

Curriculum Units by Fellows of the Yale-New Haven Teachers Institute 1997 Volume VII: Environmental Quality in the 21st Century

You Can Change the World

Curriculum Unit 97.07.03 by Francine C. Coss

"The water and the air were the two things we all shared."

Few people truly realize the impact that one person can have on the environment. Yet we all take the air and water around us for granted. Just as the local water authority encourages city residents to dispose of household waste properly, the definition of hazardous is most definitely an individual's perception. What is hazardous? Diazonon is hazardous to grubs, ants and other backyard pests, but it is also hazardous to earthworms, birds, pets and children. Yet, the American gardener uses Diazonon freely in and around their backyards each and every day. Oh sure they may follow the directions for use carefully, but they are not really reading the warnings and cautions. If the local garden center sells it, it must be safe enough.

Safe enough. Again an individual's interpretation of hazardous. An enlightened parent chooses not to use chemicals to add 'green' to their lawn, but their neighbor does. That same chemical-free individual drains their antifreeze from their car in front of their home and watches as the greenish liquid runs to the end of the block into the sewer grate. Safe enough? Hazardous? It's a matter of opinion.

The main thrust of "You Can Change the World" is to enlighten the children who have not yet formed their own opinions. They only know the opinions of their parents, relatives and neighbors. The goal of the unit is not to force a way of thinking onto the children, but to provide a thinking pattern that will look beyond their own backyard.

The quality of our environment is directly linked to our efforts to maintain and replenish utilized resources. Adults and children alike tend to forget the ramifications a single non-caring individual has on their local and global environments. Through my unit, "You Can Change the World," I will enlighten young and old members of my surrounding school community to the positive and negative effects each of us can have upon the environment by providing knowledge of the food chain, the environment and the habitat necessary for the healthy existence of animals, plants and humans.

Curriculum Unit 97.07.03

Introduction or Overview

Each year, my Kindergarten class completes a four month unit on animals. Beginning in late February with pets and continuing through April with wild life and water life, my Kindergartners study many different types of animals. Through the theme-based curriculum provided by *The Treasure Tree* the children are exposed to four animal-centered themes: Pet Show, On the Farm, Animals Animals, and Splish Splash. Each theme introduces specific types of animals, their habitats, eating habits and physical characteristics. Although these aspects are covered through the recommended curriculum resources and are expanded upon through a previously authored unit entitled, *I Wear my Genes Inside-Out: The Genetic Characteristics of Animals*, information is lacking in the relationship between animal life and plant life, especially as it applies to the environment. The unit, "You Can Change the World," will fill the void of information in these areas through its discussion of how animals need specific types of plant life and environmental conditions to survive. "You Can Change the World," in conjunction with the recommended curriculum in *The Treasure Tree* and the expanded curriculum in *I Wear My Genes Inside-Out*, will broaden the four animal units to include plant life, ecosystems and environmental improvement.

Unit I: Pets

As each animal unit begins, characteristics, eating habits and habitats are defined for the animals of study. Beginning with the most familiar animals, pets, the children are encouraged to describe the specific characteristics for each pet as it is introduced. Habitat is established through thorough reading and investigation of the animal's characteristics. Charts are completed displaying each animal's food, space and health requirements. The children then culminate the pet study by determining which pet would be best suited for the classroom environment. Further investigation of the space, temperature conditions, and availability of care by the children in the classroom will be documented and related to the pet charts. A classroom pet is then chosen and an area is prepared for the new edition to the classroom. Items that may be hazardous to the pet are removed from the classroom or placed in another area of the classroom away from the pet's living area. The new environment created will fulfill as many of the pet's habitat requirements as possible, without hindering the learning environment for the students. A student-made book entitled "Pets" will be published by the children containing all the information gathered during the classroom pet study. "Pets" will then be added to the classroom library for future reference.

Unit I: Sample Lesson Plan

"Pets" Book

Objective: To create a Pet Information Book using class-collected facts and photographs from previous

lessons and activities.

Materials: Color photographs of a variety of pets

Computer//Color Scanner//Color Printer

Scanning Software//hot/cold laminating film//scissors

laminating machine//oak tag/construction paper//glue stick book binding machine and spines or hole punch and yarn

copies of Pet Information Worksheetmarker/crayons

Curriculum Unit 97.07.03 2 of 14

Fact books and class-made fact charts/diagrams from previous lessons

Preparation: Using a scanner, scan each pet photograph.

Reduce each image to 2" wide by 2" high (approximately), cropping if necessary.

Save reduced image, name each image for the name of the pet scanned.

Print each pet image, in color, on oak tag, white construction paper or white 8.5" x 11" copy paper.

Copy one Pet Information Worksheet for each scanned image on oak tag, colored construction paper or white 8.5" x 11" copy paper.

Glue one scanned pet image onto each Pet Information Worksheet.

(Glue Pet Information Worksheet onto oak tag or colored construction paper if it is copied onto white 8.5" x 11" copy paper).

Ask the students to complete the Pet Information Worksheets using the class-made charts, diagrams and reading material available to them as a whole class activity, a small group or cooperative activity, or as an individual assignment (whichever method your students are most comfortable).

Hot/Cold laminate each completed Pet Information Worksheet.

Bind worksheets: 1)using a book binding machine with theappropriate length of spine, following

manufacturer's instructions,

2)or using a hole punch, punch 2-4 holes at the same distance into each Pet Information Worksheet and thread one length of yarn through each hole. Once all of the worksheets have been punched and threaded, tie the yarn.

*Note:

Completed worksheets may be copied and multiple copies of the "Pets" book may be published, allowing for one copy per student instead of one classroom copy.

Also, the completed worksheets may be reduced and double-sided on a copy machine to conserve paper, providing each student with a mini-sized version of the bigger classroom copy.

Pet Information Worksheet on following page.

Pet Information Worksheet

(figure available in printed form)

Unit II: Farm Animals

Following the month-long discussion of pets and the class pet culminating activity of pet adoption during the Pet Show theme, the children will then begin their study of farm animals. The food chain will automatically enter the discussion of animals on a farm due to the nature of the animals' existence. Animals for consumption as well as animal by-products will be discussed. The purpose of keeping pets will naturally be compared to the purpose of keeping farm animals. Discussions on environment and habitat will reoccur under the new theme of farm life. Foods that are consumed by the children will be connected to the farm animal studied using a picture diagram of the animal and its provided food or by-product. The children will then study the food eaten by the farm animals and discuss the relationship between what the farm animals consume and how it effects the food they provide to humans. A simple food chain illustrating what each farm animal consumes and what humans consume from that farm animal will be created and displayed in the classroom. Hazardous food products for the animals will be defined and human reaction to those hazardous products will be reviewed. A visit to Field View Dairy Farm will provide the children with a better understanding of animal products that humans consume. A discussion of habitat cleanliness and environmental conditions will take

Curriculum Unit 97.07.03 3 of 14 place both during and following the farm trip. The simple food chain illustrations will be revisited and edited from the children's increased knowledge of farm animals.

The culminating activities of butter churning (See Items 1A and 1B) and ice cream making (See Item 2) will offer additional discussion and comparison of food products that come from animals and that are consumed regularly by humans. Ingredients from store-bought butter and ice cream will be listed and compared to the ingredients from the class-made items. Discussion of ingredient necessity versus product life will come into play as the children compare ingredients and palatability of both the store-bought and the class-made products.

Unit II: Sample Lesson Plan

See Items 1A, 1B, and 2 for Materials and Preparation on following page.

(figure available in printed form)

Unit III: Wild Animals

With the conclusion of the On the Farm theme, the children will begin their study of wild animals. The food chain concept covered in our study of farm animals

will be further expanded to include animals eating plants, animals eating animals and humans eating animals. The wildlife of the surrounding community will be studied first with the introduction of rodents and backyard birds. The expansion will be natural as the food chain is expanded to encompass more and more wild life. Environment will be a factor to be added to the food chain study emphasizing the impact of environmental change on animal and plant life. The rainforest will be studied and trips to the Peabody Museum and the Beardsley Zoo will be taken to enhance the children's understanding of area wild life and rainforests.

As each animal is introduced into the community wild life study or into the rainforest wild life study, a HyperStudio" card will be created (See Item 3). Images of the animal will be scanned using a color scanner in the classroom or a digital photo will be taken of the animal at the Peabody Museum or at the Beardsley Zoo using an Apple"QuickTake 150 camera during the two class trips. The HyperStudio" card will contain a picture or photograph of the animal, a written description of the animal and a link to a food chain card in the same stack. As each new animal card is added to the stack it will be linked to other animals and food chains to further illustrate the complexities of plant life, animal life and the environment. The stack will be used for reference by the students independently. The stack will also be shared with other classrooms studying plants, animals and the environment.

The culminating project for our Animals Animals theme will be the creation of several interconnected food chains for display in the school's main corridor. The food chains will feature photographs, scanned images, digital images and child-created images of the various animals, plants and foods studied during the wild animal theme. Information previously gathered will be included in the large food chain display. The HyperStudio" project will be copied to a floppy disk, printed into a book and copied onto a video cassette tape. The disk, book, and video will be placed in the school library/resource area for use by other classes.

(figure available in printed form)

Curriculum Unit 97.07.03 4 of 14

Unit III: Sample Lesson Plan

HyperStudio" Wild Animal Project

Objective: To create a HyperStudio Stack containing images, facts and other materials related to class-

studied animals.

Materials: HyperStudio Software

Computer with Built-In Microphone and AV card

Digital Camera and/or Scanner
Digital Camera/Scanner Software

Color Photographs of a variety of wild animals (for use with scanner)
Color Drawings of a variety of wild animals (for use with scanner)
Digital images of wild animals (taken during zoo/museum field trip)
Fact books and class-made fact charts/diagrams from previous lessons

Preparation: Using a scanner, scan each animal photograph and drawing.

Reduce each image to 2" wide by 2" high (approximately), cropping if necessary.

Save reduced image, name each image for the name of the animal scanned.

Using a digital camera, reduce and crop each animal photo.

Save each digital image and name each image for the name of the animal displayed.

Create a HyperStudio Stack containing a card for each scanned/digitally photographed animal image. Each card should display facts and links to other cards/stacks.

Place each scanned/digitally photographed image on its respective card in the stack.

Using the computer's built-in microphone, record students reading the facts, etc. as they appear on each card. Follow the HyperStudio instructions for creating a button with sound. *Note:This stack can be accessed over and over again for reference purposes. Copies of the stack can be placed on floppy disks and distributed to the students for home use. If a student does not have access to a computer at home, a videotape can be recorded of the stack and its various links for viewing on a VCR. If a student does not have access to a VCR, the stack and its links can be printed on regular copy paper and bound for home use.

Also, stacks can be used year after year and are easily edited as needs change.

Stacks can also be locked to avoid alteration when used by students or other classes/schools. See HyperStudio instructions for locking stack.

Unit IV: Water Life

The environment will continue to be discussed via the food chain example during the class' study of water life. The theme Splish Splash will cover the same ground only underwater, leading the children to complete an additional HyperStudio" research stack for water life. Trips to the Whitney Water Center, Blake Street Park, Edgewood Park, Lighthouse Park, Schooner, and the Norwalk Maritime Center will all reinforce the students' understanding of the food chain and environment as it exists underwater. Fresh water and salt water environments will be compared with salt being both the positive and negative attribute for the respective environments. Links from the HyperStudio" water life stack will be made to the wild animal stack, allowing the children to further understand the impact one environment has on another. Disk, print and video copies of the more comprehensive HyperStudio" stack will also be submitted to the library/resource area for use by other classes.

Curriculum Unit 97.07.03 5 of 14

The culminating project for Splish Splash will be the creation and maintenance of a classroom aquarium. The information gathered in the HyperStudio" water life stack will provide the students with the background necessary to select the aquarium size, contents and upkeep schedule. Salt water versus fresh water environments will be compared for viability in the classroom aquarium. The water life chosen for the aquarium will be labeled and information will be entered into a separate HyperStudio" stack for continued analysis and observation. The life span of the selected water life will be tantamount to the environmental preservation within the aquarium. This highly controlled water environment will open the discussion of controlling other, less confined environments, such as our classroom, our school yard, our community, etc.

Unit IV: Sample Lesson Plan

HyperStudio" Water Life Project

Objective: To create a HyperStudio Stack containing images, facts and other materials related to class-studied water-life.

See "Unit III: Sample Lesson Plan" HyperStudio Wild Animal Project and alter/expand project to encompass water life, especially classroom aquarium life.

Conclusion

The conclusion of the four animal units will combine the information studied in all previous themes and directly connect that information to human behavior. The new environmental theme will research how humans effect the various environments positively and negatively. The goal will be a presentation of environmental facts and methods of counteracting the negative while promoting the positive. Land, air and water treatment will be covered, opening the doors a school wide environmental project.

Beginning first on a smaller scale, the classroom environment, the people, animals and objects that enter and exit the classroom environment daily will be defined and posted. People and animal habits that can enhance the classroom environment will be analyzed and solutions to negative environmental connections will be implemented. Objects that enter and exit the classroom, such as food and garbage will also be analyzed. A simple environmental solution that not only improves the classroom environment but also the school and surrounding community environments will be found in the food/garbage analysis. A small compost container will be placed in the classroom for investigating insect life and soil composition. Daily breakfast garbage will be added to the compost container by the children. The compost will be described to the children as a food chain, or even more complex, an ecosystem, containing necessary organisms for soil improvement and waste reduction. As the compost contents increase, a new, larger compost container will be created outdoors. A campaign to discard all breakfast and possibly even lunch waste will be sponsored by my Kindergartners, allowing for a school-wide waste reduction and soil improvement effort. The overall connection of human behavior to environmental maintenance and improvement will be made through the expansion of this classroom composting project.

The large scale project will begin with an organic vegetable garden first cultivated in our classroom and then expanded to the school grounds. The success of the school-wide compost effort will be highlighted through the success of the "KinderGarden" planted and cared for by my Kindergarten students. Beans and possibly other vegetables will be planted and sown for the consumption of the student body during a special lunch grown and cooked by my Kindergartners. The interest in organic gardening will be peaked for the student body, and

Curriculum Unit 97.07.03 6 of 14

an organic, "BeecherGarden" will then be planted and maintained, following the same concepts of environmental awareness as exemplified through the previous" KinderGarden" project. The concept of ecosystems will be revisited on a larger scale as older students are directly involved in the maintenance and consumption of the garden's produce. Vegetables requiring a longer growing period will be planted for late summer and early fall picking. The impetus for independence of effort in environmental improvement will be highlighted through the efforts of children and other community members in the upkeep of the "BeecherGarden" during the summer months.

The positive efforts my Kindergarten students make in the school community will expand to their local community through larger scale clean-up efforts and organic community gardening. The children will integrate their four month study of animal life and habitats with the study of the physical environments surrounding their school and greater community. Necessary ecosystems that should exist for animal and plant survival in and around the school will be analyzed and improved through class, school and community efforts. School, parent and community involvement in environmental clean-up and improvement will be inevitable due to the spread of information from my Kindergartners' efforts. Working with the land in and around the school facility, the children's study of plant life will coincide with their continued study of ecosystems and environment. The children will be educated in the areas of relative plant and animal life, natural pesticides, and animal homes. The land surrounding the school building will then be assessed and transformed with the combined efforts of the Kindergartners, other students, parents and community members, to encourage future plant growth and wildlife habitation.

"The water and the air were the two things we all shared," no longer stings when read aloud. The present animal life classroom curriculum, expanded to include food chains and ecosystems that apply to the local environment has equipped the children and the community with a greater understanding of environmental responsibility and preservation.

After the initial impact, we may all revert back to our former opinions and habits. We may once again take the air and water around us for granted. We may once again continue to define hazards as they apply to our immediate surroundings. We may once again continue to claim items and habits to be 'safe enough.' But the enlightened children of L.W. Beecher School will know the realities of individualized definitions of 'hazardous.' They will know how their personal environments impact the environment at large. They will understand how the quality of their environment is directly linked to their efforts to maintain and replenish resources. The children who have not yet formed their opinions will be transformed into educated environmental decision-makers with opinions based on personal experiences and facts.

Those who forget the ramifications a single non-caring individual has on their local and global environments will be reminded by the continued actions of the students involved in "You Can Change the World." Young and old members of the surrounding school community will be privy to the positive and negative effects each of us can have upon the environment. More people may truly realize the impact that one person can have on the environment.

No one is forcing a way of thinking onto the community, but the actions of the children will provide a thinking pattern for onlookers that will cause them to glance beyond their own backyard when spreading pesticides, dumping garbage or emptying radiator fluid. "You Can Change the World" will enable the youngest members of the school community, Kindergartners, to enhance and improve the local environment while educating themselves and others about the effects an individual has on his or her environment. Even though the overall effects may be small, they are affecting the smallest members of our community, who will someday be the

Curriculum Unit 97.07.03 7 of 14

decision-makers for the world.

Bibliography

Children's Resources

Back, Christine. Bean and Plant. Morristown, NJ: S. Burdett Co., 1986.

Follows the development of a bean plant from the emergence of the first tiny shoot to the appearance of flowers and bean pods.

Back, Christine. Tadpole and Frog. Morristown, NJ: Silver Burdett, 1986.

Photographs follow the development of a frog from egg to tadpole to frog.

Brown, Marcia. Stone Soup. Pine Plains, NY: Live Oak Media, 1987.

When three hungry soldiers come to a town where all the food has been hidden, they set out to make a soup of water and stones.

Carle, Eric. The Tiny Seed . Natick, MA: Picture Book Studio, 1987.

A simple description of a flowering plant's life cycle through the seasons.

Carle, Eric. The Very Busy Spider. New York: Philomel Books, 1995.

The farm animals try to divert a busy little spider from spinning her web, but she persists and produces a thing of both beauty and usefulness. The pictures may be felt as well as seen.

Carle, Eric. The Very Hungry Caterpillar . New York: Philomel Books, 1970.

Describes sets of up to ten objects which a hungry caterpillar ate during the week before he turned into a beautiful butterfly.

Challand, Helen J. Plants Without Seeds . Chicago : Childrens Press, 1986.

Examines the characteristics of simple plants that do not have seeds, including algae, fungi, lichen, mosses, and ferns, with a brief look at bacteria.

Cristini, Ermanno and Luigi Puricelli. *In My Garden* . Boston, MA: Alphabet Press, 1981.

Domestic animals including rabbits and a cat share a garden environment with a variety of small wild creatures. A wordless book.

Ehlert, Lois. Growing Vegetable Soup. San Diego: Harcourt Brace Jovanovich, 1987.

A father and child grow vegetables and then make them into a soup.

Ehlert, Lois. Planting a Rainbow. San Diego: Harcourt Brace Jovanovich, 1988.

A mother and child plant a rainbow of flowers in the family garden.

Curriculum Unit 97.07.03 8 of 14

Eyewitness Juniors. Amazing Monkeys. New York: Alfred A. Knopf, 1991.

A fact book about monkeys.

Florian, Douglas. Vegetable Garden . San Diego: Harcourt Brace Jovanovich, 1991.

A family plants a vegetable garden and helps it grow to a rich harvest.

Henwood, Chris. Earthworms . New York: F. Watts, 1988.

Shows how to find, house, feed, care and observe earthworms.

Henwood, Chris. Frogs . New York: F. Watts, 1988.

Close-up photographs and text show how to care for frogs which may be purchased or found outdoors.

Henwood, Chris. Snails and Slugs . New York: F. Watts, 1988.

Shows how to find, house, feed, care and observe snails and slugs.

Hunt, Bernice Kohn. The Busy Honeybee . Four Winds Press, 1972.

Describes the characteristics and duties of the different kinds of bees in a hive and explains how honey is harvested. Hurd, Thacher. *Pea Patch Jig*. New York: Crown, 1986.

Despite being picked with the lettuce and almost ending up in a salad, Baby Mouse refuses to stay out of Farmer Clem's garden.

Jordan, Helene J. How a Seed Grows . New York: Crowell, 1960.

Kellogg, Steven. Jack and the Beanstalk. New York: Morrow Junior Books, 1991.

A boy climbs to the top of a giant beanstalk, where he uses his quick wits to outsmart a giant and make his and his mother's fortune.

Kraus, Robert. Leo the Late Bloomer . New York, 1971.

Leo, a young tiger, finally blooms under the anxious eyes of his parents.

Krauss, Ruth. The Carrot Seed . New York: Harper & Row, 1945.

A young boy plants a carrot seed and, although the adults tell him that nothing will happen, he just knows it will come up.

Kroll, Steven. The Biggest Pumpkin Ever . New York: Holiday House, 1984.

Two mice, each without the other's knowledge, help a pumpkin grow into "the biggest pumpkin ever"—but for different purposes.

Maris, Ron. In My Garden . New York: Greenwillow Books, 1987.

A girl notes the objects, animals, and friends she enjoys seeing in her garden.

Markman, Erika. Grow It! An Indoor/Outdoor Gardening Guide for Kids .

New York: Random House, 1991.

Curriculum Unit 97.07.03 9 of 14

Provides tips on how to grow and care for plants.

McGavin, George. Bugs . New York: Bookwright Press, 1989.

Describes the physical characteristics, life cycles, defenses, types, and behavior of bugs.

Overbeck, Cynthia. How Seeds Travel. Minneapolis: Lerner Publications Co., 1982.

Describes how seeds are moved from place to place by wind, water, and animals, and how they function in plant reproduction.

Parker, Nancy Winslow and Joan Richards Wright. Bugs . New York: Greenwillow Books, 1987.

Includes general information, jokes, and brief descriptions of the physical characteristics, habits, and natural environment of some common insects.

Potter, Beatrix. The Tale of Peter Rabbit . London: F. Warne, 1993.

Peter disobeys his mother by going into Mr. McGregor's garden and almost gets caught.

Rockwell, Anne and Harlow. How My Garden Grew . New York: MacMillan, 1982.

With pride and pleasure, a little girl describes growing a garden all by herself.

Scholastic. What's Inside? Animal Homes . New York: Dorling Kindersley, 1993.

A fact book about bee, bird, beaver, rabbit, squirrel, and pea crab homes.

Small, Terry. Tails, Claws, Fangs & Paws: An Alphabeast Caper . New York: Bantam, 1990.

Rhyming text and pictures offer several animals for each letter of the alphabet.

Titherington, Jeanne. Pumpkin Pumpkin . New York: Greenwillow Books, 1986.

Jamie plants a pumpkin seed and, after watching it grow, carves it, and saves some seeds to plant in the spring.

Tresselt, Alvin. The Gift of the Tree . New York: Lothrop, Lee & Shepard Books, 1992.

Traces the life cycle of an oak tree and describes the animals that depend on it for shelter and food.

Watts, Barrie. Ants . New York: F. Watts, 1990.

A guide to keeping ants temporarily for the purpose of observing them.

Watts, Barrie. Butterfly and Caterpillar. Morristown, NJ: Silver Burdett Co., 1986.

Photographs follow the development of a butterfly from mating to birth of the caterpillar to chrysalis to the emergence of the butterfly.

Watts, Barrie. Beetles . New York: Franklin Watts, 1989.

Discusses how to collect beetles for observation and how to care for them before releasing them.

Curriculum Unit 97.07.03 10 of 14

Watts, Barrie. Caterpillars . New York: F. Watts, 1989.

Describes the appearance, life cycle, habitat, collection, and care of caterpillars.

Watts, Barrie. Dragonfly . Englewood Cliffs, NJ: Silver Burdett Press, 1989.

Photographs, drawings, and text depict how a dragonfly hatches from a tiny egg, lives underwater as a nymph, and finally emerges fully grown to fly away.

Watts, Barrie. Duck . New York: Lodestar, 1991.

Photographs and text depict the growth and development of a duck from egg to its sixth week.

Watts, Barrie. Grasshoppers and Crickets. New York: F. Watts, 1991.

Describes where to find grasshoppers and crickets and how to keep them as pets, feed them, and breed them.

Watts, Barrie. Honeybee . Englewood Cliffs, NJ: Silver Burdett Press, 1989.

Describes the life cycle and behavior of the honeybee.

Watts, Barrie. Ladybug. Morristown, N: Silver Burdett, 1987.

Photographs, drawings, and text on two different levels of difficulty follow the stages of development of the ladybug, from mating and hatching of the larvae to the growth of the larvae into adult ladybugs.

Watts, Barrie. Mouse . New York: Lodestar Books, 1992.

Photographs and text show the development of a mouse from birth to eight weeks old.

Watts, Barrie. Potato. Englewood Cliffs, NJ: Silver Burdett Press, 1990.

Photographs and brief text on two levels of difficulty describe how the potato develops from a shoot to a plant with the edible part growing underground.

Watts, Barrie. Rabbit . New York: Lodestar Books, 1991.

Photographs and text depict the development of a rabbit from birth through six weeks of age.

Watts, Barrie. *Tomato* . Englewood Cliffs, NJ: Silver Burdett Press, 1990.

Follows, in text and illustrations, the development of a tomato from seedling to full maturity.

Wexler, Jerome. Flowers, Fruits, and Seeds . New York: Prentice-Hall Books for Young Readers, 1987.

Photographs of various plants and trees show characteristics of different leaves, seeds, and flowers and depict the cycle from flower to fruit to seed to flower.

Curriculum Unit 97.07.03 11 of 14

Teacher Resources

Appelhof, Mary. Worms Eat my Garbage. Kalamazoo, MI: Flower Press, 1982.

Berger, Melvin. Jobs that Save Our Environment . Lothrop, Lee & Shepard, 1973.

Introduces the many careers available in the field of environmental control, including weather forecaster, geophysicist, oceanographer, plant ecologist, sewage plant worker, forest fire watcher, and city planner.

Burton, Maurice and Robert Burton. The New International Wildlife Encyclopedia. Milwaukee: Purnell References Books, 1980.

A 21-volume encyclopedia devoted to the physical characteristics, behavior, and natural environment of animals, birds, and fishes of the world.

Campbell, Stu. Let it Rot!: The Gardener's Guide to Composting . Charlotte, VT: Garden Way, 1975.

Composting and organic farming.

Cornell, Joseph. Sharing Nature with Children: A Parents' and Teachers' Nature-Awareness Guidebook . Nevada City, CA: Ananda Publications, 1979.

Nature study and games.

Coss, Francine Conelli, *I Wear My Genes Inside-Out: The Genetic Characteristics of Animals* . New Haven, CT: Yale-New Haven Teachers Institute, 1996.

Related Yale New Haven Teachers Institute Unit.

Daniel, Mark. A Child's Treasury of ANIMAL VERSE. New York: Dial Books for Young Readers, 1989.

An illustrated collection of rhymes, songs, and poems about animals from Belloc, Rossetti, Wordsworth, and other British and American writers of the nineteenth and early twentieth century.

Davis, Burke. Newer and Better Organic Gardening. Putnam, 1976.

A guide to organic vegetable gardening, including instructions for making compost, preparing the soil, and planting and caring for a garden without using poisons.

Farr, Roger C. and Dorothy S. Strickland. The Treasure Tree . Volume 1 and

Volume 2. New York: Harcourt Brace Jovanovich, 1993.

Contains Kindergarten curriculum used by New Haven Public Schools.

Hanna, Jack. Jack Hanna's Ultimate Guide to Pets . New York: Putnam, 1996.

Harr, Jonathan. A Civil Action . New York: Vintage Books, 1995.

Heriteau, Jacqueline. Grow It, Cook It. New York, NY: Perigee Books, 1983.

Curriculum Unit 97.07.03 12 of 14

Revised edition of "The How to Grow and Cook It Book of Vegetables, Herbs, Fruits, and Nuts," (1970).

Jeavons, John. How to Grow More Vegetables than You Ever Thought Possible on Less Land than You Can Imagine: A Primer on the Life-Giving Biointensive Method of Organic Horticulture. Berkeley, CA: Ten Speed Press, 1991.

Kraus, Robert. Leo the Late Bloomer. Weston, CT: Weston Woods Studios, 1983.

Filmstrip: Leo, a young tiger, finally blooms under the anxious eyes of his parents.

Lauber, Patricia. Fur, Feathers, and Flippers. New York: Scholastic, 1994.

Animal habitats and ecology.

Lavies, Bianca. Compost Critters . New York: Dutton Children's Books, 1993.

Describes what happens in a compost pile and how creatures, from bacteria and mites to millipedes and earthworms, aid in the process of turning compost into humus.

Leinwoll, Stanley. The Book of Pets . New York: J. Messner, 1980.

Provides information about the cost, care, feeding, breeding, and housing of the most popular pets.

Pleasant, Barbara. The Gardener's Bug Book: Earth-Safe Insect Control. Pownal, VT: Storey Communications, 1994.

Insect pests, biological control and organic gardening.

Rockwell, Harlow. The Compost Heap. Garden City, NY: Doubleday, 1974.

Explains simply how a compost heap is made and how it turns into soil.

Schindel, Morton. Stone Soup. Weston, CT: Weston Woods Studios, 1955.

Motion Picture: 1 film reel (11 min.); 16 mm. An iconographic retelling of the old tale about three hungry soldiers who come upon a French village and are told that there is no food to eat. Putting their heads together, they cook up a soup of stones and a clever way of tricking the villagers.

Schindel, Morton. Stone Soup. Weston, CT., Weston Woods Studios, 1955.

Filmstrip: A retelling of an old folktale about three French soldiers who trick the villagers into giving them food.

Silverstein, Shel. The Giving Tree . New York, Harper & Row, 1964.

A young boy grows to manhood and old age experiencing the love and generosity of a tree which gives to him without thought of return.

Smith, Alison. The Kids' Nature Almanac: Great Outdoor Discoveries and Activities for Parents and Children. New York: Crown Trade Paperbacks, 1995.

Natural history, nature study, and activity programs.

Steele, Mary Q. Anna's Garden Songs . New York: Greenwillow Books, 1989.

Curriculum Unit 97.07.03 13 of 14

A collection of fourteen poems about the beet, potato, radish, onion, and other plants found in the garden.

Woodcock, John. The Visual Dictionary of Animals. New York: Dorling Kindersley, 1991.

Labels internal and external views of such animals as birds, lizards and snakes, elephants, butterflies and moths, rabbits and rodents, primates, and sharks, and discusses animal tracks and animal classification.

Yepsen, Roger B., Jr. The Encyclopedia of Natural Insect and Disease Control . Emmaus, PA: Rodale Press, 1984.

Protection of plants, organic gardening, and garden pests.

HyperStudio "3.0 7w . Roger Wagner Corporation. Elgin, IL: Educational Resources.

Let's Get Growing! Company Catalog, 1997. 1-800-408-1868

https://teachersinstitute.yale.edu

© 2019 by the Yale-New Haven Teachers Institute, Yale University For terms of use visit https://teachersinstitute.yale.edu/terms

Curriculum Unit 97.07.03 14 of 14