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ABSTRACT

To some educators, infusing environmental education into different subject areas at different levels may seem like an insurmountable task. This handbook was developed to take the guesswork out of this process and alleviate the fear and confusion that may result. It was designed to assist with infusing awareness and attitude activities into the classroom, correlate widely used curriculum supplements with the objectives and principles in the Wisconsin Department of Public Instruction's environmental education guide, and simplify the infusion process using proven and effective activities. Activities are categorized by subject areas, grade levels, environmental education objectives, and ecological principles. Major resources coordinated in this volume include: (1) "Project Learning Tree"; (2) "Project WILD"; (3) "Living Lightly in the City"; (4) "Nature with Children of all Ages"; and (5) "Sharing Nature with Children." The "Fundamental Environmental Principles" are enumerated. Appendices include a "Grades K-3 Appendix" and additional environmental education resources. (CW)

Avoiding Infusion Confusion

A Practical Handbook for Infusing Environmental Activities into your Classroom

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Additional copies of Avoiding Infusion Confusion are available for grades K–3, 4–6, 7–9, and 10--12.
Write or call:

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(See order form at the end of this handbook.)

Table of Contents (Grades K-3)

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INTRODUCTION

"Environmental education should permeate the entire curriculum with every subject area at every grade level dealing with the environment in some way," according to the Wisconsin Department of Public Instruction's A Guide to Curriculum Planning in Environmental Education. To some educators this may seem like an insurmountable task, especially to those unfamiliar with what environmental education has to offer. To help simplify the process of infusing environmental education activities into your present curriculum, we have developed a handbook that takes the guesswork out of this process and alleviates the fear and confusion that may result.

What is "Avoiding Infusion Confusion"?

It is a handbook designed to...

...assist educators with infusing environmental education activities into the classroom.

...correlate widely used curriculum supplements with the objectives and principles in the DPI's A Guide to Curriculum Planning in Environmental Education

...simplify the infusion process utilizing proven and effective activities.

How is it used?

The format is designed for quick reference. Activities are categorized by subject area. They are also coordinated with grade level, environmental education objective and ecological principles.

Why was this handbook written?

It was written to assist...

...school districts in developing a program for the infusion of environmental education into Wisconsin Public School curricula as required by state mandate.

...individual teachers in selecting appropriate activities best suited for their classroom situation.

...educators in developing a systematic approach to infusion that will help reduce preparation time.

By infusing environmental education activities into every subject area in our school systems and in our student's everyday lives, we are increasing their knowledge, and appreciation of the natural environment. We are also insuring that students will be better equipped to make responsible decisions when faced with environmental issues. The task of infusing environmental education may seem like a tall order, but we're sure you'll agree that it's well worth the effort. Good luck!

Objective Categories

Grade-Level Emphases on Environmental Education Objective Categories

Level	Major Emphasis	Minor Emphasis
K - 3	Awareness Attitudes	Knowledge Skills Participation
3 - 6	Knowledge Attitudes	Awareness Skills Participation
6 - 9	Knowledge Skills Attitudes	Awareness Participation
9 - 12	Skills Participation Attitudes	Awareness Knowledge

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We have divided our handbook into four separate parts, according to grade levels. The four are: K-3, 4-6, 7-9, and 10-12. Piaget's levels of intellectual development illustrate the importance of teaching basic skills and concepts to young children, and moving towards more challenging activities. This is reflected in a changing degree of emphasis on each objective category for each of the four grade-level groups. As an administrator or teacher, you will want to know what to emphasize with your students and what will be emphasized in other grades, as well as your own. This will insure that each program has sequence, and each student has consistency from year to year.

Finding an activity in this handbook: An Example

Imagine that you are a seventh grade Language Arts teacher planning a lesson that incorporates the ecological concept of interdependence. You would like to use an activity that would help illustrate this concept and would be appropriate for the grade level and subject area that you are teaching. You have a number of environmental education resources (i.e. Project Learning Tree) but you have not had a chance to use them extensively in the classroom. Along with your other materials you have this exciting new handbook that is designed to simplify the process of infusing environmental education into your lesson plans.

Step 1. Turn to the "Concept Index" in the back of this handbook under "Interdependence" listed alphabetically. Next to the concept is the principle number and the page number it is located on. You may use either the principle number or the page number to locate this concept.

Step 2. After finding the page number and/or principle number, turn to the Environmental Activities Section and locate the appropriate page. You will find the concept (possibly along with others) at the top of the right page.

Step 3. Locate the environmental education resource you would like to use from those listed in the left column.

Step 4. Move across the row of boxes until you are beneath the correct content area. This box may contain a list of activity titles and page numbers. An empty box means that there was not an appropriate activity in the environmental education resource for this subject area and concept. If one or more activities are listed, turn to the environmental education resource that you are using and check to see if the activity teaches the concept you are interested in. Remember that an asterisk in the box indicates additional activities for these concepts and this environmental education resource are located in the appendix of this handbook.

Fundamental Environmental Principles*

Concept	Principle
Solar Energy	(1)
Secondary Energy Sources	(2)
Earth's Energy Balance	(3)
Weather & Climate, Water Cycle, Biosphere Oceanography	(4)
Decomposition, Erosion Habitat, Interaction, Interdependence, & Niche	(5)
Adaptations, Change, Camouflage, Continental Drift, Diversity, Evolution, & Succession	(6)
Biogeochemical Cycles, Energy Transfer, Food Webs, Photosynthesis, Renewable Resources, & Respiration	(7)
Birth-Death Rate, Carrying Capacity, Homeostasis, Human Population Growth, Limiting Factors, & Population	(8)

I. Fundamental Principles Dealing with Earth's Environment

A. Earth's environment operates as a system supported by conditions that are functions of earth's structure and place in the solar system.

1. Solar energy is the primary source of energy for all biogeochemical cycles and other processes occurring on earth.
2. Nuclear processes, geothermal sources, tidal movements, and gravity are secondary sources.
3. The earth is in a state of overall energy balance, absorbing energy from the sun and radiating it into space.
4. Absorption and distribution of solar energy results in the movement of global air masses, the hydrologic (water) cycle, and ocean currents, giving rise to earth's prevailing weather and climates and providing conditions essential to life on earth.

B. Earth's environment is a complex, interrelated, interactive, dynamic, constantly changing macrosystem called the ecosphere.

1. The ecosphere is composed of a mosaic of interacting systems called ecosystems.
2. The ecosphere has and is undergoing continuous change.
3. Energy and materials required for life pass into or are found in the ecosphere, and are components of each ecosystem.
4. Each ecosystem of the ecosphere contains a number of species populations, the size and stability of which vary, depending on biotic and abiotic changes in the system.

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Outline based on 1976 Federal Interagency Committee on Education Report.

Concept	Principle
Biological Needs of Humans	(9)
Psychological Needs of Humans	(10)
Use of Materials and Energy, Cultural Attitudes, Values, & Pollution	(11)
Human's Ecological Domination of Earth	(12)
Effects of Humans on Ecosystems Social Interaction	(13)
Human Population Growth and Technology and its Effects on Ecosystems	(14)
Effects of Values on Human Behavior-Impacts on Ecosystems	(15)
Built Environments are Influenced by Ecosystems	(16)

II. Fundamental Principles Dealing with Humans as Ecosystem Components

A. Humans use ecosystems to satisfy basic needs and desires.

1. Basic biological needs that must be met for humans to live and grow include habitable climate, energy, materials, rest and exercise, other humans for reproduction, and protection against environmental stress.

2. Humans cannot grow and completely develop mentally unless essential psychological and social needs and desires are met. These include security, love, esteem, self-fulfillment, social interaction, health, comfort, material goods, and religious experiences.

3. Each human culture has its own perceived needs and desires that make different demands and impacts on ecosystems. In times of stress many of these needs and desires can be adjusted.

B. Humans are an all-pervasive species in the ecosphere and thus exert a special ecological dominance.

1. Human domination results from various factors which include...large intellectual capacity, adaptation to a wide range of environmental conditions, large population size, specialization in diversity of labor.

2. Human tendencies to form and function in social and corporate groups and institutions promote development of human habitats that create unique concentrated demands on ecosystems and further increase human effects on ecosystems.

3. Recent rapid increases in human populations and technological capabilities have accelerated ecosystem changes until some are potentially irreversible.

4. Human aesthetic, ethical, moral, and spiritual values may reinforce or conflict with harmonious relationships within ecosystems.

C. Ecosystems affect humans

1. Humans and all their products function in an ecosystem framework.

Concept	Principle
Ecosphere Changes Due to Human Population and Technology Nonrenewable Resources	(17)
Physical and Chemical Components of Ecosystems: Effects on Humans	(18)
Human Needs and Values: Effects on Ecosystems	(19)
Interrelationships	(20)
Feedback Mechanisms of Ecosystems	(21)
Synergistic Effects	(22)
Appreciating Ecosystems and their Components, Appreciating the Environment, Human Impacts on Ecosystems	(23)
Barriers to Ecosystem Harmony	(24)

2. Ecosphere changes due to increasing human population and technology have both short and long term effects.

3. The built environment and its psychological miliea have a powerful effect on humans. Information transfer by verbal comunication and learned behavior operates on humans in a parallel and synergistic manner in much the same way as do physical and chemical components of ecosystems.

D. Complex interactions among humans and other ecosystem components occur continuously.

1. Humans' perceptions of their needs, their impacts on ecosystems, and ecosystem impacts on them, reflect the cultural and individual values, goals, skills, insights, and capabilities of the individuals, groups, institutions, and nations involved.

2. Relationships among components of ecosystems are reciprocal, ranging from mutually beneficial to unidirectionally destructive.

3. Feedback mechanisms of different kinds, for xample physical, chemical, social, behavioral, ranging from rudimentary to highly sophisticated, govern relationships among and within components of ecosystems.

4. Human activities often have synergistic effects on ecosystems and visa versa.

5. Human activities affect ecosystem maintenance and management.

III. Methods for Harmonizing Human Activities with Ecosystem Processes to Achieve Environmental Quality

A. Methods by which human activities, local through global, are harmonized with ecosystem processes are complex, and outcomes are not always predictable.

1. Barriers to harmony include...effects of ecosystem changes, lack of knowledge needed to make environmental predictions, and lack of uniformly dependable social-political cooperation.

Concept	Principle	
Methods to Attain Harmony	(25)	2. Harmony can be pursued through...education, environmental art, citizen action, voluntary and formal policies, economic and social incentives, and enforcement of policies.
Methods to Promote Harmony	(26)	3. Institutions, processes, and attitudes for promoting harmony include...education and communication, ethical, moral and other influences, science and technology, civic and social institutions, government and political processes, industry and commerce.
		B. Basic procedure for harmonizing human activities with ecosystem processes can be described as a series of steps.
Investigation of Ecosystems	(27)	1. Investigate ecosystem processes and components, including the effects of human activities on ecosystems and the infllluences of ecosystems on human functioning.
Importance of Ecosystem Processes and Changes	(28)	2. Recognize the importance of ecosystem processes and the significance of ecosystem changes.
Causes of Ecosystem Changes and their Consequences	(29)	3. Identify the causes of ecosystem changes and their consequences.
Action Strategies	(30)	4. Develop alternative action strategies to maintain and enhance beneficial ecosystem changes and to reduce detrimental changes, with special attention to irreversible changes and to long range versus short range commitments of resources.
Analyzing and Evaluating Alternative Action Strategies	(31)	5. Analyze and evaluate alternative action strategies within a broad array of environmental, social, and economic criteria, recognizing that criteria will differ according to circumstances of politics, geography, scale, time and society.
Adopting Action	(32)	6. Select among alternative action strategies, and adopt a policy which can be implemented at all levels, individual through global.
Implementing Action Strategies	(33)	7. Decide on and complete actions to implement the policy.
Monitoring and Evaluating Policies	(34)	8. Monitor and evaluate affects of the implemented policy.
Monitoring Feedback and Adjusting Actions as Necessary	(35)	9. Feeding information gained in Principle 34 back through Principle 27 to adjust actions to changing data bases, requirements, conditions, and perceptions.

Where to Obtain the Environmental Education Resources used in this Handbook:

The CLASS Project

Margaret Rosenberry and NWF staff. Published by and available from National Wildlife Federation, 1412 Sixteenth Street, Washington, D.C. 20036, 1982.

Investigating and Evaluating Environmental Issues and Actions Skill Development Modules.

Harold R. Hungerford, Ralph A. Litherland, R. Ben Peyton, John M. Ramsey, Audrey N. Tomera, and Trudi L. Volk. Champaign, IL. Stipes Publishing Company, 1985

Living Lightly in the City for Grades K-3 and 4-6.

Maura O'Conner, 1985

Living Lightly on the Planet for Grades 7-9 and 10-12

Maura O'Conner and Kathy McGlauflin, 1982, 1984. Published and available from the Schiltz Audubon Center, 1111 East Brown Deer Road Milwaukee, WI, 53217

Nature with Children of All Ages

Edith Sisson. Published by Englewood Cliffs of NJ in 1982. Available through bookstores.

Project Learning Tree: Supplemental Activity Guide for Grades K-6 and 7-12.

Western Regional Environmental Education Council and the American Forest Institute. Published by the American Forest Institute, Washington D.C. in 1975. Available only through a six hour workshop offered throughout the state. Contact Project Learning Tree, Wisconsin DNR, P.O. Box 7921, Madison, WI 53707.

Project WILD: Elementary and Secondary Guides.

Western Regional Environmental Education Council. Published in 1985. Available only through co-sponsoring states at six hour teacher workshops. Contact Project WILD, Wisconsin DNR, P.O. Box 7921, Madison, WI 53707.

Sharing Nature With Children

Joseph Bharat Cornell. Published by Ananda Publications of Nevada City, CA in 1979. Available through bookstores.

A Guide to Curriculum Planning in Environmental Education

Wisconsin Department of Public Instruction. Published by and available from the Wisconsin Department of Public Instruction, 125 South Webster Street, P.O. Box 7841, Madison, WI 53707

Resources Used by Each Grade Level

K-3

Project Learning Tree
Project WILD
Sharing Nature with Children
Nature with Children of All Ages
Living Lightly in the City

4-6

Project Learning Tree
Project WILD
Sharing Nature with Children
Living Lightly in the City

7-9 and 10-12

Project Learning Tree
Project WILD
The CLASS Project
Investigating and Evaluating Environmental Issues and Action Skill Development Modules
Living Lightly on the Planet

Environmental Activities Section

Principle #1

Grades K - 3

Environmental Education Resources	Content Areas: Art	Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City	Mother Earth, Father Sun Celebration p. 106 Energy All Around Me (K-1) p. 126 S Is for Sunshine p. 128	

*-See Appendix for Additional Activities

Content Areas		
Language Arts	Science	Social Studies
Bending Beans p. 32 S Is for Sunshine p. 128 *	Bending Beans p. 32 Mother Earth, Father Sun Celebration p. 106 Energy All Around Me (K-1) p. 126 S Is for Sunshine p. 128 *	Mother Earth, Father Sun Celebration p. 106

Grades K - 3

Principle #2

Environmental Education Resources	Content Areas: Art	Health
Project Learning Tree (Elementary)	Patterns in Nature p. 14	
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City		

Concept: Secondary energy sources

Content Areas		
Language Arts	Science	Social Studies
	Patterns in Nature p. 14	

Principle #3

Grades K - 3

Environmental Education Resources	Content Areas: Art	Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City		

Concept: Earth's energy balance

Content Areas		
Language Arts	Science	Social Studies
Water In My House p. 99	Water In My House p. 99 Wind Dancing, Sun Heating (1-3) p. 132	Water In My House p. 99

Principle #4

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children	Recipe for a Forest p. 54	
Nature With Children of All Ages		
Living Lightly in the City	Energy All Around Me (K-1) p. 126 S Is for Sunshine p. 128	

Concept: Weather & climate
Water Cycle
Biosphere
Oceanography

Content Areas

Language Arts	Science	Social Studies
	Signs of Fall p. 21 Water You Know? p. 94	Water You Know? p. 94
Recipe for a Forest p. 54		Recipe for a Forest p. 54
	Activities with Water p. 127-130	
Heating, Lighting and Moving (2-3) p. 126 S Is for Sunshine p. 128	Energy All Around Me (K-1) p. 126 Heating, Lighting and Moving (2-3) p. 126 S Is for Sunshine p. 128	

Principle #5

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)	Leaf Prints p. 15 Tree Shapes, Natural and Unnatural p. 17 Large Leaves p. 111	
Project WILD (Elementary)	What Bear Goes Where? p. 79 Seeing is Believing p. 99	
Sharing Nature With Children	Meet a Tree p. 26 Recipe for a Forest p. 54 Blind Trail p. 29 Duplication p. 44	Meet a Tree p. 26 Blind Trail p. 29
Nature With Children of All Ages	By the Sea I p. 99-108 By the Sea II p. 109-126	
Living Lightly in the City	S Is for Sunshine p. 128	

Concept: Interaction
Interdependence
Habitat
Niche
Decomposition
Erosion

*-See Appendix for Additional Activities

Content Areas

Language Arts	Science	Social Studies
The "Touchy-Feely" Box p. 18 Living Labels p. 22 Plant Personification p. 25 An Environmental Exchange Box p. 131	Leaf Hunt Relay p. 11 Leaf Prints p. 15 Signs of Fall p. 24 The "Touchy-Feely" Box p. 18 *	Holding Power p. 47 Long Range-Short Range p. 78 Water You Know? p. 94 An Environmental Exchange Box p. 131
Grasshopper Gravity p. 15 Wildlife is Everywhere! p. 19 Habitracks p. 35 Graphananimal p. 81 *	Grasshopper Gravity p. 15 Wildlife is Everywhere! p. 19 Habitracks p. 35 What Bear Goes Where? p. 79 *	Grasshopper Gravity p. 15 Habitracks p. 35 Polar Bears in Phoenix? p. 103
Meet a Tree p. 26 Blind Trail p. 29 Duplication p. 44 Recipe for a Forest p. 54 *	Meet a Tree p. 26 Blind Trail p. 29 Duplication p. 44 Plant Succession Crawl p. 60 *	Meet a Tree p. 26 Blind Trail p. 29
By the Sea I p. 99-108 By the Sea II p. 109-126	By the Sea I p. 99-108 By the Sea II p. 109-126 Activities with Freshwater Life p. 132 Ecology Activities p. 162-171	
Mini-Neighbors p. 70 Water In My House p. 99 S Is for Sunshine p. 128 Going Nature's Way? p. 146	Small Trees, Tall Trees p. 37 Seeds On the Go! p. 46 Flying Feathers Hunt p. 61 Nut Gatherers p. 67 *	Small Trees, Tall Trees p. 37 Flying Feathers Hunt p. 61 Water In My House p. 99 Where Does It Come From? p. 100 *

Principle #6

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)	Large Leaves p. 111	
Project WILD (Elementary)	Color Crazy p. 11 What Bear Goes Where? p. 79	
Sharing Nature With Children	Role Playing p. 31 Unnature Trail p. 40 Pyramid of Life p. 52 Webbing p. 56	
Nature With Children of All Ages	Introductory Tree Activity p. 15 Bark Rubbings p. 22 Drawings and Painting of Trees p. 23 Finding Shapes in Plants p. 33	
Living Lightly in the City	Growing Together (1-3) p. 39 Growing Together Calendar (1-3) p. 42 For the Birds p. 63 Geese Mobiles p. 65	

Concept: Continental drift
Change
Succession
Evolution
Diversity
Adaptations
Camouflage

*-See Appendix for Additional Activities

Content Areas

Language Arts	Science	Social Studies
An Environmental Exchange Box p. 131	Holding Power p. 47 Tree Cookies p. 60 School Yard Safari p. 85 Large Leaves p. 111 *	Holding Power p. 47 Tree Cookies p. 60 An Environmental Exchange Box p. 131
Color Crazy p. 11 Suprise Terrarium p. 101	Color Crazy p. 11 What Bear Goes Where? p. 79 Forest in a Jar p. 91 Suprise Terrarium p. 101	
Role Playing p. 31 Pyramid of Life p. 52 Webbing p. 56 Scavenger Hunt p. 76 *	Unnature Trail p. 40 Caterpillar Walk p. 42 And Back Home p. 43 Pyramid of Life p. 52 *	Role Playing p. 31
Introductory Tree Activity p. 15 Role Playing the Lives of Trees p. 23 Writing About Trees p. 25,26	Introductory Tree Activity p. 15 Matching Leaves p. 19 Leaf Sorting p. 19 How Many Leaves On a Tree? p. 19 *	Winter and People p. 155
Growing Together (1-3) p. 39 Snow Stories p. 68 Mini-Neighbors p. 70 Small Fliers (K-2) p. 73	Growing Together (1-3) p. 39 Growing Together Calendar (1-3) p. 42 Seeds On the Go! p. 46 Flying Feathers Hunt p. 61 *	Flying Feathers Hunt p. 61 Geese Mobiles p. 65

Principle #7

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)	Large Leaves p. 111	Invent-a-Game p. 41 Did You Ever Eat a Pine Tree? p. 50
Project WILD (Elementary)		What's for Dinner p. 49
Sharing Nature With Children	Pyramid of Life p. 52 Recipe for a Forest p. 54 Webbing p. 56 Scavenger Hunt p. 76	Heartbeat of a Tree p. 22
Nature With Children of All Ages	Looking Closely at Plants p. 31	
Living Lightly in the City	The Green Scene p. 34 Geese Mobiles p. 65 Mother Earth, Father Sun Celebration p. 106 Energy All Around Me (K-1) p. 126 *	

Concept: Energy transfer
Photosynthesis
Respiration
Biogeochemical cycles
Food webs
Renewable resources

*-See Appendix for Additional Activities

Content Areas

Language Arts	Science	Social Studies
	Holding Power p. 47 Did You Ever Eat a Pine Tree? p. 50 Long Range-Short Range p. 78 A Tree From an Acorn Grows p. 83 *	The Second Little Pig p. 30 Holding Power p. 47 Did You Ever Eat a Pine Tree? p. 50 Long Range-Short Range p. 78 *
What's for Dinner? p. 49 Owl Pellets p. 125		
Pyramid of Life p. 52 Recipe for a Forest p. 54 Webbing p. 56 Scavenger Hunt p. 76	Heartbeat of a Tree p. 22 Pyramid of Life p. 52 Recipe for a Forest p. 54 Webbing p. 56 *	
	Role Playing the Lives of Trees p. 23 Historical Uses of Trees p. 25 Tree Uses Today p. 25 Watching the Shepherds Clock p. 30 *	Historical Uses of Trees p. 25 Tree Uses Today p. 25
Bending Beans p. 32 T.H.M. (Trees Help Me) p. 45 Mini-Neighbors p. 70 Water in My House p. 99 *	Bending Beans p. 32 The Green Scene p. 34 T.H.M. (Trees Help Me) p. 45 Seeds On the Go! p. 46 *	Small Trees, Tall Trees p. 37 Flying Feathers Hunt p. 61 Geese Mobiles p. 65 Food for Me p. 98 *

Concept: Population
Birth/Death rate
Human population growth
Carrying Capacity
Homeostasis
Limiting Factors

*-See Appendix for Additional Activities

Content Areas		
Language Arts	Science	Social Studies
An Environmental Exchange Box p. 131	A Tree From an Acorn Grows p. 83 School Yard Safari p. 85	An Environmental Exchange Box p. 131
Wildlife Is Everywhere! p. 19 Beautiful Basics p. 29 Everybody Needs a Home p. 31 Quick Frozen Critters p. 105 *	Ants on a Twig p. 9 Wildlife Is Everywhere! p. 19 Beautiful Basics p. 29 Everybody Need a Home p. 31 *	Classroom Carrying Capacity p. 109 How Many Bears Can Live in This Forest? p. 115
Pyramid of Life p. 52 What Animal Am I? p. 69 Noah's Ark p. 81	Pyramid of Life p. 52 Predator-Prey p. 59 What Animal Am I? p. 69 Noah's Ark p. 81	Noah's Ark p. 81
Snow Stories p. 68 Small Fliers p. 73 ABC's of Needs p. 97	Flying Feathers Hunt p. 61 For the Birds p. 63 Geese Mobiles p. 65 Nut Gatherers p. 67 *	Flying Feathers Hunt p. 61 Geese Mobiles p. 65 ABC's of Needs p. 97

Principle #9

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)	The Artist as a Recorder of Reality p. 62	
Project WILD (Elementary)	Everybody Needs a Home p. 31 What's That, Habitat? p. 39	
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City	City Spaces, Special Places p. 17 Growing Together p. 39 Growing Together Calendar (1-3) p. 42 Energy All Around Me (K-1) p. 126	

*-See Appendix for Additional Activities

Content Areas		
Language Arts	Science	Social Studies
The Artist as a Recorder of Reality p. 62		The Second Little Pig p. 30 Maple Mallets and Ash Bats p. 35 Can You Dig It? p. 92
Everybody Needs a Home p. 31 What's That, Habitat? p. 39	Everybody Needs a Home p. 31 What's That, Habitat? p. 39	What's That, Habitat? p. 39
		Grains and People p. 51
City Spaces, Special Places p. 17 Growing Together (1-3) p. 39 T.H.M. (Trees Help Me) p. 45 ABC's of Needs p. 97 *	Growing Together (1-3) p. 39 Growing Together Calendar (1-3) p. 42 T.H.M. (Trees Help Me) p. 45 ABC's of Needs p. 97 *	City Spaces, Special Places p. 17 ABC's of Needs p. 97 Where Does It Come From? p. 100 Community Connections (2-3) p. 102 *

Principle #10

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)	Folklore p. 57 The Artist as a Recorder of Reality p. 62	
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City	City Spaces, Special Places p. 17	

Concept: Psychological needs of humans

Content Areas		
Language Arts	Science	Social Studies
Folklore p. 57 The Artist as a Recorder of Reality p. 62		Folklore p. 57
City Spaces, Special Places p. 17 My Street (2-3) p. 18 ABC's of Needs p. 97 Community Connections (2-3) p. 102	ABC's of Needs p. 97	City Spaces, Special Places p. 17 My Street (2-3) p. 18 ABC's of Needs p. 97 Community Connections (2-3) p. 102

Principle #11

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)	Natural Art p. 44 Colors from Nature p. 46 Folklore p. 57 The Artist as a Recorder of Reality p. 61	Invent-a-Game p. 41
Project WILD (Elementary)	Museum Search For Wildlife p. 65 Make a Coat! p. 75	
Sharing Nature With Children		
Nature With Children of All Ages	Plant Crafts p. 36,37,38 Seed Crafts p. 48,49,50,51	
Living Lightly in the City	Energy Savers p. 134 Conservation Puppet Pairs p. 156	

Concept: Use of materials & energy
Pollution
Cultural attitudes
Values

*-See Appendix for Additional Activities

Content Areas		
Language Arts	Science	Social Studies
Plant Personification p. 25 Natural Art p. 44 Folklore p. 57 The Artist as a Recorder of Reality p. 62 *	Plant Personification p. 25 Colors From Nature p. 46	The Second Little Pig p. 30 Maple Mallets and Ash Bats p. 35 Folklore p. 57 Can You Dig It? p. 92 *
Museum Search For Wildlife p. 65 Make a Coat! p. 75 Wildwork p. 129	Make a Coat! p. 75 Wildwork p. 129	Museum Search For Wildlife p. 65 Make a Coat! p. 75 Wildwork p. 129
Survival Hike p. 116		Survival Hike p. 116
		Plants and People p. 38,39 Grains and People p. 51
T.H.M. (Trees Help Me) p. 45 Community Connections (2-3) p. 102 Heating, Lighting and Moving (2-3) p. 126 Going Nature's Way? p. 146 *	T.H.M. (Trees Help Me) p. 45 Where Does It Come From? p. 100 Heating, Lighting and Moving (2-3) p. 132 Wind Dancing, Sun Moving (1-3) p. 132 *	Where Does It Come From? p. 100 Community Connections (2-3) p. 102 An Energy Allowance p. 131 Energy Savers (1-3) p. 134 *

Principle #12

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City 		

Content Areas

Language Arts	Science	Social Studies
Plant Personification p. 25 Interview a Board Worker p. 34 An Environmental Exchange Box p. 31	Plant Personification p. 25	Woodwork p. 32 Interview a Board Worker p. 34 An Environmental Exchange Box p. 31
Saturday Morning Wildlife Watching p. 165 Too Close for Comfort p. 185	Saturday Morning Wildlife Watching p. 165 Too Close for Comfort p. 185	Saturday Morning Wildlife Watching p. 165 Too Close for Comfort p. 185
Mammals and People Activities p. 97	Mammals and People Activities p. 97	Mammals and People Activities p. 97
Community Connections (2-3) p. 102	Where Does It Come From? p. 100	Where Does It Come From? p. 100 Community Connections (2-3) p. 102 An Energy Allowance p. 131

Principle #13

Grades K - 3

Environmental Education Resources	Content Areas: Art	Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)	What's Wild? p. 1	
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City		

Concept: Effects of humans on ecosystems
Social interactions

Content Areas		
Language Arts	Science	Social Studies
		Another Way of Seeing p. 150
What's Wild? p. 1 Too Close for Comfort p. 185	What's Wild? p. 1 Environmental Barometer p. 73 Too Close for Comfort p. 185	Environmental Barometer p. 73 Too Close for Comfort p. 185
My Street (2-3) p. 18 C is for Caring p. 20 Community Connections (2-3) p. 102	Small Trees, Tall Trees (K-2) p. 37	My Street (2-3) p. 18 C is for Carin p. 20 Small Trees, Tall Trees (K-2) p. 37 Community Connections (2-3) p. 102

Principle #14

Grades K - 3

Environmental Education Resources	Content Areas: Art	Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City		

Concept: Human population growth & technology: its effects on ecosystems

Content Areas

Language Arts	Science	Social Studies

Principle #15

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)	The Artist as a Recorder of Reality p. 62	An Individual Experiment p. 8
Project WILD (Elementary)	Ethi-Thinking p. 209	
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City	A Magnificent Walk p. 16 Energy Savers (1-3) p. 132 Conservation Puppet Pairs p. 156 I Can Do It! (2-3) p. 158	

Concept: Effects of values on human behavior: its impact on ecosystems

*-See Appendix for Additional Activities

Content Areas		
Language Arts	Science	Social Studies
Plant Personification p. 25 The Artist as a Recorder of Reality p. 62	An Individual Experiment p. 8 Plant Personification p. 25	Another Way of Seeing p. 150
Ethi-Thinking p. 209	Ethi-Thinking p. 209	Ethi-Thinking p. 209
Survival Hike p. 116		Survival Hike p. 116
	Tree Uses Today p. 25	Historical Uses of Trees p. 25 Tree Uses Today p. 25 Natural History in an Art Museum p. 155 Winter Poems p. 158
A Is for Adventure p. 13 T.H.M. (Trees Help Me) p. 45 Making Little Monsters p. 151 Conservation Puppet Pairs p. 156 *	A Magnificent Walk p. 16 T.H.M. (Trees Help Me) p. 45 Energy Savers (1-3) p. 134 It Ends Up At the Dump p. 150 *	A Is for Adventure p. 13 An Energy Allowance p. 131 Energy Savers (1-3) p. 134 It Ends Up At the Dump p. 150 *

Principle #16

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)	Musing on Music p. 69	
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City		

Concept: Built environments are influenced by ecosystems

Content Areas

Language Arts	Science	Social Studies
Musing on Music p. 69		Musing on Music p. 69 Can You Dig It? p. 92
	Tree Uses Today p. 25	Historical Uses of Trees p. 25 Tree Uses Today p. 25
	Mother Earth, May I? (1-3) p. 104	

Principle #17

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City	Finding Out About Fossil Fuels (2-3) p. 129 Energy Savers (1-3) p. 134 Conservation Puppet Pairs p. 156	

Concept: Ecosphere changes due to human population & technology
Nonrenewable resources

Content Areas

Language Arts	Science	Social Studies
		The Second Little Pig p. 30 Another Way of Seeing p. 150
Finding Out About Fossil Fuels (2-3) p. 129 Conservation Puppet Pairs p. 156	Finding Out About Fossil Fuels (2-3) p. 129 Wind Dancing, Sun Heating (1-3) p. 132 Energy Savers (1-3) p. 134 It Ends Up At the Dump (1-3) p. 150 *	Energy Savers (1-3) p. 134 It Ends Up At the Dump (1-3) p. 150

Principle #18

Grades K - 3

Environmental Education Resources	Content Areas: Art	Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City		

Concept: Physical & chemical components of ecosystems: their effect on humans

Content Areas

Language Arts	Science	Social Studies
Sounds in City and Forest p. 7		Sounds in City and Forest p. 7
Water In My House p. 99	Water In My House p. 99 Where Does It Come From? (1-3) p. 100	Water In My House p. 99 Where Does It Come From? (1-3) p. 100

Principle #19

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)	Tree Shapes, Natural and Unnatural p. 17 Folklore p. 57	
Project WILD (Elementary)		
Sharing Nature With Children	Earth Windows p. 21	Earth Windows p. 21
Nature With Children of All Ages		
Living Lightly in the City	Conservation Puppet Pairs p. 156 I Can Do It! (2-3) p. 157	

*-See Appendix for Additional Activities

Content Areas		
Language Arts	Science	Social Studies
Adopt-A-Tree p. 3 Folklore p. 57 An Environmental Exchange Box p. 131	Adopt-A-Tree p. 3	Folklore p. 57 How Big is Your Tree? p. 58 An Environmental Exchange Box p. 131
Earth Windows p. 21	Earth Windows p. 21	Earth Windows p. 21
		How Are Birds Helpful or Harmful To Us? p. 85 Endangered Species of Birds p. 85
ABC's of Needs p. 97 Water In My House p. 99 Conservation Puppet Pairs p. 156 I Can Do It! (2-3) p. 157	ABC's of Needs p. 97 Food for Me p. 98 Water In My House p. 99 Mother Earth, May I? (1-3) p. 104 *	ABC's of Needs p. 97 Food for Me p. 98 Water In My House p. 99 An Energy Allowance p. 131 *

Grades K - 3

Principle #20

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)	Large Leaves p. 111	
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City		

Content Areas

Language Arts	Science	Social Studies
	Large Leaves p. 111	
Mini-Neighbors p. 70 ABC's of Needs p. 97 Community Connections (2-3) p. 102 Going Nature's Way? p. 146	Nut Gatherers (2-3) p. 66 Mini-Neighbors p. 70 ABC's of Needs p. 97 Going Nature's Way? p. 146	ABC's of Needs p. 97 Community Connections (2-3) p. 102 Going Nature's Way? p. 146

Principle #21

Grades K - 3

Environmental Education Resources	Content Areas: Art	Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City		

Concept: Feedback mechanisms of ecosystems

Content Areas

Language Arts	Science	Social Studies

Grades K - 3

Principle #22

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City		

Concept: Synergistic effects

Content Areas		
Language Arts	Science	Social Studies
	Long Range-Short Range p. 78	Long Range-Short Range p. 78

Principle #23

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)	Classroom Conservation p. 144 Outdoor Manners Coloring Book p. 147	Expanding Sensory Perception p. 12
Project WILD (Elementary)		
Sharing Nature With Children	Earth Windows p. 21 Blind Walk p. 21 Meet a Tree p. 26 Blind Trail p. 29	Catch the Horse p. 86 Survival Hike p. 116
Nature With Children of All Ages	Introductory Tree Activity p. 15 Tree Activities p. 18,19,20 Easy Feeders for Young Children p. 81	Activities With Leaves p. 17
Living Lightly in the City	Picking Out Patterns p. 14 Energy Savers (1-3) p. 134 Conservation Puppet Pairs p. 156 I Can Do It! (2-3) p. 157	

Concept: Human impacts on ecosystems
Appreciation of the environment
Appreciating ecosystems and their components

*-See Appendix for Additional Activities

Content Areas		
Language Arts	Science	Social Studies
Expanding Sensory Perception p. 12 The "Touchy-Feely" Box p. 18 Sounds Around p. 20 Living Labels p. 22 *	Expanding Sensory Perception p. 12 The "Touchy-Feely" Box p. 18 Sounds Around p. 20 Holding Power p. 47 *	Woodwork p. 32 Holding Power p. 47 Long Range-Short Range p. 78 Water You Know? p. 94 *
First Impressions p. 161 Can Do! p. 223	First Impressions p. 161 Playing Lightly On the Earth p. 211 Can Do! p. 223	Playing Lightly On the Earth p. 211 Can Do! p. 223
Earth Windows p. 21 Blind Walk p. 21 Micro-Hike p. 416 Sounds p. 38 *	Earth Windows p. 21 Blind Walk p. 21 Bird Calling p. 100 Calling Predators p. 104 *	
Introductory Tree Activity p. 15 Bird Poems p. 80	Introductory Tree Activity p. 15 Making Friends With a Tree p. 20 Activities With Invertebrates p. 58-64 Activities With Fish p. 68 *	How Are Birds Helpful or Harmful To Us? p. 85 Endangered Species p. 85
A Is for Adventure p. 13 T.H.M. (Trees Help Me) p. 45 Mini-Neighbors p. 70 Water In My House p. 99 *	T.H.M. (Trees Help Me) p. 45 Mini-Neighbors p. 70 Food for Me p. 98 Water In My House p. 99 *	A Is for Adventure p. 13 Picking Out Patterns p. 14 Food for Me p. 98 Water In My House p. 99 *

Principle #[illegible]

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City	Conservation Puppet Pairs p. 156	

Content Areas

Language Arts	Science	Social Studies
Rickety Racket p. 155 Conservation Puppet Pairs p. 155	Conservation Puppet Pairs p. 156	Rickety Racket p. 155

Grades K - 3

Principle #25

Environmental Education Resources	Content Areas: Art	Health
Project Learning Tree (Elementary)	The Closer You Look p. 10 Natural Art p. 44 Colors from Nature p. 46 Classroom Conservation p. 144 *	
Project WILD (Elementary)	Ethi-Thinking p. 209	
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City	Picking Out Patterns p. 14 Neighborhood Rainbows (K-1) p. 15 A Magnificent Walk p. 16 Energy Savers (1-3) p. 134 *	

*-See Appendix for Additional Activities

Content Areas		
Language Arts	Science	Social Studies
Plant Personification p. 25 Natural Art p. 44 The Artist as a Recorder of Reality p. 62	The Closer You Look p. 10 Plant Personification p. 25 Colors from Nature p. 46	Classroom Conservation p. 144
And the Wolf Wore Shoes p. 163 Ethi-Thinking p. 209	And the Wolf Wore Shoes p. 163 Ethi-Thinking p. 209 Playing Lightly On the Earth p. 211	Ethi-Thinking p. 209 Playing Lightly On the Earth p. 211
Conservation Awareness p 182-187	Conservation Awareness p. 182-187	Conservation Awareness p. 182-187
A Is for Adventure p. 13 My Street (2-3) p. 18 C Is for Caring p. 20 If I Were A Tree p. 43 *	A Magnificent Walk p. 16 If I Were A Tree p. 43 Snow Stories p. 68 Energy Savers (1-3) p. 134 *	A Is for Adventure p. 13 Picking Out Patterns p. 14 Neighborhood Rainbows (K-1) p. 15 My Street (2-3) p. 18 *

Grades K - 3

Principle #26

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City		

Concept: Methods to promote harmony

Content Areas

Language Arts	Science	Social Studies

Grades K - 3

Principle #27

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)	Outdoor Manners Coloring Book p. 147	
Project WILD (Elementary)	Learning to Look, Looking to See p. 181 Ethi-Thinking p. 209	
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City	The Green Scene p. 34 T.H.M. (Trees Help Me) p. 45 Energy All Around Me (K-1) p. 126 S Is for Sunshine p. 1281	

*-See Appendix for Additional Activities

Content Areas

Language Arts	Science	Social Studies
Interview a Board Worker p. 34 Outdoor Manners Coloring Book p. 147	Holding Power p. 47 Long Range-Short Range p. 78	Outdoor Manners Coloring Book p. 147 Interview a Board Worker p. 34 Holding Power p. 47 Long Range-Short Range p. 78 *
Learning to Look, Looking to See p. 181 Too Close for Comfort p. 185 Ethi-Thinking p. 209 Can Do! p. 223	Learning to Look, Looking to See p. 181 Too Close for Comfort p. 185 Ethi-Thinking p. 209 Can Do! p. 223	Learning to Look, Looking to See p. 181 Too Close for Comfort p. 185 Ethi-Thinking p. 209 Can Do! p. 223
		Endangered Species of Birds p. 85
My Street (2-3) p. 18 Bending Beans p. 32 Mini-Neighbors p. 70 Water In My House p. 99 *	Bending Beans p. 32 The Green Scene p. 34 Small Trees, Tall Trees (K-2) p. 37 T.H.M. (Trees Help Me) p. 45 *	My Street (2-3) p. 18 Small Trees, Tall Trees (K-2) p. 37 T.H.M. (Trees Help Me) p. 45 Flying Feathers Hunt p. 61 *

Principle #28

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children	Earth Windows p. 21	Earth Windows p. 21
Nature With Children of All Ages		
Living Lightly in the City		

Concept: Importance of ecosystem processes & changes

Content Areas

Language Arts	Science	Social Studies
Earth Windows p. 21	Earth Windows p. 21	Earth Windows p. 21
Going Nature's Way? p. 146	Going Nature's Way? p. 146	Going Nature's Way? p. 146

Principle #29

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City	Conservation Puppet Pairs p. 156	

Concept: Causes of ecosystem changes & their consequences

Content Areas

Language Arts	Science	Social Studies
Can Do! p. 223	Can Do! p. 223	Can Do! p. 223
Rickety Racket p. 155 Conservation Puppet Pairs p. 156	It Ends Up At the Dump p. 150 Conservation Puppet Pairs p. 156	Class Trash p. 149 It Ends Up At the Dump p. 150 Rickety Racket p. 155

Principle #30

Grades K - 3

Environmental Education Resources	Content Areas: Art	Health
Project Learning Tree (Elementary)	Outdoor Manners Coloring Book p. 147	
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living L[illegible]y in the City	Energy Savers (1-3) p. 134 I Can Do It! (2-3) p. 157	

Content Areas

Language Arts	Science	Social Studies
Outdoor Manners Coloring Book p. 147		Outdoor Manners Coloring Book p. 147
Can Do! p. 223	Can Do! p. 223	Can Do! p. 223
Making Litter Monsters p. 151	Energy Savers (1-3) p. 134 It Ends Up At the Dump p. 150 Making Litter Monsters p. 151 Green It Up! p. 153 •	Energy Savers (1-3) p. 134 Class Trash p. 149 It Ends Up At the Dump p. 150 Making Litter Monsters p. 151 •

Principle #31

Grades K - 3

Environmental Education Resources	Content Areas: Art	Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City		

Concept: Analyzing & evaluating alternative action strategies

Content Areas

Language Arts	Science	Social Studies

Principle #32

Grades K - 3

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City		

Concept: Adopting action strategies

Content Areas		
Language Arts	Science	Social Studies

Grades K - 3

Principle #33

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)	Classroom Conservation p. 144	
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City		

Concept: Implementing action strategies

Content Areas		
Language Arts	Science	Social Studies
		Classroom Conservation p. 144

Grades K - 3

Principle #34

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)	Classroom Conservation p. 144	
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City		

Concept: Monitoring & evaluating policies

Content Areas		
Language Arts	Science	Social Studies
		Classroom Conservation p. 144

Grades K - 3

Principle #35

Environmental Education Resources	Content Areas: Art	Content Areas: Health
Project Learning Tree (Elementary)		
Project WILD (Elementary)		
Sharing Nature With Children		
Nature With Children of All Ages		
Living Lightly in the City		

Concept: Monitoring feedback & adjusting actions as necessary

Content Areas		
Language Arts	Science	Social Studies

Grades K-3 Appendix

Principle #	Content Area	Resource	Activity	Page #
5	Art	Sharing	What Animal Am I?	69
			Tree Silhouettes	74
			Scavenger Hunt	76
			Wild Animal Scrabble	78
			Still Hunting	112
	Language Arts	WILD	The Thicket Game	95
			Seeing is Believing	99
			Polar Bears in Phoenix?	103
			First Impressions	161
		Sharing	Animal Game	66
			What Animal am I?	69
			Owls and Crows	72
			Scavenger Hunt	76
			Wild Animal Scrabble	78
			Still Hunting	112
	Science	PLT	Plant Personification	25
			Holding Power	7
			Long Range-Short Range	78
			A Tree From an Acorn...	83
			School Yard Safari	85
			What's in Soil?	87
			Water You Know?	94
			Bursting Buds	97
			Large Leaves	111
			Trees as Habitats	112
			Birds 'n' Worms	115
		WILD	Graph an Animal	81
			The Thicket Game	95
			Seeing is Believing	99
			Polar Bears in Phoenix?	103
			First Impressions	161
		Sharing	Recipe for a Forest	54
			Animal Game	66
			What Animal am I?	69
		Living	Mini-Neighbors	70
			Water in my House	99
			Where Does it Come From?	100
			S is for Sunshine	128
			Going Nature's Way?	146
	Social Studies	Living	Going Nature's Way?	146
6	Art	Sharing	Scavenger Hunt	76
			Wild Animal Scrabble	78
			Animal Parts	82
			Camouflage	88

Principle #	Content Area	Resource	Activity	Page #
6	Language Arts	Sharing	Wild Animal Scrabble	78
	Science	PLT	Trees as Habitats	112
			Bird_ 'n' Worms	115
		Sharing	Webbing	56
			Predator-Prey	59
			Plant Succession Crawl	60
			Scavenger Hunt	76
			Wild Animal Scrabble	78
			Animal Parts	82
			Camouflage	88
		Nature	Hardness of Wood	25
			Dandelions	30
			Finding Special Features...	33
			Winter, with nods...	144-159
		Living	For the Birds	63
			Geese Mobiles	65
			Nut Gatherers	67
			Snow Stories	68
			Mini-Neighbors	70
			Small Fliers	73
7	Art	Living	S is for Sunshine	128
			Energy Savers (1-3)	134
	Language Arts	Living	Energy Moves Me!	124
			S is for Sunshine	128
			Finding Out about Fossil...	129
			Going Nature's Way?	146
	Science	PLT	School Yard Safari	85
			What's in Soil?	87
			Large Leaves	111
		Nature	Plant Growth Activities	34-36
			Seed Growth Activities	45
			Seed Dispersal Activities	46
		Living	Flying Feathers Hunt	61
			Geese Mobiles	65
			Mini-Neighbors	70
			Water in my House	99
			Where does it Come From?	100
			Mother Earth, Father Sun	106
			Energy Moves Me!	124
			Energy all Around Me	126
			Heating, Lighting...	126
			S is for Sunshine	128
			Green it Up!	153
	Social Studies	PLT	Can you Dig it?	92
			·other Way of Seeing	150
		Living	Water in my House	99
			Where does it Come From?	100
			Mother Earth, Father Sun	106
			Green it Up!	153

Principle #	Content Area	Resource	Activity	Page #
8	Language Arts	WILD	Classroom Carrying...	109
	Science	WILD	Quick Frozen Critters	105
			Classroom Carrying...	109
			How Many Bears...	115
		Living	Snow Stories	68
			Small Fliers	73
			ABC's of Needs	97
			Food for Me	98
			Green it up!	153
9	Art	Living	S is for Sunshine	128
	Language Arts	Living	Community Connections	102
			Heating, Lighting...	126
			S is for Sunshine	128
	Science	Living	Where does it Come From?	100
			Energy All Around Me	126
			Heating, Lighting...	126
			S is for Sunshine	128
	Social Studies	Living	An Energy Allowance	131
11	Language Arts	PLT	An Environmental Exchange Box	131
		Living	Conservation Puppet...	156
	Science	Living	Energy Savers (1-3)	134
			Going Nature's Way	146
			It Ends up at the Dump	150
			Conservation Puppet...	156
	Social Studies	PLT	An Environmental Exchange Box	131
			Another Way of Seeing	150
		Living	Going Nature's Way?	146
			It Ends up at the Dump	150
15	Art	Living	Conservation Puppet...	156
	Language Arts	Living	I Can Do It! (2-3)	158
			Conservation Puppet...	156
	Science	Living	Making Litter Monsters	151
	Social Studies	Living	Making Litter Monsters	151
			Conservation Puppet...	156
			I Can Do It! (2-3)	157
17	Science	Living	Conservation Puppet...	156
19	Science	Living	It Ends up at the Dump	150
			Conservation Puppet...	156
	Social Studies	Living	It Ends up at the Dump	150
			I Can Do it! (2-3)	157
23	Art	Sharing	Role Playing	33
			Colors	39
			Duplication	44
			Micro Hike	46

Principle #	Content Area	Resource	Activity	Page #
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			Still Hunting	112
			Silent Sharing Walk	120
	Language Arts	PLT	Outdoor Manners ...	147
		Sharing	Duplication	44
			Still Hunting	112
			The Night World	114
			Animal Lobbyists	131
			Animal Game Clues	133
		Living	Going Nature's Way	146
			Rickety Racket	155
			Conservation Puppet...	156
			I Can Do It! (2-3)	157
	Science	PLT	Long Range-Short Range	78
			Healing Wounds	86
			Water You Know?	94
			Math Exercise	98
		Sharing	Duplication	44
			Micro-Hike	46
			Tree Silhouettes	74
			Birds on a Stick	102
			Still Hunting	112
			The Night World	114
			Animal Lobbyists	121
			Animal Game Clues	133
		Nature	Amphibians	69
			Reptiles	70-73
			Birds	75-79
			Hatching Chicken Eggs	83
			By the Sea I	99-108
			By the Sea II	109-126
		Living	Mother Earth, May I?	104
			Energy Savers (1-3)	134
			Going Nature's Way?	146
			It Ends up at the Dump	150
			Green it Up!	153
			Conservation Puppet...	156
	Social Studies	PLT	Can You Dig It?	92
			Classroom Conservation	144
			Outdoor Manners...	147
		Living	An Energy Allowance	131
			Energy Savers (1-3)	134
			Going Nature's Way?	146
			It Ends up at the Dump	150
			Green it Up!	153
			Rickity Racket	155
			I Can Do It! (2-3)	157

Principle #	Content Area	Resource	Activity	Page #
25	Art	PLT	The Artist as a	62
		Living	Conservation Puppet...	156
			I Can Do it!	157
	Language Arts	Living	Snow Stories	68
			Making Litter Monsters	151
			I Can Do It!	157
	Science	Living	It Ends up at the Dump	150
			Making Litter Monsters	151
			Green it Up!	153
			Conservation Puppet...	156
	Social Studies	Living	C is for Caring	20
			Energy Savers (1-3)	134
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Additional E.E. Curriculum Resources

Acclimatizing. 1972.
Acclimatization. 1974.
Sunship Earth. 1979.

Steve Van Matre Published by the American Camping Association in Martinsville, IN 46151 and the Institute for Earth Education, P.O. Box 788, Warrenville, IL 60555.

Van Matre first popularized the sensory approach to environmental study--immersing people in a swamp, blindfolding them through the forest, and digging their hands into soil. By experiencing the environment with all of our senses, we will come to know, and appreciate it better. Acclimatizing and Acclimatization describes short activities and adventures to discover the outdoors. Sunship Earth is a carefully structured five-day residential outdoor program. The magic and discovery is still there, but with an emphasis on the larger picture of ecology and human interaction.

Biological Science: An Ecological Approach. Fourth ed. 1978.

Biological Sciences Curriculum Study (BSCS), Rand McNally, P.O. Box 930, Boulder, CO. An excellent secondary biology text that emphasizes ecology throughout. Picked as one of the best biology textbooks used in the nation's high schools. Eighteen books were studied by a group commissioned by People for the American Way. This was one of the three excellent textbooks which they described as "doing an excellent job of covering evolutionary theory and the field of biology.

Central Wisconsin Environmental Resource Manual. 1981

Central Wisconsin Environmental Station (CWES), University of Wisconsin, Stevens Point, National Science Foundation Special Training Project in Ecology and Environmental Education.

Provides listings of community resources that can be used as field trips or speakers. Three volumes cover resources in the following counties: Adams, Wood, Columbia, Kewaunee, Green Lake, Sauk, Waushara, Portage, Marathon, Langlade, Lincoln, Waupaca, Clark, Oneida, Shawano, Taylor, and Winnebago. Resources have been located and analyzed and are presented in an organized format in order to provide a practical, relevant, and ready reference that can facilitate resource use by teachers at all grade levels. Focuses specifically on resource use for environmental education.

Connections: A Curriculum in Appropriate Technology for Fifth and Sixth Grades. 1980.

Written by and available from the National Center for Appropriate Technology. Box 3838, Butte, Montana 59701.

This activity guide for elementary teachers provides exciting ideas and information in solar energy, water conservation, transportation, recycling, nutrition, and gardening--a good beginning for understanding many current issues.

Conserving Soil.

U.S.D.A. Soil Conservation Service. Published and distributed in 19__. Currently available from the National Association of Conservation Districts Service Dept., P.O. Box 855, League City, TX 77573-9989.

Color transparencies, ditto masters, activities, and background information help teachers convey information about soil and its wise use.

The Cousteau Almanac: An Inventory of Life On Our Water Planet.

Jaques Ives Cousteau and Cousteau Staff. Published by Doubleday Company in New York, 1981. Available through bookstores.

The Almanac is a treasure of information on environmental issues around the world in the 1980's. Articles are well written, well documented, and arranged in a unique order Scattered throughout are vignettes of people and organizations who work toward the solutions to environmental problems, usually on a local level, and usually successfully. The last section provides information on organizing around an issue and taking action.

Environmental Science: An Introduction. Second edition.
Living in the Environment. Fourth edition.
G. Tyler Miller. Published by Wadsworth Publishing Company in Belmont, CA. 1986. Available as text.

Both texts fairly represent the variety of perspectives that color environmental issues. Environmental Science covers the issues in less depth than Living in the Environment. Written for college students.

Environmental Science: Managing the Environment. Second edition.
P. Walton Purdom and Stanley H. Anderson. Merrill Publishing Co. 1983.

Textbook designed to create a threefold understanding of: (1) all facets of the environment that affect ecosystems and human life; (2) the impacts of human activities on various aspects of environmental quality; and (3) the environmental, economic, and cultural factors that shape urban development.

Humanizing Environmental Education: A Guide for Leading Nature and Human Nature Activities.
Clifford Knapp and Joel Goodman. Published by the American Camping Association in Martinsville, IN, 1981. Available from the American Camping Association, Martinsville, IN, 46151-7902.

Introduction to Environmental Studies.
Jonathan Turk and W.B. Saunders. 1980.

This secondary-college text is divided into the following study units:

I. Introduction and Social Background
II. The Biological Background
III. Human Population
IV. Resources and Energy
V. Rural Land Use
VI. Pollution

This book was written to provide environmental education to a wide variety of people. It gives an overview of various social, economic, technical, and political issues. The problems of ecological disruptions, growth of human population, land use, energy, nuclear power, food supplies, pesticides, air and water pollution, solid waste, and noise are covered. Specific features of this text include: case histories, take-home experiments, problems and questions for class discussions, chapter summaries, glossary, and use of the metric system.

Investigating Your Environment. June, 1980.
U.S. Forest Service-U.S. Dept. of Agriculture, U.S. Government Printing Office.

A set of separate activities for secondary teachers designed for investigating different components of the environment. Techniques such as collecting observable data, making inferences, setting up investigations to check inferences, communicating feelings and awareness are used in these activities. Many of the investigations are wholly or partially conducted outside and all stress active participation by the learner. Some of the activities cover such topics as water, wildlife, soils, forestry, land use, and human communities.

Project Creation. Concern Regarding the Environment and Technology in our Nation/Neighborhood.
Title IV, ESEA, Developed at La Salle-Peru Township High School, District #120, La Salle, IL. 1978. Available through: The Environment and Technology Project, 1633 N. Burling, Chicago, IL 60614. Telephone: (312) 280-8163.

A series of sixteen environmental and technology units that cover the major concepts of energy, land use, urban management, and pollution. "The overall goal of CREATION is the development of students as citizens who will hold a strong environmental ethic." Five universal objectives appear in this curriculum as follows: interdependence, impact, maintenance, quality of life, and improvement.

Teaching Environmental Education.
Harold Hungerford and R. Ben Payton. 1976. Published by J. Weston Walch, Portland, ME 04104.

A source of information for middle and secondary school teachers who are responsible for curriculum development and/or instruction in this field. Provides components of environmental literacy, an introduction to ecological foundations, analysis of an environmental issue, suggestion for environmental action training, and a summary of selected environmental education programs for possible use. Suggested activities are provided to guide the teacher in developing and implementing environmental education strategies.

Thinking Globally and Acting Locally: Environmental Education Teaching Activities.
Lori Mann and William B. Stapp. Published by and available from ERIC/SMEAC, Ohio State University, 1200 Chambers Road, Third Floor, Columbus, OH 43212. 1982.

Environmental issues are larger than any one municipal boundary and are tightly intertwined with issues of culture, economics, politics, history, and science. This manual provides activities for upper elementary through high school students that help distill the global consequences of local issues and actions.

Understanding the Game of the Environment: An Illustrated Guide to Understanding Ecological Principles.
David R. Houston. Published by and available from the US Forest Service, US Dept. of Agriculture, Washington D.C. as the Agricultural Information Bulletin No. 426. 1979.

Here is one of the few ecological texts published for high school students. Major ecological principles are summarized and organized into a game, complete with players, rules, boundaries, etc. Detailed illustrations provide the basis for in-depth discussions.

The Wholeschool Book: Teaching and Learning in the 20th Century.
Bob Samples, Cheryl Charles, and Dick Barnhart. Published by Addison-Wesley Publishing Company, Reading, MA. 1977. Available at bookstores.

This book offers a humanistic, people-oriented philosophy of education complete with suggestions for questions, discussions, and activities that encourage students to participate in the learning process.

Wildlife Habitat Conservation Teacher's PAC Series.
Environmental education teaching aids available from the National Institute for Urban Wildlife. Write: National Institute for Urban Wildlife, 10921 Trotting Ridge Way, Columbia, MD 21044.

The PAC's were originally developed by the U.S. Fish and Wildlife Service and targeted at the fourth through seventh grade level student. The contents of each teacher's PAC component are: poster (1), teaching overview (1), lesson plans (3), student centered pages (2-6), and a folder. The following PAC's are available: Urban Areas; Freshwater Marshes: Beaches, Dunes and Barrier Islands; Wetland Conservation and Uses; Endangered Species; Migrating Birds; Hunting and Wildlife Conflicts; and Wildlife Conflicts.

Concept Index

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