from a compost pile is rich in insect life and decomposing plant matter.)

SCIENTIFIC PROCESS:
Through observation, the child develops an awareness of the various components of soil.

PROCEDURE:
1) The parent begins by asking the child what they think is in the soil.

2) After the child has voiced his/her opinions, the parent informs him/her that he/she will find out what is in soil through examination.

3) The child is provided with a container of soil, a large spoon, and a hand lens.

4) The parent informs the child that

5) After the child has spread the soil on a newspaper, he/she begins to explore the soil contents. The child should be given plenty of time for observation.

VOCABULARY:
- compost
- decompose
- organic
LESSON HIGHLIGHTS

Goal: The child will identify animal life present in soil.
Location: Indoors or outdoors
Subject Integration: Science
Theme: Energy, Interactions, Evolution
Vocabulary: humus, compost, decompose, organic
Environment: Natural
MAKING TRACK

OBJECTIVE:
The child will make plaster castings of animal tracks found during their marsh walk.

MATERIALS:
- zip-lock bags containing 2 cups of plaster of Paris
- 6 oz. measuring cup
- 3 plastic rings cut from 2-liter soda bottles
- dry paint brushes
- flags
- pitcher of water
- garbage bag for used bags

BACKGROUND INFORMATION:
The preservation of the Suisun Marsh environment depends upon limited impacts from its visitors. Therefore, the collection of samples is prohibited. The plaster casting of animal tracks provides children with the opportunity to record their observations without impacting the environment.

SCIENTIFIC PROCESS:
The child's observation skills are improved as he/she searches for signs of wildlife. The plaster casting provides a means of recording the child's observations.

PROCEDURE:
1) At the head of the trail, the parent collects water in water pitchers.

2) At the beginning of the marsh walk, the parent ask the child to search for wildlife tracks.

3) When a track is found, the parent will help the child to model the following steps:

   Place the plastic ring around the track. Submerge the bottom edge 1/4 inch into the soil.
   Measure 3-4 cups of water. Pour the water slowly into the bag containing the plaster.
   Squeeze the bag to combine the ingredients. Pour plaster mixture over the track. Place bag into garbage bag.
   Stake a flag to mark the casting. Tell the child that the casting should be set by the end of the walk.

4) Direct the child to predict what the animal was doing when it made the track. Make a casting that will be collected at the end of the walk.

VOCABULARY:
animal tracks

EXTENSION ACTIVITIES:
1) Put aside a display area for the tracks in the home.

2) Have the child write a story about the activities of the animal that made the track.
LESSON HIGHLIGHTS

Goal: The child will make plaster castings of animal tracks.
Location: Outside
Subject Integration: Science, Mathematics, Language Arts
Theme: Scale and Structure
Vocabulary: animal tracks
Environment: Natural
SCAVENGER HUNT

LESSON 6

OBJECTIVE:
Through the exploration of the yard or park, the child will find a variety of evidence showing the existence of plant and animal life.

MATERIALS:
• One Scavenger List

BACKGROUND INFORMATION:
Through participation, the child will realize that his/her yard or park is the habitat for a variety of plants and animals.

Prior to beginning this activity, the child should be taught to respect plant and animal life. The child should be advised not to place plant parts into their mouths and to wash their hands following this lesson.

SCIENTIFIC PROCESS:
The intent of this activity is to provide the child with an opportunity for yard or park exploration. Through observing and communicating, the child will discover the variety of plants and animals sharing their play area.

In addition, the child will use organizing skills in the presentation of their data.

PROCEDURE:
1) The parent provides his child with a scavenger list.

2) The parent discusses with the child the boundaries set for this activity.

3) The parent instructs the child on how to record his/her data. The child will place a check next to each item on their list.

4) The child is allowed to hunt for about fifteen minutes.

B.E.S.T.
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LESSON HIGHLIGHTS

Goal: The child will explore playground plant and animal life.
Location: Outdoors
Subject Integration: Science
Vocabulary: None
Environment: Natural
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ENVIRONMENTAL AWARENESS
LESSENING THE IMPACT

OBJECTIVE:
Children will be introduced to the concepts of recycling, reducing, and composting.

MATERIALS:
• 10-15 pictures of people conserving resources (Examples: recycling, composting, carpooling, using rapid transit, picking up garbage, turning off lights)
• 10-15 pictures of people wasting resources (Examples: a clear-cut forest, polluted river, landfill, litter, excessive use of electricity)

BACKGROUND INFORMATION:
Seventy percent of landfills in the United States are nearing capacity. As available sites for landfills diminish, it is becoming more necessary that the people of the United States find alternatives to throwing away their garbage. Three alternatives that are presented in the following lesson are reducing, recycling, and composting.

This lesson is designed in such a fashion that children will come up with a general idea of conservation through the presentation of positive and negative pictures presented by the parent. This lesson begins with the parent saying, "I have an idea, and I want you to guess what it is. I will show you pictures that do not fit my idea." Children are directed to write down what they think the concept is every time a new positive or negative example is presented.

SCIENTIFIC PROCESS:
Children will make inferences based on their observations of positive and negative examples.

PROCEDURES:
1) The parent tells his/her child that she/he has an idea and wants him/her to guess what it is. The parent explains the procedures as stated in BACKGROUND INFORMATION.
2) The parent alternates the presentation of positive and negative examples. After each presentation, the child record his/her guesses.
3) This procedure continues until all examples have been presented. At that time, the parent request the child’s conclusions about the concept. All responses are acceptable.

VOCABULARY:
positive negative
conservation recycling
reducing composting
LESSON HIGHLIGHTS

**Goal:** Children will identify the need for recycling, reducing, and composting.

**Location:** Indoors

**Subject Integration:** Science, Language Arts, Art

**Theme:** Systems and Interactions, Energy, Patterns of Change, Evolution

**Vocabulary:** Positive, negative, conservation, recycling, reducing, composting

**Environment:** Built
PACKAGING THE PROBLEMS

LESSON 8

OBJECTIVE:
Through examination of the packaging of different food items, children will be able to identify the unnecessary waste associated with packaging.

MATERIALS:
A variety of packaging examples that demonstrate the packaging of large quantity food items and individually packaged items.

Example:
- a box of cereal -vs- a variety pack
- large bottle of juice -vs- six-pack cans

BACKGROUND INFORMATION:
We are a "throw away" society that is generating garbage at an ever-increasing rate. Landfills across our country are rapidly filling to capacity. The demands of our increasing population and limited land space require alternative actions. One action is an examination of our basic values as consumers.

One way to reduce the amount of garbage we create is by buying products that do not contain excessive packaging.

SCIENTIFIC PROCESS:
By comparing the amount of garbage generated by different packaging of the same item, children will be able to infer which packaging is least harmful to the environment.

PROCEDURES:
1) Depending upon items selected, the parent should start a discussion, "Do you enjoy eating...?"
2) "What do you do with the packaging once the product is eaten?"
3) Lead a discussion about what happens to the packaging once it is thrown out. (Parent note: Garbage is placed in landfills that are designed to prevent the decomposing of materials. The majority of current landfills are near capacity. To extend the life of current landfills, our society needs to reduce garbage.)
4) The parent should show the same food item packaged in two different ways. Unwrap each item and compare the amount of food contained to the amount of garbage generated.
5) Ask the child which packaging generated more garbage than produce received.
6) The child will unpack the food items and determine which one generated more garbage.
7) The child will be given magazine pictures or cuttings from shopping flyers and will be asked to sort according to the type of packaging: appropriate or excessive.
PACKAGING THE PROBLEMS (continued)       LESSON 8

VOCABULARY:
packaging
landfill

EXTENSION ACTIVITIES:
1) Food products used for this lesson could be used for a cooking project, or other appropriate activity.

2) Packaging waste can be sorted according to recyclable and non-recyclable.

3) Children can be given the task of designing new forms of packaging.

LESSON HIGHLIGHTS

Goal: Students will recognize wasteful packaging.
Location: Indoors
Subject Integration: Science, Consumer Education
Theme: Energy
Vocabulary: Packaging, landfill
Environment: Built
OBJECTIVE:
Children will be introduced to the basic principles of recycling paper as they collect, sort, and recycle playground and home’s garbage.

MATERIALS:
- Collected garbage
- Paper recycling kit (see below)

BACKGROUND INFORMATION:
Teaching children to care for the environment and treating it with respect often begins with an examination of the playground. This activity allows students to clean the house yard and create something useful out of the collected garbage.

Preparing the Recycling Kit:
The kit consists of:
- a large tub
- two boards (1” x 12” x 12”)
- 2 pieces of felt (8” x 8”)
- 2 pieces of screen (6” x 6”)
- 1 cookie cutter or tuna fish can
  (Cover edges of can with strapping tape.)

SCIENTIFIC PROCESS:
Through basic observation skills, children will be able to sort discarded paper collected on the playground into recyclable and non-recyclable piles.

PROCEDURES:
1) After a discussion of why we should care for our environment, have children collect all garbage from the house and house’s yard. Advise child not to touch anything containing human bodily fluids such as tissues or band aids.
2) Separate paper from solid garbage. Discard solid garbage.
3) Separate recyclable from non-recyclable paper. Non-recyclable paper is any paper that is bonded to foil or plastic or that is wax coated. Discard non-recyclable paper.
4) Have children tear paper garbage into one-inch squares.
5) Soak paper in water overnight.
6) Place soaked paper into blender (1/3 paper: 2/3 water) and blend until it is a fine pulp.
7) Fill the large tub halfway with water.
8) Parent places a piece of screen against the bottom of the tuna can or cookie cutter. Holding them tightly, submerge them half-an-inch into the tub of water.

The child now pours approximately a quarter-inch of pulp into the tuna can or cookie cutter, stirring his/her finger to assure equal distribution.
9) The cookie cutter-screen combination is now lifted from the water. Excess
water is allowed to drain through the screen leaving the pulp behind.

10) The cookie cutter or tuna can is now carefully removed from the screen. Place a piece of felt on top of the screen and rotate them 180 degrees so that the screen is now on top.

11) The screen is now carefully removed leaving the recycled paper on the piece of felt. The second piece of felt is now placed on top, sandwiching the recycled paper.

12) The pieces of felt are now placed between the two boards. Next, place the boards on the ground. Have the child jump up and down on the boards to excrete the excess water.

13) Remove the felt. Separate the felt and remove the recycled paper. Place the paper in a warm sunny spot. The paper should dry within a few hours.

VOCABULARY:
recyclable
non-recyclable
pulp

EXTENSION ACTIVITIES:
1) Recycled paper can be used for a variety of art projects: cards, collages, environmental education, bulletin boards, and small handbills discussing importance of recycling.

LESSON HIGHLIGHTS

Goal: Children will learn the basic principles about recycling paper.
Location: Indoors and outdoors
Subject Integration: Science, Environmental Education, Art
Theme: Energy, Patterns of Change
Vocabulary: Packaging, landfill
Environment: Built
OBJECTIVE:
This lesson will demonstrate how organic waste can be composted into useable soil.

MATERIALS:
- Two large buckets
- Organic scraps (table scraps—extracting animal or dairy products, grass cuttings, etc.)
- Soil
- Soil-dwelling creatures (worms, isopods, etc.) can be obtained from fishing stores.

BACKGROUND INFORMATION:
Literally tons of organic material are disposed of daily. Much of this could be composted into useable soil. Families who compost can reduce their garbage from 25 to 50 percent. This experiment provides children with an opportunity to observe the decomposing of organic material as well as the interaction of the organisms living in the compost. Compost piles are generally odorless and take little care. The finished product can be added to gardens, placed around street trees, or added to soil for plants.

SCIENTIFIC PROCESS:
Children will observe energy and food cycles in process.

PROCEDURE:
1) The buckets should have small holes in the sides to allow for oxygen to enter.
2) In one bucket, the child place two inches of soil that contains worms and isopods. Next he/she add three inches of organic material. Two inches of soil follow and then again organic material, creating an organic-soil layer cake.
3) The material within the bucket is lightly watered twice a week. Care should be taken not to over water for it may kill the small organisms.
4) Once a week, the entire contents of the bucket should be dumped into the second bucket. This rearranges the ordering of the material and aides in its decomposition.
5) The entire process should take three to four weeks for the material to decompose. The child should note a major decrease in the amount of volume of material in the bucket.

VOCABULARY:
compost
decompose
organic
LESSON HIGHLIGHTS

**Goal:** Students will build a compost pile and understand its usefulness.

**Location:** Indoors

**Subject Integration:** Science, Language Arts

**Theme:** Energy, Systems and Interactions

**Vocabulary:** Compost, decompose, organic

**Environment:** Built
GLOSSARY
GLOSSARY  GLOSARIO
GRADES 3 - 4  GRADOS 3 - 4

A

Adaptation: An adjustment (hereditary) in which a species improves its condition in relationship to its environment.

Adaptación: Un ajuste (hereditario) en el que una especie modifica su condición en relación con el medio ambiente.

Adaptive radiation: The evolution of a specie into several related species characterized by different specializations that fit them for life in various environments (as the beak changes in finches).

Radiación Adaptable: La evolución de una especie en varias especies relacionadas entre sí, caracterizadas por diferentes especializaciones que los adapta de por vida en varios ambientes distintos (como los cambios en el pico de los pinzones).

Alimentary canal: The mucous membrane-lined tube of the Digestive System extending from the mouth to the anus.

Tubo alimenticio: El tubo del aparato digestivo cubierto de una membrana mucosa que va desde la boca hasta el ano.

Allergy: Hypersensitive or tissue reaction to environmental factors or substances such as pollens, foods, dust, or microorganisms, in amounts that do not affect most people.

Alergia: Hipersensibilidad o reacción a factores ambientales o a substancias tales como polen, alimentos, polvo o microorganismos en cantidades que no afectan a muchas personas.

Aquatic: In water; growing or living in or on water.

Acuático: En agua; que crece o vive dentro del o sobre el agua.
Arts: System of principles and methods employed in performing a set of activities.
Artes: Métodos o conjunto de reglas que se emplea cuando se lleva a cabo una actividad.

B
Bacteria: Unicellular organism; micro-organisms--free-living or parasitic.
Bacteria: Microorganismo unicelular, seres vivos o parásitos libres.

Bitter: A sharp, acrid, and unpleasant taste.
Amargo: Un sabor áspero, agrio, ácido.

Bulk: Great size, mass or volume.
Bulto: Gran tamaño, masa o volumen.

C
Cohesion: Mutual attraction by which the elements of a body are held together.
Cohesión: Adherencia, fuerza que une las moléculas de un cuerpo.

Competition: To contend with another; rivalry; a contest or test of skill.
Competición: Competir con otro; rivalidad; un concurso o prueba de habilidad.

Conclusion: The end; the result or outcome of an act or activity.
Conclusión: El final; el resultado de un acto o actividad.

D
Dairy Products: Foods made from milk and milk itself.
Productos  
Lácteos:  
*Alimentos derivados de la leche.*

**Decompose:**  
The break down, decay of matter via chemical or mechanical action.

**Descompuesto:**  
*La descomposición o putrefacción química o mecánica de la materia viva.*

**Digestible:**  
Transform food into absorbable material via chemical and muscular action of the alimentary canal.

**Digerible:**  
*Transformación de los alimentos para su absorción bajo la acción química y muscular del canal alimenticio.*

**E**

**Endangered:**  
Face with danger of extinction (elimination).

**Peligro de extinción:**  
*A punto de desaparecer o ser eliminado.*

**F**

**Fish:**  
Cold-blooded, aquatic vertebrates--bony or cartilaginous skeletons, or jawless species.

**Pez:**  
*Animal acuático, vertebrado, de sangre fría, de esqueleto óseo, cartilaginoso o sin mandíbula.*

**Fluffy:**  
Soft, light composition, feathery.

**Lanoso:**  
*Pelo suave y rizado.*

**Fragrance:**  
A sweet, pleasant odor. Scent.

**Fragancia:**  
*Olor agradable, perfume, aroma.*
Fungus: Specialized group of plants that feed on organic matter; a number of which feed on dead or decaying matter, thereby assists in the decomposing of organic matter.

Hongo: Grupo especializado de plantas que se alimenta de materia orgánica, ya se viva o muerta, ayudando así a su descomposición.

G

Group: Assemblage of objects or people gathered or located together based on some set reason or occupance.

Grupo: Conjunto de personas o cosas reunidos en un mismo lugar con intereses u ocupaciones similares.

H

Heat: A form of energy associated with movement of atoms or molecules in solids.

Calor: Una forma de energía relacionada con movimiento de átomos o moléculas en sólidos.

Humus: Brown or black organic material consisting of decayed or decaying vegetable matter.

Humus: Materia orgánica de color negro o café que resulta de la descomposición o putrefacción de restos vegetales.

Hypersensitive: Excessively sensitive to substances as food, chemicals, pollen, dust, etc.

Hipersensible: De suma sensibilidad a substancias como, químicos, polen, polvo, alimentos, etc.

Hypothesis: An explanation for a set of facts that can be tested by further investigation.

Hipótesis: Suposición de hechos posibles para sacar una consecuencia.
Identification: Establish origin, nature, or characteristic of.

Identificación: Origen establecido, naturaleza o característica.

Indigestible: Impossible or difficult to digest as food.

Indigesto: Imposible o difícil de digerir como alimento.

Insects: Small invertebrate animals such as moths, spiders, crayfish.

Insectos: Animales pequeños invertebrados, tales como, polillas arañas, cangrejos.

Investigation: Examine in a planned manner; make a detailed inquiry.

Investigación: Examinar en una manera premeditada; hacer una indagación detallada.

J

Jaw: Bony structure forming the mouth and holding the teeth.

Mandíbula: Estructura ósea que forma la boca y sostiene los dientes.

K

Kneecap: The patella. The bone covering the knee joint.

Rótula: La patela. El hueso que cubre la articulación de la rodilla.

L

Language: Voice sounds and written symbols of humans to represent these sounds to express or communicate thoughts and feelings.
Lenguaje: Conjunto de sonidos de la voz y símbolos escritos que los seres humanos usa para expresar o comunicar pensamientos o sentimientos.

Least: Smallest in magnitude, degree, or rank.

El menor: El más pequeño en magnitud, grado, o rango.

Life cycle: Course of development that an organism passes from inception to its mature stage.

Ciclo vital: La dirección en el desarrollo por la que pasa un organismo desde su origen hasta su estado de madurez.

Light: Sensation of perceiving light; visible light for seeing.

Luz: Sensación de percibir luz; lo que ilumina los objetos y los hace visible.

M

Mandible: The lower jaw in vertebrates.

Mandíbula: La mandíbula inferior en los vertebrados.

Mathematics: Study of numbers, their associated relationship.

Matemáticas: El estudio de los números, y sus combinaciones.

Mechanical: Produced by machines or tools. Manually done.

Mecánica: Fabricar con máquinas o herramientas manuales.

Metamorphosis: In animals, a change in body form (larva to adult).

Metamorfosis: Un cambio en la forma del cuerpo de animales (larva a adulto).
**Most:** Greatest in number, size or degree.

**La mayoría:** El mayor en número, la mayor parte.

**Molt:** To shed external body covering as exoskeleton.

**Mudar de piel:** Mudar la cubierta exterior del cuerpo como el exoesqueleto.

**N**

**Nauseate:** A stomach disturbance; strong aversion.

**Náusea:** Asco o aversión que causa una cosa.

**Non-bio-degradable:** Not capable of being organically broken down.

**No biodegradable:** Materia inorgánica incapaz de descomponerse.

**Non-recyclable:** Cannot be recycled; cannot extract useable substances from the materials.

**No reciclable:** Que no se puede reciclar; no se puede extraer elementos utilizables de los materiales.

**P**

**Prey:** An animal hunted or seized for food.

**Presa:** Animal que se caza como alimento.

**Preserve:** To keep alive or in existence; keep safe.

**Preservar:** Mantener vivo o en existencia; mantener fuera de peligro.

**Predator:** Prey upon other animals or things.

**Animal de rapina:** Que se alimenta de otros animales.
**R**

**Radius bone:** Bone of the forearm on the thumb side.

**Radio:** El hueso del antebrazo del lado del dedo pulgar.

**Red bone marrow:** Marrow that produces blood cells.

**Médula ósea roja:** Médula que produce las células sanguíneas.

**Rib cage:** Cavity that contains the heart lungs and esophagus.

**Caja torácica:** La cavidad que contiene el corazón, los pulmones y el esófago.

**Root:** Part of the plant that grows down into the soil.

**La raíz:** Parte de la planta que crece hacia abajo dentro de la tierra.

**S**

**Science:** Study dealing with body of facts showing the operation of general laws.

**Ciencia:** El estudio que tiene que ver con un conjunto de conocimientos que muestran como funcionan las leyes generales.

**Shelter:** Something that gives protection from storms, missiles, etc.; refuge.

**Refugio:** Lugar que protege de las tormentas, misiles, etc. Asilo.

**Similar:** Having likeness or resemblance.

**Parecido:** Que tiene similitud o semejanza.

**Soil:** Portion of earth's surface consisting of humus and broken down rock.

**Tierra:** Porción de la superficie de la tierra compuesta por humus y pezados de rocas.
**Stomach:**
Sac-like enlargement of the alimentary canal; helps to digest food.

**Estómago:**
Viscera del canal alimenticio que ayuda en la digestión de los alimentos.

**Surface tension:**
Elastic-like force existing in surface of liquid.

**Tensión superficial:**
Fuerza elástica existente en la superficie de los líquidos.

**U**

**Upper arm:**
Arm between shoulder and elbow, humerus bone.

**Brazo superior:**
El húmero, la parte del brazo entre el hombro y el codo, el húmero.

**W**

**Worms:**
Long, slender, soft-bodied invertebrate organisms.

**Gusanos:**
Organismos invertebrados, largos, delgados y suaves.
BIBLIOGRAPHY
ANOTATED BIBLIOGRAPHY

A children's book that examines how young people experience the world through the use of their five senses.


A description of the steps taken to collect and transport garbage to the landfill.

Basic concepts of ecology are introduced in this book. Action projects are included.

A teacher resource guide that focuses on soil. The book contains numerous activities that can be used in the classroom and/or sent home for family projects. Some sample activities are making adobe bricks, making a sand sculpture using sand and cornstarch, layering the components of soil in a jar, and making a fossil.

This book contains a collection of positive behaviors humans can implement to decrease their negative impact on the environment.

Student empowerment can make all the difference in the world, as demonstrated in this positive story about a group of elementary school students' efforts to save a creek and prepare it for the salmon that were being "grown" at their school. Their experiences are described through color photographs and a narrative interpersed with actual dialogues that took place among students, teachers, and other adults. Glossary.


This simple, direct, very informative book examines the earthworm. The two-page fact sheet will be helpful in discussions with children.


This is a summary of owl folklore, habitat, adaptations, and descriptions of various kinds of owls.


Two children and their parents move to a new home in the city and the family plants a garden. Each phase is described as the family works together to implement their plans. Several pages have inserts that describe


Roop, Peter and Connie. One Earth, A Multitude of Creatures, Walker.


A children’s book that examines common things that children touch. In addition, it contains a scientific section with detailed information and a chart directed toward young children.

Ruis, M. The above-mentioned books including others authored by Ruis are available in Spanish.

This story challenges the reader to discover wildlife in a snow-covered backyard that first appears empty. Readers become aware that many forms of animal and insect life share his or her environment.

This book focuses on the issues of garbage, conservation, and recycling.


This book explains how to care for small wildlife in the classroom.

A collection of poetry based on wildlife. The poems are illustrated in watercolors.

Arranged in order, the artist’s engaging watercolor sketches introduce a variety of species. Introductory paragraphs and informative captions provide details on habits and habitats. Glossary.
Wilson, A. (1990). Look! The Ultimate Spot-the-Difference Book. (Grade level: K-Adult.) A beautifully illustrated picture book that challenges the reader to discover differences between pairs of seemingly identical pictures. The reader is exposed to a variety of global ecosystems. Each page is keyed at the back of the book. The key identifies and describes the unique qualities of the illustrated wildlife.
