

The Environmental Education Collection — A Review of Resources for Educators Volume 3 represents another in a series of documents published by the North American Association for Environmental Education as part of the National Project for Excellence in Environmental Education.

National Project for Excellence in Environmental Education

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Acknowledgments

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Phone: (706) 764-2926 Fax: (706) 764-2094 e-mail: csmith409@aol.com website: www.naaee.org

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How Can Biodiversity Be Preserved?



IN A NUTSHELL

Developed by: Jane Boston &
Stephen Commins

Stanford Program on
International and Cross-
Cultural Education (SPICE)
Institute for
International Studies
Stanford University
Encina Hall East,
Ground Floor
Stanford, CA 94305-6055

phone: (800) 578-1114

fax: (650) 723-6784

website: <http://spice.stanford.edu>

Cost: \$39.95 + s&h

SUBJECTS

Economics

Science

Social Studies

This book contains a series of activities designed to teach students about important issues in biological preservation, as well as challenges and questions faced by policy makers. There are six principal activities in the collection dealing with species preservation, regenerative or sustainable use, the establishment of biosphere reserves, eco-tourism, public/private partnerships, and organizational structure behind policy decisions. For each activity, background information, an outline, extension questions, and handout masters are provided. Supportive materials include maps, charts, text, and lists of additional resources. Supplementing the main activities are two orienting activities on the concept of biodiversity and a closing activity that involves developing a local action plan. The text of the Convention of Biological Diversity is included in the appendix. The package includes two extra sets of activity cards.

Grade Level
6-10

Length
120 pages

Date Published
1996

THE **BOTTOM**
L I N E

"Fosters an understanding of how issues can be investigated and plans developed."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Encourages research and inquiry. Ensures balance by involving students in role-play activities.	Little mention of the opinions of native people cited in case studies.
	Depth	Includes both local and global concerns. Links concepts to real-life situations.	Student resource cards provide only minimal information.
	Emphasis on Skills Building	Employs fact-finding, data analysis, and decision-making skills.	
	Action Orientation	Demonstrates impact individuals can have.	
	Instructional Soundness	Involves cooperative group work and other learning modes. Clearly states goals and objectives.	Only the final activity takes students out of the classroom.
	Usability	Student materials are easy to reproduce. Binder format allows for addition of updated information or additional activities.	

"I wish there was more contact with the real world—I would do some of that at the onset, as an introduction."

"Enough of a variety of materials to make the whole worthwhile."



City Kids and City Critters!

Activities for Urban Explorers



IN A NUTSHELL

Written by: Janet Wier Roberts
& Carole Huelbig

McGraw Hill Company
Attention Direct Marketing
P.O. Box 548
Blacklick, OH 43004-0548

phone: (800) 262-4729
fax: (614) 759-3644
website: www.mcgraw-hill.com

Cost: \$15.95 + s&h

SUBJECTS

Language Arts
Mathematics
Physical Education
Science
Social Studies

The activities in this book encourage children to become "nature detectives" and to sharpen their observation skills in order to locate, recognize and understand the animals that they encounter. The activities in the first chapter focus on sensory awareness. Subsequent chapters address specific locations where wildlife might be found, such as ponds, backyards, streets, and vacant lots.

Children are thus exposed to creatures as diverse as ants, caterpillars, raccoons, foxes, and pigeons. Students are encouraged to keep observation journals, develop and test hypotheses, and are provided with field guides to direct their investigations. Activities include searching for animal tracks, counting and identifying animals and plants in different locations, playing simulation games involving animal feeding habits, and worm composting. Environmental concepts, such as habitat and adaptation are explored in the process. Students are given the subjects, skills, concepts, and necessary materials to attract animals. Teachers are advised how to keep outdoor experiments safe. Each chapter is followed by a list of recommended readings. In addition, the book includes a glossary, an index, bibliography, and resource list.

Grade Level
3-6

Length
155 pages

Date Published
1996

THE BOTTOM
LINE

"The tactile learner would excel with these activities because of the great emphasis on learning and observing with the senses."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Sources of information are well documented. Activities encourage students to explore and to make their own observations.	Unclear if content has been through peer reviews. Diversity of children involved in "kid testing" not specified. Students featured in drawings appear to be all caucasian.
	Depth	Very strong on building awareness.	No conceptual framework or connections between the different activities.
	Emphasis on Skills Building	Makes use of a number of observation and reasoning skills.	Weak on creative thinking process.
	Action Orientation	N o t A p p l i c a b l e .	
	Instructional Soundness	Diverse lessons provide for different learning styles. Makes connections to learners' everyday lives. Many activities involve taking the students outdoors.	Does not include learner outcomes. Curriculum is very teacher-driven.
	Usability	Illustrations and masters of handouts are clear and easy to use. Overall structure is very clear. Background material is brief and to the point.	Lessons were not organized sequentially. Some materials might be difficult to obtain.

"The proposed activities are well thought out; they are fun and basics will be learned. What do we do with what we have learned? That is missing."

"Specific to urban kids, but could be used for other neighborhoods."



Composting: Waste to Resources



IN A NUTSHELL

Written by: Jean F. Bonhotal
& Marianne E. Krasny

Media Services
Distribution Center
7 Cornell Business &
Technology Park
Cornell University
Ithaca, New York, 14850

phone: (607) 255-2080
fax: (607) 255-9946
e-mail: dist_center@cornell.edu

Cost: \$8.50 + s&h

SUBJECTS

Fine Arts
Science

This package includes a thirty-eight page teacher's guide, a series of cards describing different composting systems, a progress tracking sheet, and two posters which illustrate the composting process and provide suggestions on making composting more successful. The materials explain: how composting works, how to design and set up different composting systems (e.g., mounds vs turning units), reasons for composting, and ways to investigate and solve problems with existing compost piles. The guide includes several investigations in which students measure their pile's temperature, draw pictures of microscopic and visible creature which inhabit their piles, measure the rate at which different items decompose and under what conditions, and experiment with using their compost to help grow plants. The guide includes a glossary and lists additional sources of information about composting. Illustrations include diagrams and black-and-white drawings.

Grade Level
4-8

Length
38+ pages

Date Published
1994

THE BOTTOM
LINE

"Provides great facts and accurate directions for building bins."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Very open to inquiry.	Some supportive data may be outdated. Does not present a balanced explanation of different viewpoints.
	Depth	Focuses on concepts.	Gives little attention to different geographic scales.
	Emphasis on Skills Building	Many activities involve teamwork. Facilitates critical thinking. Strong on action skills.	Does little to connect skills to issues. Focus is on final product.
	Action Orientation	Not Applicable.	
	Instructional Soundness	Encourages teaching inside and outside the classroom. Many activities are learner-centered and encourage student involvement.	Lessons are not particularly interdisciplinary. Does relatively little to connect composting to learners' everyday lives.
	Usability	Activities are clear, logical and easy to follow. Materials are easily reproducible.	

"Discusses the issue of waste reduction, but there could be more of an emphasis so that students feel a personal responsibility."

"Would do well in an activity center or special project area."



Connections: Guide to a Healthy Environment



IN A NUTSHELL

Written by: John Poore, Alexis Adams & Deanne Roquet

Eco Education
275 East Fourth Street
Suite 821
Saint Paul, MN 55101

phone: (651) 222-7691
fax: (651) 222-3425
e-mail: ecoed@minn.net
website: www.blacktop.com/ecoeducation

Cost: \$39.95 + s&h Teachers Manual & one Guide Book
\$2.50 + s&h for each additional Guide Book

SUBJECTS

Fine Arts
Language Arts
Science

Connections is a guidebook to help students learn to take care of the environment. Individual chapters address habitat destruction, population growth, pollution, and other environmental concepts and issues. Students are routinely encouraged to provide their own artwork to blank spaces in the text. Each chapter contains background information and provides examples of "Eco-Warriors", students who have taken on environmental project or challenges. A number of "Eco Assignments" are provided, where students and their families work together to measure their household use of resources.

An Eco Guide at the back of the student book provides additional suggestions for action projects. Included are a lengthy resource list and a bibliography. The teacher's manual provides additional background information, calendars, pre- and post-tests with answers, data sheets, and masters of handouts. It also contains investigations and demonstrations, each listing a learner outcome, duration, and discussion or journaling suggestions.

Grade Level	5-8
Length	195 pages
Date Published	1994

THE BOTTOM
LINE

"Very few materials so clearly delineate the use of kinesthetic activities—this is a godsend for those looking to integrate movement into the curriculum."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Open to inquiry.	Factual information is rarely referenced. Opposing viewpoints generally not included.
	Depth	Numerous activities build awareness. Chapters build on individual concepts. Addresses regional, local, and global scales.	
	Emphasis on Skills Building	Develops communication and higher-level thinking skills.	Does not encourage students to arrive at their own conclusions.
	Action Orientation	Teachers self-efficacy and personal responsibility. Very action oriented.	
	Instructional Soundness	Activities build on previous knowledge. Provides for a varied learning environment. Very interdisciplinary and learner-centered.	Learner outcomes are very general.
	Usability	Adaptable to any location in the U.S. Background information is thorough and helpful. Lessons are well-written and easy to use.	Does not identify grade level or target audience.

"Most activities could be done without the student workbook."

"Great sense of humor throughout the curriculum - keeps a 'heavy' topic 'light!'"



Creepy Crawlies & the Scientific Method

Over 100 Hands-On Science Experiments for Children



IN A NUTSHELL

Written by: Sally Stenhouse
Kneidel

Fulcrum Publishers
16100 Table Mountain Parkway
Golden, Colorado 80403

phone: (800) 992-2908
fax: (800) 726-7112
e-mail:
fulcrum@fulcrum-books.com
website:
www.fulcrum@fulcrum-books.com

Cost: \$18.95 + s&h

SUBJECTS

Science

This book familiarizes students with the scientific method by having them practice the formulation of questions and hypotheses, developing methods, collecting data and reviewing results. The subjects for their inquiries are a variety of creatures, including spiders, worms, ant lions, slime mold, tadpoles, and mantises. The questions researched can be as simple as "Do crickets prefer houses with one door or two doors?" or "Do worms prefer damp or dry conditions?" More complicated research questions include the effect of temperature on the development of fruit flies. Hypotheses are suggested, along with ways to test them. The author provides blank charts, tables, and other data gathering devices to enable students to research these questions and to record their findings. The text provides an overview of the scientific method and background information on all of the creatures studied, including materials lists and information on how to obtain and keep critters for classroom use. Appendices include lists of supply companies, a bibliography, and an index. Illustrations consist of photographs, drawings and diagrams.

Grade Level
K-6

Length
224 pages

Date Published
revised in 2000

THE BOTTOM
LINE

"Some of the richest learning environments I have seen are in classrooms using the activities in this text."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Focuses on acquiring information. Open to inquiry. Photographs show a diverse student body.	Sources of specific pieces of information are not cited.
	Depth	Includes chapter on connections between the experiments. Experiments appropriate to developmental level of children.	Does little to reflect connections of the animals to their environment.
	Emphasis on Skills Building	Critical thinking is strongly developed: hypothesizing, observing, identifying, analyzing data, etc.	
	Action Orientation	N o t A p p l i c a b l e.	
	Instructional Soundness	Experiments are learner-centered.	Book lacks goals and objectives. Little attention given to ethics of keeping animals in classroom or using them for experiments.
	Usability	Illustrations are clear, concise, and easy to follow. Material is long-lived.	Contains no glossary or teacher support. Vocabulary may not be age-appropriate.

"Would love to see a workshop accompany this. Not many teachers would feel comfortable bringing creatures into their classroom that they would more than likely kill in their home."

"Kids love bugs, and these experiments would really interest young children."



Cycling Back to Nature:

with Biodegradable Polymers
Currently Out of Print



IN A NUTSHELL

Written by: Robert L. Horton,
Joe E. Heimlich, &
James R. Hollyer

National 4-H Supply Service
7100 Connecticut Avenue
Chevy Chase, MD 20815

phone: (301) 961-2934
fax: (301) 961-2937
website: www.fourhcouncil.edu

Cost: \$5.00 + s&h

SUBJECTS

Language Arts
Science
Social Studies

Using a combination of laboratory experiments, classroom discussion, scavenger hunts, reading, map drawings, and other activities, this book introduces students to some of the issues surrounding solid waste and some of the possible solutions. The book begins by exploring a number of natural cycles (e.g., water cycle and carbon cycle) and goes on to discuss what happens when those cycles are interrupted or disturbed. Attention focuses on factors necessary for decomposition, problems associated with the disposal of plastics, and possibilities of using biodegradable polymers for different products. Basic suggestions are given for developing a home compost pile. Activities come with a materials list and suggestions for processing the activity. Illustrations include drawings, charts, and maps. Appendices include a list of different polymer labels for recycling and tips for writing letters to politicians.

Grade Level
10 & up
Length
68 pages
Date Published
1996

THE BOTTOM
L I N E

"Activities allow students to explore various aspects of natural and manufactured materials."

	Key Characteristics	Strengths Noted	Other Considerations
What the REVIEWERS Said !	Fairness and Accuracy	Material was reviewed by a variety of experts. Some of the information presented is clearly referenced.	Only presents single view-point on recycling. Promotes use of biodegradable polymers.
	Depth	Includes a conceptual framework and ideas are presented logically. Focus is on explaining facts and issues in context.	
	Emphasis on Skills Building	Encourages learners to collect and draw conclusions from data.	Does not emphasize critical thinking or action skills.
	Action Orientation	Encourages learners to take personal responsibility.	
	Instructional Soundness	Includes both classroom and field-based activities.	Activities do not always meet stated objectives.
	Usability	Materials are well laid out and easy to use.	Contains insufficient safety instructions (e.g., for the use of knives).

"The whole piece is fragmented; it doesn't feel like it's all there."

"The outer packaging (water soluble and biodegradable) is great!"



The Digital Field Trip to the Wetlands



IN A NUTSHELL

Digital Frog, International
Trillium Place
RR#2, 7377 Culfass Road
Puslinch, Ontario
N0B 2J0, Canada

phone: (519) 766-1097
fax: (519) 767-9994
e-mail: info@digitalfrog.com
website: www.digitalfrog.com

Cost: Home Version \$45.00
Educational (includes student/
teacher workbooks) \$99.00 +
s&h
Lab Pack (5 Users) \$249.00 +
s&h

SUBJECTS

Science
Social Studies

This CD-ROM program offers students an opportunity to learn about wetlands and their ecology. Although largely based on Cloud Lake in Ontario, Canada, the program is designed to be used in conjunction with local wetland field trips as well. The software consists of five principal screens. Study of a Bog provides information on succession and adaptations in bogs, as well as a description of wetland food webs. Field Trip to the Bog is a virtual visit to Cloud Lake. It contains photographs of numerous sites and allows students to retrieve additional information on species of flora or fauna they encounter.

Wetland Types provides information on the different types of wetlands and includes an on-line quiz. Mechanics of a Wetland provides information on nutrient cycles and explains how wetlands prevent erosion. Our Endangered Wetlands provides information on the dangers facing wetland habitats and some of the consequences of wetland destruction. Some of the screens include brief movies with audio narration. The accompanying binder provides both teacher and students editions of a workbook, which includes a field guide, questions, quizzes, charts for documenting observations, and suggestions on using the software program.

Grade Level	8-12
Length	CD-ROM & Book
Date Published	1996

THE BOTTOM LINE

"Materials could easily be integrated into established curriculum and are useful for a wide variety of grades."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Information is accurate. Students are encouraged to develop own ideas and conclusions.	Does not cite sources of information. Does not present all perspectives (e.g., agriculture). Some statistics will require updating.
	Depth	Concepts are clear.	Some topics are given only superficial treatment.
	Emphasis on Skills Building	Relies heavily on observation and classification skills.	Weak on analytic and creative thinking skills.
	Action Orientation	N o t A p p l i c a b l e.	
	Instructional Soundness	Lists learning objectives. Provides resources for further research.	Provides limited connections to learners' everyday lives. Format is rigid, "cookbook" style.
	Usability	Presentation of materials is clear and inviting.	Graphics are of poor quality.

"This is an example of a really good outline misused as software."

"A great resource, particularly if used in conjunction with field trips to wetlands."



Earth Day to Arbor Day: An Opportunity for Stewardship Currently Out of Print



IN A NUTSHELL

The National Arbor Day
Foundation
Member Services
100 Arbor Avenue
Nebraska City, NE 68410

phone: (402) 474-5655
fax: (420) 474-0820
website: www.arborday.org

Cost: \$16.45 + s&h

SUBJECTS

Fine Arts
Language Arts
Science
Social Studies

This kit provides information and resources for those interested in developing an Arbor Day celebration built upon the concept of stewardship. The first section of the guide provides lessons and activities dealing with food chains, the importance of trees, personal beliefs and values, and paper consumption. Lesson plans include community tree surveys, paper making, collages and billboards, and service projects. Instructions are provided for planting trees, choosing proper trees for planting, and identifying planting sites. The guide's second section contains ideas for developing an Arbor Day celebration. It contains suggestions for organizers, such as sample schedules and information about fund-raising, as well as songs, plays and poems about trees. Some of the text comes in both English and Spanish versions. An audiotape contains a reading of Giono's *The Man Who Planted Trees* and fictional interview with Herodotus, Theodore Roosevelt, and the founder of Arbor Day. The kit also includes sample proclamations, brochures, and two color posters.

Grade Level	5-6
Length	74 pages & audiotape
Date Published	1996

THE BOTTOM
LINE

"A very nice way to introduce students to making a commitment to stewardship."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Information is accurate. Many activities reflect openness to inquiry.	Biased against treeless ecosystems (e.g., prairie, desert).
	Depth	Explains interdependence. Encourages students to build awareness of their own neighborhood.	
	Emphasis on Skills Building	Applies skills to issues. Emphasizes citizenship skills. Makes use of math and data collecting skills as well as creative expression.	Weak on critical thinking skills.
	Action Orientation	Encourages student action and cooperation with other individuals/organizations. Teaches personal responsibility.	
	Instructional Soundness	Utilizes different ways of learning. Incorporates activities from different subject areas.	Does not provide goals and objectives. Does not specify grade level.
	Usability	Information is long-lived. Materials are easy to use and are adaptable.	

"More helpful for a non-formal educator, since it has good basic ideas but not sound educational structure."

"Very useful in terms of planning an Arbor Day celebration."



Earth's Endangered Environments:

Picture Show



IN A NUTSHELL

National Geographic Society
Educational Services
P.O. Box 10597
Des Moines, IA 50340

phone: (800) 368-2728
fax: (515) 362-3366
TDD: (800) 548-9797

Cost:
Individual \$35.95 + s&h (#81181)
Lab Pack (5 users)
\$137.95 + s&h (#82028)

SUBJECT

Science
Social Studies

Two movies are on this CD-ROM, one dealing with rainforest and the other with wetlands. Specific habitats described include both temperate and tropical rainforests, swamps, bottomlands, peat bogs, arctic tundra, marshes and prairie potholes. The importance of the different ecosystems is discussed, along with some of the issues facing their survival. Efforts to preserve the ecosystems are described. The movies are presented with or without captions, and as scripts of the movie. Spanish versions appear on the same CD. One screen provides suggestions for classroom activities, including two activity sheets for each movie. Both images and text can be printed or downloaded for reports. The student section includes a glossary, background information, and list of key points for each film. Technical assistance is available through a toll-free number.

Grade Level
4-9
Length
CD-ROM
Date Published
1994

What the REVIEWERS Said!

Other Considerations
Strengths Noted

This is a concise, basic introduction to two ecosystems. The graphics and visual presentation are of high quality. The information on wetlands and rainforests is accurate, and the program covers concepts well. It is formatted like a television program, with little interaction and much passive viewing. The activities provided are simplistic. The program is easy to use, although some reviewers reported trouble printing information. Individual action and responsibility are not addressed.



Earth Matters

Studies for Our Global Future
2nd Edition



IN A NUTSHELL

Edited by: Pamela Wasserman

Zero Population Growth
1400 16th Street, N.W.,
Suite 320
Washington, D.C. 20036

phone: (202) 322-2200
fax: (202) 322-2302
website:

www.populationconnection.org

Cost: \$23.00 + s&h

SUBJECTS

Economics
Health
Language Arts
Mathematics
Science
Social Studies

The thirty-four activities in this collection are organized into thirteen chapters, each focused on a different environmental topic or issue. The topics addressed include population dynamics, hunger, deforestation, poverty, the status of women, natural resources, and wildlife endangerment. Each chapter begins with 3-4 pages of reference background reading for students, which lay out the main themes of the exercises.

The activities themselves range from chart and graph-reading exercises to board games, debates, and basic science experiments. The teacher's guide, at the front of the book, provides a table of activities arranged by subject matter, summaries of the activities with skills listed, and a chart matching the activities to national standards for various subject areas. The final section of the book includes recommended resources and information on accessing other publications by Zero Population Growth.

Grade Level	9-12
Length	210 pages
Date Published	1998

THE BOTTOM
L I N E

"Provides extensive information on how humans are impacting global ecosystems."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Student readings are well-referenced. Reviewed by many experts and educators.	Tends to present a specific point of view.
	Depth	Provides opportunities to increase awareness. Concepts are presented within both social science and natural science frameworks.	Focuses more on global than regional or local scales. No clear conceptual framework.
	Emphasis on Skills Building	Includes opportunities for collecting and organizing information, drawing conclusions, and addressing issues.	Few opportunities for students to develop hypotheses. Little emphasis on developing action skills.
	Action Orientation	Encourages students to look at issues in their own communities and to reflect on their own choices.	
	Instructional Soundness	Clearly states goals, objectives, methods and materials. Resource addresses a variety of learning styles.	Lacks assessment and evaluation methods.
	Usability	Includes resources for further research. Material can be easily photocopied. Activities linked to selected national standards.	

"Other than one expert reviewer, none appeared to be representing groups with alternative positions."

"A lot of thought and testing appears to have gone into putting together this resource."



Earth's Endangered Environments:

Picture Show



IN A NUTSHELL

National Geographic Society
Educational Services
P.O. Box 10597
Des Moines, IA 50340

phone: (800) 368-2728
fax: (515) 362-3366
TDD: (800) 548-9797

Cost:
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\$137.95 + s&h (#82028)

SUBJECT

Science
Social Studies

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Grade Level

4-9

Length
CD-ROM

Date Published
1994

What the REVIEWERS Said!

Other Considerations
Strengths Noted

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Eco-Adventures in the Rainforest



IN A NUTSHELL

Chariot Software Group
3659 India Street
San Diego, CA 92103
phone: (800) 242-7468
fax: (619) 491-0021
website: www.chariot.com

Cost:
Individual \$59.95 + s&h
Lab Pack (5 users) \$94.95 + s&h
Site Licence \$159.00

SUBJECT

Science

This software consists of a number of simulated expeditions, in which the player journeys through the rainforest in search of one of several creatures. With the help of a mysterious guide, players travel through thick forests, across rivers, and over areas that have been burned for cattle pasture. The camera allows the player to photograph interesting sights along the way. Throughout the expeditions, students encounter natives, other researchers, and rangers, and must navigate away from poachers, snares, falling trees, and dangerous animals. After completing each expedition a team of reporters ask the player a number of questions about rainforest flora and fauna. The resource guide explains how to play the game and provides a glossary of animal and plant names, a bibliography of books on rainforest wildlife, maps of the world showing the locations of rainforests, and answers to selected questions about the game. A poster showing black-and-white drawings of the animals is also included.

Grade Level
3 & up

Length
1 CD-ROM

Date Published
1994

What the REVIEWERS Said!

Other
Considerations
Strengths
Noted

Information was largely accurate, although limited and date-sensitive. The program showed animals from different parts of the world in the same rainforest. Activities are learner-centered to a degree and involve the students in map reading, strategizing, and comprehending scientific information. The program is easy to use and follow. The different scenarios offer interesting information on rainforest issues, but did little to encourage original thought or point out alternatives. Reviewers differed on whether children would find it interesting or inviting.



Earthways:

Simple Environmental Activities for Young Children



IN A NUTSHELL

Written by: Carol Petrash

Gryphon House Inc.
P.O. Box 207
Beltsville, MD 20704-0207

phone: (800) 638-0928
(301) 595-9500
fax: (301) 595-0051
website: www.ghbooks.com

Cost: \$19.95 + s&h

SUBJECTS

Fine Arts
Health

The activities in this book are divided into four chapters, one representing each season of the year. Each chapter then has four sections. The first offers suggestions for making the classroom environmentally friendly, such as by using non-toxic or reusable supplies. The second provides seasonal recommendations for the development of an indoor garden. The third is a collection of ideas for seasonal craft projects. The author calls the fourth section "supplying the missing links"; these activities are designed to help students recognize and appreciate the connections between everyday objects and their natural origins.

Among the activities are rolling candles from sheets of beeswax and creating desserts from berries the students have picked. The text includes lists of mail-order supply companies, background reading for teachers, environmental education organizations, and an index.

Grade Level
PreK-2

Length
206 pages

Date Published
1992

THE **BOTTOM**
LINE

"An atypical resource with a focus on using things from nature and recycled materials to develop an awareness of our earth's ways."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Provides numerous references.	
	Depth	Sequencing of activities helps make connections clear.	Concepts were given scant attention.
	Emphasis on Skills Building	Strong on action skills and on encouraging creativity.	Does not develop critical thinking skills.
	Action Orientation	Involves children in recycling, composting, and the use of environmentally-friendly materials.	Does not really address the student's role in nature.
	Instructional Soundness	Time and age group specified for each activity. Allows for learning outside the classroom.	Does not state goals or objectives. Often calls for children to use potentially dangerous objects (needles, candles, etc.).
	Usability	Activities are long-lived and sequentially organized. Uniform structure is employed throughout.	Some of the materials are not easily obtained.

"The author wants us to watch what we consume, but the activities consume things from nature, rather than the store."

"Although it lacks science-based content, this book provides clear directions for fun nature crafts."



Eco-Adventures in the Rainforest



IN A NUTSHELL

Chariot Software Group
3659 India Street
San Diego, CA 92103
phone: (800) 242-7468
fax: (619) 491-0021
website: www.chariot.com

Cost:
Individual \$59.95 + s&h
Lab Pack (5 users) \$94.95 + s&h
Site Licence \$159.00

SUBJECT

Science

This software consists of a number of simulated expeditions, in which the player journeys through the rainforest in search of one of several creatures. With the help of a mysterious guide, players travel through thick forests, across rivers, and over areas that have been burned for cattle pasture. The camera allows the player to photograph interesting sights along the way. Throughout the expeditions, students encounter natives, other researchers, and rangers, and must navigate away from poachers, snares, falling trees, and dangerous animals. After completing each expedition a team of reporters ask the player a number of questions about rainforest flora and fauna. The resource guide explains how to play the game and provides a glossary of animal and plant names, a bibliography of books on rainforest wildlife, maps of the world showing the locations of rainforests, and answers to selected questions about the game. A poster showing black-and-white drawings of the animals is also included.

Grade Level
3 & up

Length
1 CD-ROM

Date Published
1994

What the REVIEWERS Said!

Other Considerations
Strengths Noted

Information was largely accurate, although limited and date-sensitive. The program showed animals from different parts of the world in the same rainforest. Activities are learner-centered to a degree and involve the students in map reading, strategizing, and comprehending scientific information. The program is easy to use and follow. The different scenarios offer interesting information on rainforest issues, but did little to encourage original thought or point out alternatives. Reviewers differed on whether children would find it interesting or inviting.



Eco-Inquiry

A Guide to Ecological Learning
Experiences for the Upper
Elementary/Middle Grades



IN A NUTSHELL

Written by: Kathleen Hogan

Kendall-Hunt Publishing
Company
4050 Westmark Drive
Dubuque, IA 52002-1804

phone: (800) 228-0810
fax: (800) 772-9165
e-mail: orders@kendallhunt.com
website: www.kendallhunt.com

Cost: \$44.95 + s&h

SUBJECTS

Science

This curriculum involves students in experiments and research that will provide an understanding of ecological processes and how they affect a specific site in their local environment. The text is divided into three modules, each of which addresses a particular concept area: food webs, nutrient cycling, and decomposition. During the course of this program, students become familiar with composting, seed growth, development of environmental impact statements, and evaluating the experience and training of scientists. Each module gives students opportunities to generate theories, conduct research, and evaluate and process data. Individual lesson plans alert teachers to desired outcomes, needed materials, important vocabulary, preparation instruction, safety concerns, and ongoing means of assessment. Teachers are provided with narratives for introducing and describing the topics and activities, as well as suggestions for extensions. The text includes student worksheets, game cards, and illustrations.

Grade Level
5-8

Length
392 pages

Date Published
1994

THE BOTTOM
LINE

"I like the development of making science and scientists seem real and interesting."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Illustrations show diversity. Information is current. Materials focus on inquiry.	Lists reviewers, but not their affiliations.
	Depth	Allows for investigations over several weeks. Concepts are taught in context.	Material is locally focused and may lack regional and global relevance.
	Emphasis on Skills Building	Develops lab, creative problem solving, and observation skills. Students develop their own experiments. Uses group skills.	
	Action Orientation	Encourages sense of personal responsibility.	
	Instructional Soundness	Involves parents in learning process. Inquiry is learner-centered. Encourages many forms of assessment.	Materials could be more interdisciplinary.
	Usability	Materials are long-lived, adaptable, and have a clear and helpful format.	

"Allows for different perspectives to be introduced and explored."

"This text would best be used in situations where the teacher has one to two months or more to devote to these topics.."



Hands-On Minds-On Science Environmental Issues



IN A NUTSHELL

Written by: Pauline Chandler

Teacher Created
Materials Inc.
6421 Industry Way
Westminster, CA 92683

phone: (800) 662-4321
(714) 891-7895
fax: (714) 892-0283
website:
www.teachercreated.com

Cost: \$11.99 + s&h

SUBJECTS

Fine Arts
Health
Language Arts
Science
Social Studies

This book begins with a systematic introduction to the scientific method and science process skills. It goes on to provide suggestions on teaching and applying other learning skills relevant to the study of environmental issues, such as defining and identifying issues, determining who is affected by them, and providing a structure to use in analyzing different people's perspectives. Later chapters provide suggestions on structuring investigations into specific environmental issues, such as solid water management, air and water quality, and land use. For each issue, individual questions are posed along with ideas for engaging students in an experiential understanding of the issue. Activities include measuring the amount of recyclable material in garbage, listing household toxins, conducting experiments with gasses or soil types, and using pop bottles to simulate the greenhouse effect. Each activity includes suggestions for preparing the class for the activity, a list of needed materials, a description of the procedure, and suggestions for extensions and closure. The text provides masters of handouts, a glossary, bibliography, and assessment forms, and is illustrated with drawings and charts. This book is also available in Spanish.

Grade Level
3-5

Length
96 pages

Date Published
1994

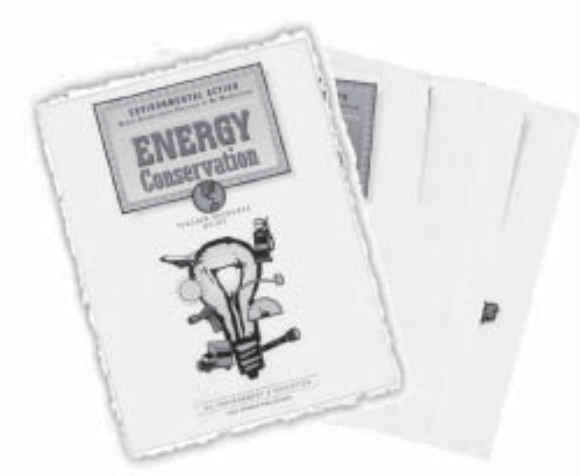
THE BOTTOM
LINE

"Individually, these are excellent activities and materials integrating life skill development and issues."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Expresses different viewpoints and encourages inquiry. Sources of information are referenced.	Includes some directive statements. Some fact sheets are time-sensitive and will require updating. Some perspectives are understated.
	Depth	Establishes a broad awareness of environmental issues. Builds knowledge and understanding through experiences.	
	Emphasis on Skills Building	Utilizes critical thinking skills. Each issue incorporates a personal action component.	
	Action Orientation	Provides opportunities for students to think about personal and community actions. Develops sense of personal responsibility.	
	Instructional Soundness	Information is made relevant to students. Uses a variety of activities and learning styles. Includes assessment tools.	Lessons are very teacher-driven. Targeted age group is not clear. Objectives are not stated.
	Usability	Materials are easily reproducible. Activities are organized in a consistent manner.	Provides little background information.

"The author tries to cover way too much, thus undermining the very skill building they seek."

"Good, clear science investigations."



Environmental ACTION!



IN A NUTSHELL

Developed by: E2: Environment & Education

Dale Seymour Publications
P.O. Box 5026
White Plains, NY 10602

phone: (800) 872-1100
fax: (914) 328-5487
website:

www.pearsonlearning.com

Cost: \$13.95 + s&h
each teacher's guide
\$5.95 + s&h each student guide

For Workshop Information Contact:
E2: Environment & Education
P.O. Box 20515
Boulder, CO 80308-3515
phone: (303) 442-3339
fax: (303) 442-6633
website: www.e2inaction.org

SUBJECTS

- Economics
- Health
- Language Arts
- Science
- Social Studies

Environmental ACTION (Analyze, Consider Option, Take Action In Our Neighborhood) is a series of six modules, each addressing a different environmental issue. The issues covered include energy conservation, food choices, biodiversity, chemicals, resource management, waste reduction, and water use. The modules can be used independently, consecutively, or in any combination. Each module contains a teacher guide and a student guide. Each is composed of several one-hour lessons which students can perform on their own or in small groups.

Lessons include suggestions for follow-up that students can do at home. Modules conclude with students developing an action proposal. Masters of student worksheets, discussion questions, and wrap-up ideas are provided in the student editions. Student guides also include background information and a glossary. Teacher guides provide additional suggestions for facilitating the lessons, itemized concepts and objectives, special vocabulary, student responses to discussion questions, and masters of quizzes with answers.

Grade Level	8-12
Length	varies per book
Date Published	1998

THE BOTTOM
LINE

"The strength of this material is its action orientation. Action steps are clear and explain concepts in community/school context."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Reviewed by educators and content specialists. Graphics represent a variety of cultures. Very open in inquiry.	Extent of balance is questionable in some modules. Facts will need updating.
	Depth	Addresses concepts in context.	Provides minimal background information.
	Emphasis on Skills Building	Encourages critical and creative thinking. Builds investigative and action skills.	
	Action Orientation	Presents idea that individual actions make a difference. Strong on action component.	
	Instructional Soundness	Makes clear connections to learners' lives. Highly learner-centered.	
	Usability	Both student and teacher guides are clear. Support material and workshops are available.	Cost of entire set may be prohibitive.

"May be too young-looking for secondary students."

"Modular format allows for a wide variety of customizing options."



Environmental Resource Guide:

Air Quality - Grades 3-5



IN A NUTSHELL

Written by: Air & Waste
Management Association

Air & Waste Management Assoc.
Publications Order Department
P.O. Box 1020
Sewickley, PA 15143-1020

phone: (800) 275-5851
(412) 741-1288
fax: (412) 741-0609
website: www.awma.org

Cost: \$33.50 + s&h for Air & Waste
Management Association Members
\$44.50 + s&h for non-members

SUBJECTS

Fine Arts
Health
Language Arts
Mathematics
Science
Social Studies

The lessons in this guide are designed to provide elementary school students with an introduction to air, air quality issues, and pollution control and prevention. Topics include effects of air pollution on human health, ways to detect radon and carbon monoxide, acid precipitation, smog, wind scales, global warming, and the dispersion of air pollutants.

Individual lessons last from one to four class periods and consist of several related activities; many have different versions for specific grades. Activities include scientific experiments, discussion, drama, making nontoxic cleaners, creating mobiles, puzzles, and reading. The guide lists topics, time requirements, subjects, objectives, required materials, follow-up and extension activities. Resource lists are also provided for each lesson. The curriculum contains a glossary, fifteen pages of fact sheets, masters for worksheets and handouts, and diagrams to illustrate experiments. Parallel modules are available for grades K-2 and 6-8.

Grade Level
3-5

Length
250 pages

Date Published
1996

THE BOTTOM
L I N E

"I liked the coverage of indoor air quality. It is in-depth and covered familiar sources that students can do something about."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Information appears to be accurate.	Weak in terms of showing consequences of poor air quality, except in regards to humans.
	Depth	Clusters activities around concepts. Addresses historical context.	Little linkage to social or economic issues.
	Emphasis on Skills Building	Uses some critical and creative thinking skills. Applies skills to specific issues.	
	Action Orientation	Identifies action steps to take at home.	
	Instructional Soundness	Connects information to learners' everyday lives. Builds upon prior knowledge. Contains some outdoor activities.	Safety instructions are not always made clear to students. Some information may be too advanced for 3rd-5th graders.
Usability	Instructions are clear and complete. Lessons are adaptable. Most equipment is inexpensive and easily obtained.		

"The connection between level of consumption and the level of air pollution was not adequately made."

"There is a wide range of lessons, from extremely simple to extremely challenging."



Environmental Teaching Guide:

21 Ways to Bring the
Environment into the
Classroom

Currently Out of Print



IN A NUTSHELL

Texas Natural Resource
Conservation Commission
MC 195
P.O. Box 13087
Austin, TX 78711-3087

Publication GI-207

phone: (512) 239-0028
fax: (512) 239-4488
website: www.tnrcc.state.tx.us

Cost: No charge for first copy.
Additional copies \$3.25

SUBJECTS

Science
Social Studies

This three-part manual contains twenty-one lesson plans. The first section deals with air quality and includes activities that teach about air pressure, temperature inversion, the role of plants in producing oxygen, and the use of scrubbers to prevent air pollution. Section two is concerned with waste management and recycling, and includes projects that involve reusing materials and increase awareness of waste. The third section addresses water quality and includes making models of aquifers, experiments with water and oils, and exploring sources of water pollution. Each activity lists a purpose, appropriate grade, objective, background information, materials required, and the source from which the activity was taken. Several activities also include discussion ideas, suggestions for enrichment, or assessment tools.

Grade Level
K-6

Length
62 pages

Date Published
1996

THE **BOTTOM**
LINE

"A great resource for primary education."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Cites sources. Open to inquiry.	Some activities do not promote multiple viewpoints.
	Depth	Thematic in approach. Builds awareness of pollution and how people respond to pollutants. Builds on what students already know.	
	Emphasis on Skills Building	Skills are tied to issues. Builds analytic and critical thinking skills.	
	Action Orientation	Encourages students to identify alternatives to their current consumer behavior.	
	Instructional Soundness	Makes connections to learners' everyday lives. Activities are interdisciplinary and learner-centered. Uses cooperative learning groups.	Goals are identified by number but not spelled out. All learning takes place in the classroom.
	Usability	Text is clear and easy to use. Materials required are affordable and simple.	

"Not very balanced, but intended for open-ended activities."

"Highly usable laboratory activities."



Environmental Science: Water & Air



IN A NUTSHELL

Written by: Lee Hunter,
Richard Goodman, MaryJo
Diem, Steve Middleton &
Carrie Casey

Globe Fearon Customer
Service Center
4350 Equity Drive
P.O. Box 2649
Columbus, OH 43216-2649

phone: (800) 848-9500
fax: (800) 260-2530
website: www.globefearon.com

Cost: \$12.95/12.50 teacher
resource + s&h

SUBJECTS

Science
Social Studies

This student textbook explores some of the environmental concerns associated with water and air. The text begins by discussing the chemical composition of water, and goes on to describe how water travels through air and soil, sources of freshwater, how much water is used and treated, and how the learner is affected by water quality and availability. The second half of the book discusses the chemical properties of air, air pollution, acid precipitation, and climate change. The text is interspersed with laboratory and field activities, review and discussion questions, and a series of challenges entitled "You Solve it." The text includes a glossary, an index, and a resource directory. Illustrations consist of photographs, drawings, and charts. Important vocabulary words appear in bold type.

Grade Level
6 & up

Length
92 pages

Date	Published
	1995

THE BOTTOM
L I N E

"The information and activities provide a teacher with a supplement for a broad-based unit on water and air."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy		Some information is ambiguously phrased and could lead students to inaccurate conclusions. Fails to cite some data sources.
	Depth	Addresses and identifies concepts. Provides students with context for information.	
	Emphasis on Skills Building	Provides laboratory, field studies, and case studies for application of skills.	Weak on creative thinking skills.
	Action Orientation	Provides age-appropriate suggestions for action.	Assumes that some courses of action are preferable or are a goal for the students.
	Instructional Soundness	Opportunities to learn through a variety of sources and activities.	Largely teacher driven.
Usability	Logical, easy to follow sequence.		

"'You solve It' sections add a lot. Nice lab activities."

"Seems to be more issue than concept driven. More of a social studies than a science book."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Clearly cites sources of information. Text is open to inquiry and provides a balanced presentation of differing views.	Focuses almost exclusively on Great Lakes states. Some data will need updating. Provides little information on use of Great Lakes by different cultures.
	Depth	Discusses local and global aspects of issues. Fosters awareness. Makes correlations between natural and built environments.	
	Emphasis on Skills Building	Employs cost/benefit analysis, problem solving, laboratory skills. Students apply scientific and analytic skills to issues.	
	Action Orientation	Students reflect on their values regarding specific policies and legislation.	Weak on self-efficacy. Does not really focus on action.
	Instructional Soundness	Uses expanded learning environment. Lessons are interdisciplinary and make use of different learning styles. Material is made relevant to learners' lives.	
	Usability	Activity abstracts are helpful. Correlated with national science standards and benchmarks for scientific literacy.	Layout is rather confusing at first.

"Seems to reflect the current state of scientific debate of global climate change."

"Gives students/teachers a choice of how much to get into this through the extension section of each activity."



Global Change Education Resource Guide



IN A NUTSHELL

Edited by: Lynn L. Mortensen

Office of Global Programs
National Oceanic and
Atmospheric Administration
Attn: Direct Marketing
1100 Wayne Avenue,
Suite 1225
Silver Spring, MD 20910

phone: (301) 427-2089 ext. 28
fax: (301) 427-2222
e-mail: gray@ogp.noaa.gov

Cost: No charge
(while supplies last)

SUBJECTS

Mathematics
Science
Social Studies

Developed by the National Oceanic and Atmospheric Administration, this collection of materials brings together scientific journal articles, sections from activity guides, and lessons from other educational materials to comprise a teaching unit on the scientific discussion of global temperature change. Chapters address natural climate changes, the greenhouse effect, the rise in sea levels, ozone depletion, and how the global ecosystem is responding to these stressors. Social effects and considerations are also addressed. A final chapter looks at decision-making around these scientifically uncertain issues. Most information is given in text form although some activities and experiments are included. Also available is a set of 48 full color transparency masters and a videotape showing several scientists discussing and explaining climate change issues. The material is illustrated with photographs, drawings, charts, maps, and tables. A bibliography of related materials is also provided. Many of the chapters come from United Nations and U.S. Government publications, and are available in different languages.

Grade Level
K-12

Length
402 pages

Date Published
1994

THE **BOTTOM**
LINE

"As it is, this is a resource guide. It provides a great deal of information that could add to an educator's information base."

	Key Characteristics	Strengths Noted	Other Considerations
What the REVIEWERS Said !	Fairness and Accuracy	Presents global and national positions. Include many primary sources. Materials are referenced and peer-reviewed.	
	Depth	Gives attention to scale, awareness, and concepts.	
	Emphasis on Skills Building	Includes many opportunities for practicing scientific inquiry and evaluation skills.	
	Action Orientation	N o t A p p l i c a b l e .	
	Instructional Soundness	Provides a variety of formats. Some lessons connect subject matter to students' lives.	Provides much information but few lesson plans for teachers. Not designed for learner-centered instruction. Contains few hands-on activities.
	Usability	Provides helpful background information.	Some sections may be too complicated even for high school students.

"Any teacher would be glad to have this as a reference in the classroom."

"An incredible package covering scientific and social issues."



A Guide to Groundwater Guardian: 1998 Program Year



IN A NUTSHELL

Written by: Groundwater
Guardian Management Team

The Groundwater Foundation
P.O. Box 22558
Lincoln, NE 68524-2558

phone: (800) 858-4844
(402) 434-2740
fax: (402) 434-2742
e-mail: info@groundwater.org

Cost: No charge

SUBJECT

Science
Social Studies

The *Groundwater Guardian* is a program designed to raise awareness of groundwater issues and assist communities in forming plans to protect groundwater. This community guide introduces the program and provides concrete and specific instructions to those wishing to participate. Planning is geared towards five types of results-oriented projects: public awareness, conservation, pollution prevention, public policy, and best management practices. Projects vary in length from one to several years. Chapters address the nature of the program, how to plan for projects, how to implement action plans, and how to apply for designation as a Groundwater Guardian community. Parallel chapters address the development of Groundwater Guardian Affiliates, which are entities that promote groundwater awareness and assist communities in their efforts. Appendices include application and planning forms, a glossary of groundwater terms, and examples of the five different types of activities.

Grade Level	adult
Length	65 pages
Date Published	1998

What the REVIEWERS Said!

Other Considerations
Strengths Noted

This material is more of a how-to guide than an educational curriculum. The action component is very strong, and assumes that those using the materials share the organization's views and concerns about groundwater. The instructions provide an overview and suggest sources for further information, but do not go into much detail by themselves. The material focuses on grassroots organizing and the importance of involving a diverse cross-section of the local community.



A Guide to Groundwater Guardian: 1998 Program Year



IN A NUTSHELL

Written by: Groundwater
Guardian Management Team

The Groundwater Foundation
P.O. Box 22558
Lincoln, NE 68524-2558

phone: (800) 858-4844
(402) 434-2740
fax: (402) 434-2742
e-mail: info@groundwater.org

Cost: No charge

SUBJECT

Science
Social Studies

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Grade Level	adult
Length	65 pages
Date Published	1998

What the REVIEWERS Said!

Other Considerations
Strengths Noted

This material is more of a how-to guide than an educational curriculum. The action component is very strong, and assumes that those using the materials share the organization's views and concerns about groundwater. The instructions provide an overview and suggest sources for further information, but do not go into much detail by themselves. The material focuses on grassroots organizing and the importance of involving a diverse cross-section of the local community.



North American Ecosystems



IN A NUTSHELL

Queue, Inc.
338 Commerce Drive
Fairfield, CT 06432

phone: (800) 232-2224
(203) 333-7268
fax: (800) 775-2729
e-mail: sales@queueinc.com
website: www.queueinc.com

Cost: \$145.00 + s&h

SUBJECT

Science
Social Studies

This hybrid Macintosh/Windows CD-ROM introduces students to the concept of a biome and allows them to explore specific biomes in North America. Although six biomes are introduced and discussed, the program focuses on three: the desert, the Rocky Mountains, and the prairie. Each section provides brief movies with written and spoken narration, and looks at the climate, geography, flora and fauna that define each biome. Additional background material for instructors is provided in a separate folder, along with pre- and post-questions, instructions for using the program, and four quizzes presented with and without answers.

The material also includes several maps showing the location of different biomes, as well as an on-line glossary that allows the students to review information on specific topics or ideas.

Grade Level
6-10

Length
1 CD-ROM

Date Published
1996

What the REVIEWERS Said!

Other Considerations
Strengths Noted

The information appears to be accurate and balanced, although there was little in the ways of exploring different viewpoints. Reviewers described the materials as visually appealing and well-organized; the visuals received high marks, and the use of historical photographs and video footage added to the material. The teacher's guide is rather weak, and little was done to address skill development. The program is not very interactive, although the quizzes were found to be helpful.



The Intriguing Past: Fundamentals of Archaeology

A Teacher's Guide



IN A NUTSHELL

Developed by: Shelly Smith,
Jeanne Moe, Kelly Letts,
Danielle Paterson

U.S. Department of the Interior
Bureau of Land Management
Heritage Education Program
P.O. Box 758
Dolores, CO 81323

phone: (970) 882-4811 Ext. 120
e-mail: dramsay@co.blm.gov

Cost: \$15.00 + s&h

SUBJECTS

Language Arts
Science
Social Studies

The eight lessons in this teacher's guide are drawn from an earlier, larger collection, *Intrigue of the Past: Investigating Archaeology*, which was a product of Utah's archaeology program. Lessons range from fifteen to ninety minutes in length and many are designed for classes divided into smaller groups. Students learn about the importance of studying the past and develop important cognitive skills, such as classifying different objects, forming hypotheses, and understanding the difference between observing and inferring. By means of games, discussions, and other activities, students become familiar with the nature of archaeological research, develop a time line of important events in their own lives, and take part in an archaeological 'dig' in a pile of garbage. Each lesson is referenced for subject, skill, learning strategies, duration, and class size. Objectives, materials, important vocabulary, background information, and links to the larger curriculum are included. Each lesson also lists closure and opening suggestions, worksheets and masters. Illustrations consist of black-and-white drawings and charts.

Grade Level	4-7
Length	40 pages
Date Published	1997

THE BOTTOM
LINE

"Activities require students to bring in photos or objects that represent their past—an excellent hook for instilling a sense of ownership."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Cites sources of information. Field tested by a large number of teachers.	Few opportunities for inquiry. Does not reflect urban archaeology.
	Depth	Increases awareness of built environments of the past.	
	Emphasis on Skills Building	Develops a wide range of critical thinking skills. Learners are encouraged to draw their own conclusions.	
	Action Orientation	Promotes civic responsibility.	Addresses problem of artifact collecting, but does not provide suggestions for student action.
	Instructional Soundness	Uses a variety of instructional methods. Clearly states goals and objectives. Material is made relevant to learners' lives.	Relies heavily on paper and pencil activities.
	Usability	Material is clear and easy to use. Workshops are available to help teachers incorporate archaeology into the classroom. Supplies needed are easily accessible.	

"Not enough moving activities. Children in this age group need to move around."

"Good for teaching basic archaeological concepts."



Investigating & Evaluating Environmental Issues & Actions: Skill Development Program



IN A NUTSHELL

Written by: Harold Hungerford,
Ralph Litherland, R. Ben
Peyton, John Ramsey &
Trudi Volk

Stipes Publishing Company
10-12 Chester Street
Champaign, IL 61820

phone: (217) 356-8391
fax: (217) 356-5753

Cost: \$26.80 + s&h
teacher's edition
\$13.80 + s&h student's edition

SUBJECTS

Economics
Language Arts
Mathematics
Science
Social Studies

This material is designed to give students the tools to investigate and evaluate environmental issues. Students are first introduced to definitions of 'environment,' then are led through processes of identifying issues and research questions, conducting investigations, interpreting data, and developing action strategies based on research. Topics addressed include: understanding the differences between conclusions and inferences; doing research on issues in libraries; recognizing values associated with belief statements; and how to organize and present data. As part of the curriculum, students are responsible for completing and reporting on an issue investigation. The material is interspersed with case studies, quotes from original documents on specific environmental discussions, cartoons, photographs, and charts. The teacher's guide provides additional background information, a discussion of environmental literacy, and suggestions for teaching the units.

Grade Level
6-12

Length
270 pages

Date Published
revised in 2003

THE BOTTOM
L I N E

"Great job on getting kids to think for themselves
and to analyze their own ideas."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Case studies reflect diversity of issues and geographic areas. References sources of information. Provides balanced presentations and encourages inquiry.	
	Depth	Promotes an awareness of issues. Students encouraged to explore own beliefs. Teaches concepts in context.	
	Emphasis on Skills Building	Strong on critical thinking and application of skills to issues.	
	Action Orientation	Includes entire section on action. Stresses looking at problems from a variety of perspectives and acting only after careful reflection of the issues.	
	Instructional Soundness	Goals and objectives are clearly spelled out.	Relies largely on reading to learn skills. Involves few lab or field work exercises.
	Usability	Adaptable and easy to use. Instructions are clear and concise.	Case studies and data will need to be updated.

"Teachers may have a little difficulty with the format, as it is not laid out in a linear 'do it this way' format."

"Teaches the learners how, not what, to think."



Investigating Groundwater:

The Fruitvale Story



IN A NUTSHELL

Written by: Chemical Education
for Public Understanding
Program (CEPUP)

Lab-Aids, Inc.
17 Colt Court
Ronkonkoma, NY 11779

phone: (800) 382-8003
fax: (631) 737-1286
website: www.lab-aids.com/

Cost: \$19.95 + s&h teacher's
guide
\$196.00 + s&h for complete kit

SUBJECTS

Health
Science
Social Studies

The book provides a structured series of lessons and activities in which students learn about groundwater and investigate a case of groundwater pollution. In the first two of the book's seven sections, students learn and experiment with basic facts about groundwater, such as water movement and concentrations of chemicals. In sections three through five, students study and plan additional research on a groundwater contamination situation in the fictional town of Fruitvale. Working in small groups, students plan their own course of action and find the information necessary to determine the source of the pollution. The final two sections involve the students in role-playing activities, where they act out a town meeting to decide how best to clean up the contamination. Supports include student sheets, masters of handouts and other project materials, complete instructions for setting up the experiments, background information, an achievement test, information on obtaining supplies, and a glossary. Illustrations consist of maps, charts, drawings, and photographs.

Grade Level
6-9

Length
84 pages

Date Published
1991

THE BOTTOM
LINE

"An inquiry-based, problem-solving approach to learning about the environment and the results of poor decision making."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Factually accurate. Provides different viewpoints and allows students to make their own decisions.	
	Depth	Students learn concepts in stages. Examines short- and long-term issues.	
	Emphasis on Skills Building	Makes use of both critical and creative thinking skills. Applies skills to issues. Uses interpersonal and group skills.	
	Action Orientation	Role-play gives an example of citizen involvement resulting in change.	Does not relate to learners' own community or personal behaviors.
	Instructional Soundness	Very learner-centered. Clearly states goals and learner outcomes. Accommodates different learning styles.	All activities are designed as classroom activities.
	Usability	Package is long-lived, clear, and easy to use. Can be adapted to different situations or locations.	

"Very usable, even for teachers with little science background."

"Raises awareness of the problem and then follows through to a solution."



Investigating Your Environment



IN A NUTSHELL

Developed by: USDA Forest
Service, Pacific Northwest
Region

Natural Resource Education
Coordinator
U.S. Forest Service
Leavenworth Ranger Station
600 Sherbourne
Leavenworth, WA 98826

fax: (509) 548-5817
e-mail: Thomas_Susan_1/
r6pnw_wenatchee@fs.fed.us

Cost: No charge

SUBJECTS

Fine Arts
Language Arts
Mathematics
Science
Social Studies

This large collection of activities on a number of different topics was originally developed by the U.S. Forest Service. The first of four sections, "Basic Environments", addresses such items as plants, animals, measuring skills, roles of species, and water volume. The next section, "Unique Environments", adds lessons on dunes, built environments, deserts, and ponds, among others. "Extending Your Environment" incorporates activities that challenge students to study, compare and make decisions regarding land use, and includes area studies and simulation exercises. The final section, "Investigation Spin-offs", gives suggestions to teachers for making the activities more meaningful to students. Each activity lists concepts, objectives, materials needed, processes used, time requirements, and suggestions for closure and transition. Masters are provided for handouts and student information pages. Appendices include supply lists, references and learning goals for Oregon and Washington.

Grade Level
6-12

Length
964 pages

Date Published
1993

THE BOTTOM
L I N E

"This guide has good classroom activities to discuss basic environmental concepts."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Information appears accurate. Inquiry is encouraged.	Does not cite references. Gives teachers and students a framework for investigating issues but does not address issues directly.
	Depth	Covers a large number of environmental topics. Builds awareness.	No clear conceptual framework.
	Emphasis on Skills Building	Strong in developing critical and creative thinking skills (data collection, analysis, interpretation, problem solving).	
	Action Orientation	N o t A p p l i c a b l e .	
	Instructional Soundness	Lists objective, concepts and principles. Units are student-centered. Connects well to learners' everyday lives.	
	Usability	Forms are reproducible. Connects to national standards. Activities are adaptable and long-lived.	Some activities require specialized supplies which may need to be ordered.

"Includes a lot of information and one class period activities."

"This is basically a group of good, solid activities."



Interactive Lake Ecology



IN A NUTSHELL

Written by: Mark T. Denoncour

New Hampshire Department
of Environmental Services
6 Hazen Drive
Concord, NH 03301

phone: (603) 271-3503

fax: (603) 271-2867

e-mail:

mloskamp@des.state.nh.us

Cost: \$7.50 teacher's guide

\$5.50 student's guide

SUBJECTS

Language Arts

Mathematics

Science

Social Studies

This curriculum contains seven lessons on lakes, water, and lake ecology. The student guide includes text, diagrams, instructions for conducting experiments, note sheets, and a glossary. Important vocabulary words are italicized throughout, and chapters conclude with review questions. Lesson topics include properties of water, succession, pollution, lake classification, food chains, and watersheds. A final chapter reviews the information of the seven lessons and encourages students to take part in action projects. The teacher's guide lists objectives for each lesson, answers to review questions, procedures for conducting experiments, and teaching instructions. The appendices include illustrations (diagrams, maps, or drawings) of the major ideas presented in the chapters, worksheet masters, time frame charts, suggestions for field trips, a final test, and a bibliography. An accompanying video covers the topics of the seven chapters and includes interviews with scientists and additional illustrations of the concepts covered.

Grade Level
5-8

Length
105 pages

Date Published
1991

THE BOTTOM
LINE

"This would be a beneficial resource for an environmental educator, especially when working with a classroom on a pre- or post-activity basis."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Information is factually accurate.	Presents a conservationist bias.
	Depth	Emphasizes ecological concepts. Looks at change over time.	
	Emphasis on Skills Building	Makes use of critical thinking skills. Students develop hypotheses regarding experiments.	
	Action Orientation	Promotes action; encourages learner to share information with others. Identifies ways learners can make a difference.	
	Instructional Soundness	Combines hands-on activities, field trips, guest speakers, and other teaching strategies. Includes assessment options	Does not state goals.
	Usability	Materials are long-lived, easy to use, and adaptable	Student book is uninviting. May not be relevant to those who do not live near a lake.

"The video is a good introduction to the written materials."

"An impressive piece of material to present limnology and related environmental issues."



The Leopold Education Project:

Lessons in a Land Ethic



IN A NUTSHELL

Leopold Education Project
1783 Buerkle Circle
St. Paul, MN 55110

phone: (651) 773-2000
fax: (651) 773-5500
e-mail: lep@pheasantsforever.org
website: www.lep.org

Cost: \$20.00/Distributed through a training workshop

SUBJECTS

Fine Arts
Language Arts
Mathematics
Science
Social Studies

This curriculum is based on the writings of Aldo Leopold, in particular the first section of his *A Sand County Almanac*. The curriculum contains the text of Leopold's original work, a teacher's guide, lesson plans, task cards, and a video. *Lessons in a Land Ethic*, the teacher's guide, offers twenty-one lessons on conservation and nature. The lessons are based on selections from Leopold's writings and are arranged thematically by season. Each lesson lists objectives, vocabulary, background information, location, and suggestions for evaluation and extension. Masters of student worksheets are provided when appropriate. The guide includes a glossary, bibliography, and list of references. *Environmental Heroes and Heroines* provides three lesson plans which discuss past and present heroes and explore students' values. A set of nineteen task cards provides students with ideas for specific observations or experiments to perform while walking through a natural area. A fifty-six minute biographical video describes the development of Leopold's land ethic. The project also produces newsletters and offers trainings to certify instructors to facilitate workshops.

Grade Level	5-8
Length	89 page teacher's guide
Date Published	1995

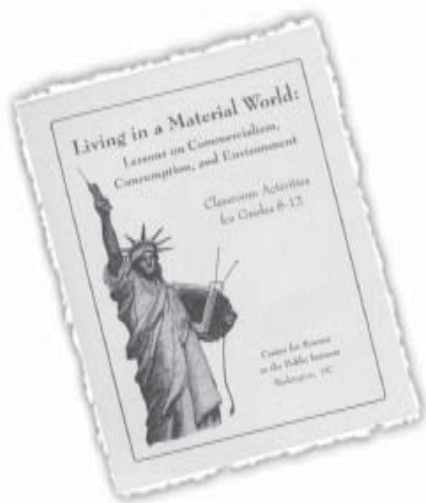
THE BOTTOM LINE

"Highly recommended due to unique topic, teacher resources, and potential to impact attitudes for life."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Information is straightforward and referenced. Attempts to give a balanced presentation of controversial issues.	Weak in terms of diversity.
	Depth	Shows development of ideas and issues over time. Materials tie in ethical, historical, and cultural links.	
	Emphasis on Skills Building	Promotes critical and creative thinking.	Few opportunities to apply skills. Unclear how students can share their discoveries/insights with others.
	Action Orientation	One module includes examples of environmental heroes. Promotes personal responsibility.	
	Instructional Soundness	Students worksheets are helpful. Assessment ideas are included. Provides both classroom- and outdoor-based exercises.	Not very learner-centered.
	Usability	Provides ongoing support and training. Material is clear, logical, and easy to use.	Assumes that learners live near habitat similar to Leopold's. Insufficient background material.

"Does not delve deeply into issues—mostly aesthetics and appreciation."

"I like the marriage between literature and conservation ethics."



Living in a Material World:

Lessons on Commercialism, Consumption, & Environment



IN A NUTSHELL

Developed by: Environmental Education Exchange

GPN and Center for Environmental Literacy
P.O. Box 80669
Lincoln, NE 68501-0669

phone: (800) 228-4630
fax: (800) 306-2330
website: www.gpn.unl.edu/

Cost: \$24.95

SUBJECTS

Economics
Fine Arts
Health
Language Arts
Social Studies

The eight lessons in this book address three facets of commercialism: pressures to consume, effects of commercialism and consumption, and countering commercialism. A bar graph in each lesson indicates the extent to which each of these facets is addressed. Students analyze advertising techniques, complete questionnaires regarding their responses to advertising, evaluate packaging used in common products, and analyze their feelings regarding happiness and quality of life. Activities include discussions, surveys, drama, and experiential exercises (such as trying to avoid advertising and commercialism for 72 hours).

Each lesson lists a goal, subjects involved, materials needed, teacher notes, variations and extensions, and resources. Illustrations consist of transparency masters, charts, and photographs of actual advertisements. The text also includes a list of references and resources and several pages of additional activities.

Grade Level	8-12
Length	82 pages
Date Published	1996

THE BOTTOM
L I N E

"I am pleased with the attempt to have students look deep into consumerism."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Reflects both local and international diversity. Promotes inquiry. Information is from respectable sources and is clearly referenced.	Most recent reference is from 1994. Did not include a perspective from the advertising industry or indicate role of advertising in democracy, free speech, etc. Promotes perspectives of a noncommercial society.
	Depth	Pays attention to different ethnicities and scales from local to global. Develops concepts well.	
	Emphasis on Skills Building	Encourages critical thinking.	Doesn't engage students in defining problems or developing surveys. Could emphasize communication skills more.
	Action Orientation	N o t A p p l i c a b l e .	
	Instructional Soundness	Builds on learners' previous knowledge. Encourages expanded learning environment. Connects to learners' everyday lives.	Material may be better suited for 11-12 grade students.
	Usability	Lessons are adaptable, reproducible, and long-lived. Requires minimal equipment.	Overheads are very text-heavy.

"Subject is not integrated into broader subjects of civics or psychology. Too bad the authors don't take the risk of providing more balance."

"Uses wide variety of life skills as it promotes student analysis."



Marine Ecology & Conservation:

Teacher's Guide



IN A NUTSHELL

Written by: Donna Potter Parham

Sea World
500 Sea World Drive
San Diego, CA 92109-7995

phone: (800) 23-SHAMU
TDD: (800) TD-SHAMU
fax: (619) 226-3634
website: www.seaworld.org

Cost:

K-3 Teacher's Guide \$5.95 + s&h
4-8 Teacher's Guide \$5.95 + s&h

SUBJECTS

Fine Arts
Language Arts
Mathematics
Science

There are two different editions of this teacher's guide, one for grades K-3 and the other for grades 4-8. The two guides have identical introductory lessons and pages which describe some ocean-dwelling animals and introduce some basic concepts of ecology and conservation. The activities in both guides provide a basic introduction to animal adaptation, food chains, and some of the damage caused to wildlife by oil spills and waste. Activities for younger students include artwork, games, songs and experiments. Activities for 4-8 graders include several opportunities for students to practice to decision making skills and to analyze conservation problems. Each activity lists objectives, background information, and materials needed. Each volume provides its own vocabulary list, statement of objectives for the unit, and list of additional resources. Illustrations include drawings and black-and-white photographs.

Grade Level	K-3, 4-8
Length	26 pages each
Date Published	1995

THE BOTTOM LINE

"This curriculum really focuses on conservation and it good at presenting fair arguments from both sides."

	Key Characteristics	Strengths Noted	Other Considerations
What the REVIEWERS Said !	Fairness and Accuracy	Challenges students to see all sides of a situation. Information is largely accurate.	Facts are not referenced. Does not list affiliations or roles of scientific advisors. Contains at least one inaccurate scene of ocean life.
	Depth		No obvious effort to tie the activities together. Touches on many concepts but in a simplified, general way.
	Emphasis on Skills Building	Specific activities deal with observation, data collection, critical thinking, and action skills. Encourages use of a variety of media.	
	Action Orientation	Action is addressed in several activities.	
	Instructional Soundness	Makes use of a variety of activities in many subject areas. Clearly states goals.	Some reading material or activities may not be appropriate for given grade level.
	Usability	Lessons are reproducible and inexpensive. Lessons are not site- or location-specific. Text is clear and easy to use.	

"Discusses how humans interact with the ocean, but doesn't seem to emphasize our reliance on it."

"Very basic, simplistic introduction to marine ecology."



Migratory Birds:

Issue Pac



IN A NUTSHELL

Developed by: U.S. Fish &
Wildlife

Urban Wildlife Resources
5130 W. Running Brook Road
Columbia, MD 21044

phone: (410) 997-7161

fax: (410) 997-6849

website:

www.erols.com/urbanwildlife

Cost: \$6.95 + s&h

SUBJECTS

Fine Arts
Mathematics
Science

This package of materials on bird migration was developed by the U.S. Fish and Wildlife Service. It consists of a leader overview, a page of action-based education projects dealing with birds, two student pages, three principal activities, and a poster showing the migration routes of four different songbirds. The leader overview provides information on the timing of migration, theories on why birds migrate and how they maintain direction, how scientists track bird migration, and dangers facing migratory birds. The three principal activities include learning objectives, time and setting, data sheets, review questions, and suggested follow-up activities. One activity is a game, one a situation, and one an exercise in mapping bird movements based on bird banding information. The package also includes a glossary and a list of curriculum resources. Pages are illustrated with drawings.

Grade Level
3-7

Length
30 pages

Date Published
1995

THE **BOTTOM**
L I N E

"The materials are comprehensive and touch on a range of issues associated with migratory bird populations."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	References are cited. Material stimulates inquiry.	Lacks different viewpoints.
	Depth	Develops awareness.	Does not detail reasons for threats to birds. Does not focus on concepts.
	Emphasis on Skills Building	Develops birding and observation skills (e.g., using binoculars and field guides).	
	Action Orientation	Some of the action-based activities build on personal responsibility.	
	Instructional Soundness	Includes multiple learning styles. Some action projects relate to students' homes or school.	Principal activities are weak on connecting to students' lives. Mapping may be too complicated for some students.
	Usability	Easy to use and reproduce.	No suggestions for use in schools that are not in the path of migration routes.

"The materials do not indicate why the loss of migratory birds is important, other than a brief mention of indicators."

"Stimulates inquiry about problems of migratory birds."



Mud, Muck & Other Wonderful Things:

An Environmental Curriculum for Five- to Eight-Year Olds

Currently Out of Print



IN A NUTSHELL

Written by: Mary Kroll

National 4-H Supply Service
7100 Connecticut Avenue
Chevy Chase, MD 20815-4999

phone: (301) 961-2934

fax: (301) 961-2937

website: www.fourhcouncil.edu

Reference# ES1007

Cost: \$5.00 + s&h

SUBJECTS

Fine Arts
Science

This is a structured, sequential curriculum designed to help introduce young learners to the world of nature, with an emphasis on wetland habitats. The book consists of seven chapters, each dedicated to a different topic and containing three different activities. Activities include puzzles, games, discussions, temperature measurements, weather study, drawings, and numerous outdoor explorations. A side-bar for each lesson identifies relevant life skills, the preferred group size and adult/child ratio, age ranges, location, time requirements, and materials needed. An activity matrix charts the outcomes, preferred site, and time of year for each activity. The text includes student pages and masters of handouts. Each activity ends with a paragraph that begins "Being a steward of the environment means...", which is meant to be read to the students to provide ideas for additional discussion or exploration. A section at the beginning of the book provides information for the teacher on the abilities of five- to eight-year olds.

Grade Level
K-3

Length
76 pages

Date Published
1995

THE BOTTOM
LINE

"A useful basic book on a variety of ecological concepts for someone is who working with K-3 children."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Very open to inquiry.	Some bias detected regarding forestry. Does not cite sources of information.
	Depth	Discusses concept as appropriate for developmental level. Begins by increasing awareness.	
	Emphasis on Skills Building	Pre-activity discussions are designed to prompt students to think. Allows for creative thinking, hypothesizing.	
	Action Orientation	Encourages student responsibility. Builds on the concept of stewardship.	
	Instructional Soundness	Lessons are interdisciplinary, learner-centered, and relate to everyday life. Includes outdoor and hands-on activities. Uses many learning modalities.	Relevance of some activities not clear.
Usability	Well laid-out, easy to copy.	Does not provide additional resources. Contains no glossary.	

"Many kindergartners lack the logic necessary for some of these activities."

"The 'teaching by asking questions' method allows for creative thinking."



North American Ecosystems



IN A NUTSHELL

Queue, Inc.
338 Commerce Drive
Fairfield, CT 06432

phone: (800) 232-2224
(203) 333-7268
fax: (800) 775-2729
e-mail: sales@queueinc.com
website: www.queueinc.com

Cost: \$145.00 + s&h

SUBJECT

Science
Social Studies

This hybrid Macintosh/Windows CD-ROM introduces students to the concept of a biome and allows them to explore specific biomes in North America. Although six biomes are introduced and discussed, the program focuses on three: the desert, the Rocky Mountains, and the prairie. Each section provides brief movies with written and spoken narration, and looks at the climate, geography, flora and fauna that define each biome. Additional background material for instructors is provided in a separate folder, along with pre- and post-questions, instructions for using the program, and four quizzes presented with and without answers.

The material also includes several maps showing the location of different biomes, as well as an on-line glossary that allows the students to review information on specific topics or ideas.

Grade Level
6-10

Length
1 CD-ROM

Date Published
1996

What the REVIEWERS Said!

Other
Considerations

Strengths
Noted

The information appears to be accurate and balanced, although there was little in the ways of exploring different viewpoints. Reviewers described the materials as visually appealing and well-organized; the visuals received high marks, and the use of historical photographs and video footage added to the material. The teacher's guide is rather weak, and little was done to address skill development. The program is not very interactive, although the quizzes were found to be helpful.



Oceans Alive!



IN A NUTSHELL

Environmental Media Corporation
1008 Paris Avenue
Port Royal, SC 29935

phone: (800) 368-3382
fax: (803)986-9093

e-mail: ggerber@envmedia.com
website: www.envmedia.com

Cost: \$199.95 for all four videotapes
\$59.95 + s&h for each videotape

SUBJECT

Science
Social Studies

This material consists of four fifty-minute videotapes and two teaching guides. Each videotape contains ten five-minute segments, each of which addresses a different aspect of ocean life. Topics include the classification of sponges, ways to identify fish, the role of zooplankton in the ocean, food chains, and homes used by sea creatures. A variety of oceanic life forms from whales to sponges, are featured. Segments are narrated and feature color photography, much of it under water. The teaching guide includes additional information on each of the forty topics, as well as suggestions for discussions or classroom investigations related to the segment topic. The first two videocassettes and accompanying teacher's guide are also available in Spanish.

Grade	Level
	5 & up
Length	
	videos & teacher's guides
Date	Published
	1992

What the REVIEWERS Said!

Strengths Noted

Other Considerations

The photography in the videos is very clear and was well received. The information appears to be both accurate and fair in presentation. The suggestions for activities and discussion in the teacher's guide are helpful. Animals not frequently found in nature films are given attention here. The segments are in no particular order; all feature the same background music, and move rather slowly. As a result, they might become boring to some students if used for too long or too frequently. Related topics are sometimes scattered among segments, with unrelated footage in between. Some of the terminology used in the videotape is not defined.



Oceans:

Earth's Last Frontier



IN A NUTSHELL

Written & Produced by:
Peter Cochran

Rainbow Educational Media
4540 Preslyn Drive
Raleigh, NC 27604-3177

phone: (800) 331-4047
fax: (919) 954-7554
website:
www.rainbowedumedia.com

Cost: \$39.00 + s&h

SUBJECT

Science

This video provides a general overview of oceans. Attention is given to the topography of the ocean floor, the variety of wildlife in the ocean, the effect of water pressure on different kinds of marine life, the role of gravity on the creation of tides, and the formation and effects of waves and currents. Other topics include salinity, plate tectonics, and photosynthesis. Both scientists and students are shown exploring marine life. Live action photography is augmented with diagrams and maps. Male and female voices alternate narration. Examples of simple experiments demonstrating water pressure, effects of waves, and movement of water are given. The video comes with a thirty-page teacher's guide, which lists learning objectives for the video, a glossary, review questions, eight selected learning activities which can be done in the classroom, a bibliography, and the script. A separate sheet provides a multiple-choice test.

Grade Level

4-6

Length

24 minutes

Date Published

1995

What the REVIEWERS Said!

Other Considerations
Strengths Noted

The photography is clear and the graphics informative. The film is strong on building awareness of the complexity of oceans and ocean life. The material is straightforward, accurate, and unbiased. The sound quality, however, is inconsistent. The video does little to explain some of the concepts mentioned; however, a teacher could easily stop the video and proceed with a discussion.



Oceans Alive!



IN A NUTSHELL

Environmental Media Corporation
1008 Paris Avenue
Port Royal, SC 29935

phone: (800) 368-3382
fax: (803)986-9093

e-mail: ggerber@envmedia.com
website: www.envmedia.com

Cost: \$199.95 for all four videotapes
\$59.95 + s&h for each videotape

SUBJECT

Science
Social Studies

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Grade	Level
	5 & up
Length	
	videos & teacher's guides
Date	Published
	1992

What the REVIEWERS Said!

Strengths Noted

Other Considerations

The photography in the videos is very clear and was well received. The information appears to be both accurate and fair in presentation. The suggestions for activities and discussion in the teacher's guide are helpful. Animals not frequently found in nature films are given attention here. The segments are in no particular order; all feature the same background music, and move rather slowly. As a result, they might become boring to some students if used for too long or too frequently. Related topics are sometimes scattered among segments, with unrelated footage in between. Some of the terminology used in the videotape is not defined.



Oceans:

Earth's Last Frontier



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phone: (800) 331-4047
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Cost: \$39.00 + s&h

SUBJECT

Science

This video provides a general overview of oceans. Attention is given to the topography of the ocean floor, the variety of wildlife in the ocean, the effect of water pressure on different kinds of marine life, the role of gravity on the creation of tides, and the formation and effects of waves and currents. Other topics include salinity, plate tectonics, and photosynthesis. Both scientists and students are shown exploring marine life. Live action photography is augmented with diagrams and maps. Male and female voices alternate narration. Examples of simple experiments demonstrating water pressure, effects of waves, and movement of water are given. The video comes with a thirty-page teacher's guide, which lists learning objectives for the video, a glossary, review questions, eight selected learning activities which can be done in the classroom, a bibliography, and the script. A separate sheet provides a multiple-choice test.

Grade Level
4-6

Length
24 minutes

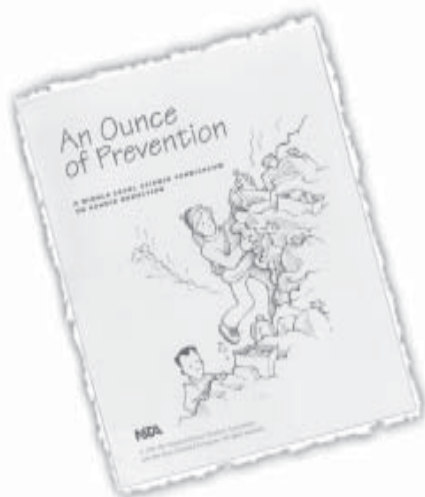
Date Published
1995

What the REVIEWERS Said!

Strengths Noted

Other Considerations

The photography is clear and the graphics informative. The film is strong on building awareness of the complexity of oceans and ocean life. The material is straightforward, accurate, and unbiased. The sound quality, however, is inconsistent. The video does little to explain some of the concepts mentioned; however, a teacher could easily stop the video and proceed with a discussion.



An Ounce of Prevention:

A Middle Level Science Curriculum on Source Reduction

Currently Out of Print



IN A NUTSHELL

Written by: Pam Ashford, Page Keeley, Inez Liftig, Janet Peeler & Pat Warren

The Dow Chemical Company
P.O. Box 1206
Midland, MI 48641-9823

phone: (517) 636-7155
e-mail: rakingsbury@dow.com

Cost: No charge

SUBJECTS

Health
Language Arts
Mathematics
Science
Social Studies

This curriculum, produced in conjunction with the National Science Teachers Association, focuses on reducing the amount of solid waste created rather than recycling or reusing items. Students first develop an awareness of solid waste problems by studying history, current methods of solid waste disposal, packaging, and solid and toxic waste in their own homes. Students then look at the waste produced in their own lives, weigh the consequences of using different materials, and consider alternatives to their current consumption. The final activities study how students can reduce waste at their school and develop a plan of action for use at a state level. Each of the fifteen activities lists objectives, content areas, time requirements, discussion questions, and extensions. Student pages and handouts are provided, as are references, materials lists, and suggestions for adapting to different group sizes.

Grade Level
6-8

Length
128 pages

Date Published
1996

THE BOTTOM LINE

"One of the strengths of this package is the way it looks at various sides of real issues. Activities and exercises help learners understand some of the why of plastic use."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Encourages inquiry. Cites sources of information. Treatment of information is largely balanced.	Data used in certain activities will need to be updated.
	Depth	Encourages awareness. Introduces and builds on concepts in context.	
	Emphasis on Skills Building	Activities require many different kinds of thinking. Encourages learners to apply what they've learned.	
	Action Orientation	Learners examine their own responsibility regarding solid waste.	Does not include examples of successful action projects.
	Instructional Soundness	Activities are interdisciplinary and learner-centered. Incorporates cooperative learning and involves families and school.	
	Usability	Structure is clear and easy to follow. Provides teacher background.	Instructions are unclear in at least one activity. Lacks instructional support.

"Very comprehensive coverage of the issue."

"This is an effective resource to use with middle-level students in conservation education."



Reducing, Reusing and Recycling:

Environmental Concerns



IN A NUTSHELL

Rainbow Educational Media
4540 Preslyn Drive
Raleigh, NC 27604-3177

phone: (800) 331-4047
fax: (919) 954-7554
website:

rwww.rainbowedumedia.com

Cost: \$39.00 + s&h

SUBJECT

Health
Science

This video features a discussion of the different types of solid waste (including hazardous wastes), explains how it is disposed of, identifies some the dangers of solid waste, and provides suggestions for young people to help prevent problems associated with garbage. Using computer-generated graphics and live photography, the program conveys the amount of garbage and solid waste created daily, the volume of discarded recyclables, and some of the benefits obtained when students reduce, reuse, and recycle. The videotape comes with a twenty-page teacher's guide, which includes learning objectives, a summary of the program, review questions with answers, the complete script of the videotape, a glossary, and a list of agencies and organizations to contact for more information. An additional sheet contains a ten-question multiple choice test.

Grade Level

4-6

Length

20 minutes

Date Published

1990

What the REVIEWERS Said!

Strengths Noted

Other Considerations

The video is well-sequenced and introduces concepts and vocabulary in a logical order. The script was helpful and would be especially useful to those with limited hearing. Some of the statistics mentioned need to be updated and corrected. The video emphasized individual responsibility with regard to solid waste, but offers minimal action skills. The narrator is a white male, and the homes shown in the video appears to be middle class.



Reducing, Reusing and Recycling:

Environmental Concerns



IN A NUTSHELL

Rainbow Educational Media
4540 Preslyn Drive
Raleigh, NC 27604-3177

phone: (800) 331-4047
fax: (919) 954-7554
website:

rwww.rainbowedumedia.com

Cost: \$39.00 + s&h

SUBJECT

Health
Science

This video features a discussion of the different types of solid waste (including hazardous wastes), explains how it is disposed of, identifies some the dangers of solid waste, and provides suggestions for young people to help prevent problems associated with garbage. Using computer-generated graphics and live photography, the program conveys the amount of garbage and solid waste created daily, the volume of discarded recyclables, and some of the benefits obtained when students reduce, reuse, and recycle. The videotape comes with a twenty-page teacher's guide, which includes learning objectives, a summary of the program, review questions with answers, the complete script of the videotape, a glossary, and a list of agencies and organizations to contact for more information. An additional sheet contains a ten-question multiple choice test.

Grade Level

4-6

Length

20 minutes

Date Published

1990

What the REVIEWERS Said!

Strengths Noted

The video is well-sequenced and introduces concepts and vocabulary in a logical order. The script was helpful and would be especially useful to those with limited hearing. Some of the statistics mentioned need to be updated and corrected. The video emphasized individual responsibility with regard to solid waste, but offers minimal action skills. The narrator is a white male, and the homes shown in the video appears to be middle class.



Taking Action: An Educator's Guide to Involving Students in Environmental Action Projects



IN A NUTSHELL

Written by: Darlene K. Stoner

Council for Environmental
Education/Project WILD
707 Conservation Lane
Suite 305
Gaithersburg, MD 20878

phone: (301) 527-8900
fax: (301) 527-8912
e-mail: info@projectwild.org
website: www.projectwild.org

Cost: \$7.00 + s&h

SUBJECT

Health
Language Arts
Science
Social Studies

This booklet was developed to give educators suggestions and examples of student environmental action projects. The first three sections describe some of the logistics of action project planning. These cover such topics as motivation, conflict resolution, connecting to the school's curriculum, interviewing skills, and tips for project assessment. The fourth section, which makes up the bulk of the book, is dedicated to examples of successful projects from around the country. Project descriptions are grouped by type (such as conserving energy, measuring water quality, or working with endangered species). A list of suggestions for additional projects, helpful publications, and organizations follows each grouping. Sections five through seven offer additional resources, such as a brief list of award and grant opportunities and an action matrix for planning action strategies.

Grade Level
7-12

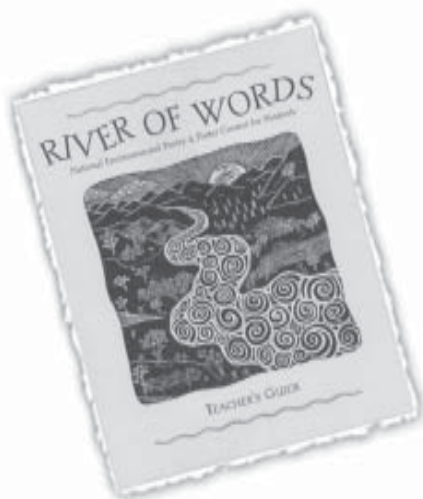
Length
74 pages

Date Published
1995

What the REVIEWERS Said!

Other
Considerations
Strengths
Noted

This resource is strong in terms of skills building and in providing an overview of action projects. The resource lists are considered helpful. The examples of successful projects and the lists of ideas for further projects are very comprehensive. Reviewers felt that more detailed explanation of the steps for developing and choosing action projects, as well as research on their benefits, were needed.



River of Words:

National Environmental Poetry & Poster Contest for Students - Teacher's Guide



IN A NUTSHELL

Written by: Pamela Martin &
Carolyn West

International Rivers Network
2547 Eighth St 13B
Berkeley, CA 94701

phone: (510) 548-7636
fax: (510) 548-2095
email: info@riverofwords.org
website: www.riverofwords.org

Cost: \$43.00 includes s&h

SUBJECTS

Language Arts
Science
Social Studies

The publication of this guide was prompted by the 1996 National Environmental Poetry Contest. The guide contains reprints of articles of the process of writing poetry, how to lead poetry writing sessions with students, and how to foster creativity. One section explores the concept of watershed, presents a map showing some of the principal watersheds in the country, describes factors affecting watersheds, and gives a basic introduction to issues related to water and water usage. Other chapters include reprints of articles on teaching in the out-of-doors and incorporating multidisciplinary approaches in teaching about the environment. The booklet is accented with samples of writings by teachers, students, and professional poets such as U.S. Poet Laureate Robert Haas. A poster accompanies the booklet and provides more specific information about the contest itself. A curriculum supplement includes readings, discussion questions, practice in the use of topographical maps, and a simple model of a watershed. Teacher workshops are available.

Grade Level
K-12

Length
54 pages

Date Published
1996

THE BOTTOM
LINE

"Encourages personal reflection and introspection.
Makes me want to use this with the students in
my classroom."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Represents diverse cultures and ages. Opens topic to inquiry and exploration.	Sources of specific facts on watersheds not cited.
	Depth	Develops awareness of watershed. Identifies key concepts.	No suggestions for adjusting for different developmental levels.
	Emphasis on Skills Building	Strong on creative thinking and applying creativity to study of watersheds.	
	Action Orientation	N o t A p p l i c a b l e.	
	Instructional Soundness	Material is very learner-centered and interdisciplinary.	Goals and objectives for activities are not clearly stated.
	Usability	Provides large and helpful bibliography. Guide is readable and visually appealing. Information and pedagogical suggestions are adaptable and long-lived.	Content is poorly organized.

"Many teachers may lack the background to feel safe. This should not deter them; use this to bring the interdisciplinary nature of the project into play."

"Lots of detail for its size and stated purpose."



Search for the Great Shark

Currently Out of Print



IN A NUTSHELL

Written by: Science Museum
of Minnesota

Educational Resources
Science Museum of Minnesota
30 E. Tenth Street
St. Paul, MN 55101

phone: (800) 221-9444 ext. 4551
fax: (612) 221-4526
website:
www.sci.mus.mn.us/omni

Cost: \$7.95 + s&h

SUBJECTS

Fine Arts
Language Arts
Mathematics
Science
Social Studies

This activity guide was developed in conjunction with the Omnitheater film *Search for the Great Sharks*. However, the ten activities can be used independently of the film. Among the activities are experiments designed to teach students the size of one part per million (to illustrate the shark's sense of smell), and a town hall meeting where different community members express their concerns about sharks. Other activities include a boardgame to help learn about shark features and anatomy, a craft project where students develop shark models to learn about the properties of different sizes and shapes of fins, and an exercise where students map out the contours of the ocean floor. Each activity lists materials needed, provides brief background information, and gives answers to specific objective questions. The material is illustrated with drawings, charts, and maps, and comes with student pages, information cards, a gameboard, and an annotated bibliography.

Grade Level	3-8
Length	40 pages
Date Published	1993

THE BOTTOM
L I N E

"Makes students aware of what scientists are doing to help sharks on a global/international scale."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Facts concerning shark biology seem accurate. Annotated bibliography provided.	Sources and affiliations of authors are not specifically identified.
	Depth	Increases student's awareness of sharks. Discusses the importance of sharks to humans.	
	Emphasis on Skills Building	Develops data organizing, problem solving and basic laboratory skills.	Some lessons are weak on hypothesizing and drawing conclusions from data.
	Action Orientation	Not Applicable.	
	Instructional Soundness	Lists resources for further study. Includes lab work, role play, and creative arts. Makes connections to various disciplines.	Does not specify ages for individual activities. Limited description of goals and objectives.
	Usability	Material appears to be long-lived. Instructions are clear and easy to follow. Most materials required are inexpensive and easily obtained.	

"Includes interesting activities which a creative teacher could adapt to become more learner-centered."

"Excellent background information for teachers/students to learn more about sharks."



Sea Turtle Trek



IN A NUTSHELL

Developed by: Samuel S. Bland
& North Carolina Division of
Parks & Recreation

ERIC Document
Reproduction Service
7420 Fullerton Road
Springfield, VA 22153
Reference # ED 401095

phone: (800) 443-3742
e-mail: (for information)
marti_kane@mail.enr.st.nc.us
website: www.edrs.com or
[http://ils.unc.edu/parkproject/
ncparks.html](http://ils.unc.edu/parkproject/ncparks.html)

Cost: \$38.00 includes s&h

SUBJECTS

Language Arts
Mathematics
Science

Hammocks Beach State Park, North Carolina, is an important nesting ground for the loggerhead sea turtle. This guide provides on-site, pre- and post-visit activities for school groups visiting the park. Pre-visit activities include lessons on reptiles and adaptations, word searches, and turtle identification exercises. On-site activities include predator-prey games, scouting for nesting sites, and quiz games based on the park's slide show.

Post-visit activities include analyzing nesting and migration data. Objectives, concepts, subject areas, materials lists, teacher background information, and time requirements are provided for each activity.

Important vocabulary words are printed in bold. Masters of student pages, worksheets, and puzzles are provided. Appendices include a glossary, fact sheets on different species of sea turtles, information on sea turtle conservation efforts, and forms for scheduling visits to the park. Illustrations consist of maps, drawings, and charts.

Grade Level
6-8

Length
124 pages

Date Published
1995

THE BOTTOM
L I N E

"Offers a great storyline, fun and challenging activities, valuable information for critical thinking. Addresses important issues of marine conservation."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Presents balance of human and natural threats to turtles. Data is accurate and allows students to draw their own conclusions.	
	Depth	Focus on concepts is appropriate to developmental level. Addresses many aspects of biology and conservation.	
	Emphasis on Skills Building	Incorporates many science skills. Applies skills to actual issues. Incorporated both critical and creative thinking.	
	Action Orientation	Outdoor activities encourage stewardship and problem-solving.	Conservation actions are listed primarily in the appendix, rather than in the main curriculum.
	Instructional Soundness	Provides a variety of activities to relate to different learning styles. Clearly states goals, objectives, and ties to North Carolina state standards. Makes use of outdoor setting.	
	Usability	Well organized and easy to use. Provides lists and contacts for additional information.	Very site specific. May not be useful to those unable to make a field trip.

"Classroom and outdoor learning are clearly linked."
 "Very thoroughly presents an effective learning experience."



Taking Action: An Educator's Guide to Involving Students in Environmental Action Projects



IN A NUTSHELL

Written by: Darlene K. Stoner

Council for Environmental
Education/Project WILD
707 Conservation Lane
Suite 305
Gaithersburg, MD 20878

phone: (301) 527-8900
fax: (301) 527-8912
e-mail: info@projectwild.org
website: www.projectwild.org

Cost: \$7.00 + s&h

SUBJECT

Health
Language Arts
Science
Social Studies

This booklet was developed to give educators suggestions and examples of student environmental action projects. The first three sections describe some of the logistics of action project planning. These cover such topics as motivation, conflict resolution, connecting to the school's curriculum, interviewing skills, and tips for project assessment. The fourth section, which makes up the bulk of the book, is dedicated to examples of successful projects from around the country. Project descriptions are grouped by type (such as conserving energy, measuring water quality, or working with endangered species). A list of suggestions for additional projects, helpful publications, and organizations follows each grouping. Sections five through seven offer additional resources, such as a brief list of award and grant opportunities and an action matrix for planning action strategies.

Grade Level	7-12
Length	74 pages
Date Published	1995

What the REVIEWERS Said!

Other
Considerations
Strengths
Noted

This resource is strong in terms of skills building and in providing an overview of action projects. The resource lists are considered helpful. The examples of successful projects and the lists of ideas for further projects are very comprehensive. Reviewers felt that more detailed explanation of the steps for developing and choosing action projects, as well as research on their benefits, were needed.



Teacher's Guide to World Resources Currently Out of Print



IN A NUTSHELL

Developed by: World
Resources Institute

Kendall-Hunt Publishing
Company
4050 Westmark Drive
Dubuque, IA 52002-1804

phone: (800) 228-0810
fax: (800) 772-9165
e-mail: orders@kendallhunt.com
website: www.kendallhunt.com

Cost: books range from
\$8.99 to \$10.99 + s&h
video \$14.95 + s&h

SUBJECTS

Economics
Health
Language Arts
Mathematics
Science
Social Studies

This set of materials includes eleven separate books, each focusing on a particular topic. Books address such issues as energy, poverty, global warming, sustainability, and biodiversity. Each book lists learning objectives, correlation to curricular standards, and teaching strategies. Student handouts, transparency masters, suggestions for further study, and bibliographies are provided for each unit. Lesson plans provide background information, discussion questions, vocabulary, ideas for beginning and ending lessons, and suggestions for student enrichment activities. Types of learning activities include research, interviewing, action projects, experiments, creative writing, and mathematical calculations. Many of the units involve case studies. A related videotape is also available featuring business representatives, politicians, and representatives of non-governmental organizations discussing three main concerns: population, biodiversity, and global climate change.

Grade Level	7-12
Length	varies per book
Date Published	1997

THE BOTTOM
LINE

"Comprehensive materials with a healthy
overdose of information."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Presents accurate information. Different cultures and perspectives are presented and discussed.	Does not represent consumerist or economics positions. Seems to assume consensus on existence of problems. Information will need updating.
	Depth	Demonstrates connections between different issues. Addresses local and global scales. Presents multiple aspects of different issues.	
	Emphasis on Skills Building	Contains many analytical, critical and creative thinking activities.	Greater variety of skills found in enrichment activities.
	Action Orientation	Repeatedly discusses personal responsibility. Entire unit is dedicated to action. Success stories from different countries are provided.	May be overwhelming and therefore discouraging.
	Instructional Soundness	Lessons are interdisciplinary and related to everyday life. Activities rely on different learning styles.	Much is delivered by lecture/discussion.
	Usability	Prices are reasonable. Clearly written. Abundant resources listed.	

"A more upbeat approach might elicit a more positive response—the video gives positive views but buries them among images of pessimism."
 "These units lend themselves to action. Teachers should use the natural lead-ins."



ThemeWorks: Trees



IN A NUTSHELL

Written by: Joan Westley

ThemeWorks
Creative Publications
5632 W. 115th Street
Alsip, IL 60482

phone: (800) 642-0822
fax: (800) 642-0821
website:
www.wrightgroup.com

Cost: \$25.95 + s&h

SUBJECTS

Fine Arts
Health
Language Arts
Mathematics
Physical Education
Science
Social Studies

Using poetry, music, cooking, literature, drama, art, math, and science activities, this book exposes young children to the world of trees. The unit begins with a ceremony adopting a specific class tree. The eighteen subsequent lessons involve this tree and others and include journaling, sensory awareness, crafts representing tree-dwelling creatures, recipes for foods made from tree products, studies of differing kinds of trees and how trees grow and change over time. The unit culminates with a ceremonial dance around the tree. Materials include reproducible masters, tree songs with guitar chords, a sample letter to parents explaining the unit, recipes, general suggestions for crafts and laboratory experiments, and a curriculum chart listing activities in different subject areas. Suggested supplementary readings are identified throughout the book and are summarized in a resource list.

Grade Level
K-2

Length
64 pages

Date Published
1991

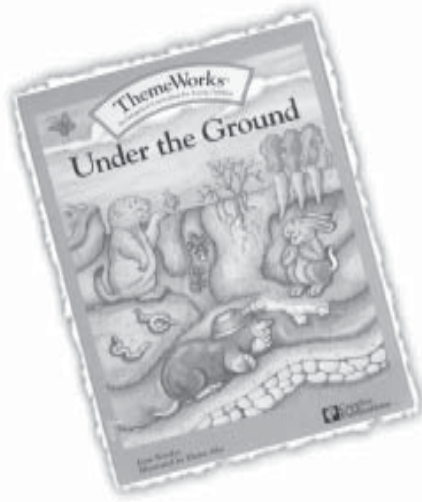
THE BOTTOM
LINE

"Many of the components allow teachers to view samples rather than long explanations. They quickly can determine what to include."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Information is factual, not likely to change. Addresses a few different cultures and their relationship to trees.	
	Depth	Emphasizes interdependence of trees and people. Looks at the concept of ecosystem.	Provides overall theme, but no conceptual framework. Largely a collection of quick facts about trees.
	Emphasis on Skills Building	Develops observation, inquiry, comparison, counting, and measuring skills.	
	Action Orientation	N o t A p p l i c a b l e .	
	Instructional Soundness	Material is interdisciplinary, learner-centered, and addresses a variety of learning styles. Makes connections to everyday life.	Does not state objectives.
	Usability	Uses readily available materials. Activity instructions are user-friendly and easy to follow.	Page numbering is off in some situations.

"Materials are appropriate for this age group and easy for the teacher to use."

"Trees seem to be the background for interdisciplinary activities, rather than the focus of the lesson."



ThemeWorks: Under the Ground



IN A NUTSHELL

Written by: Joan Westley

ThemeWorks
Creative Publications
5632 W. 115th Street
Alsip, IL 60482

phone: (800) 642-0822
fax: (800) 642-0821
website:
www.wrightgroup.com

Cost: \$25.95 + s&h

SUBJECTS

Fine Arts
Health
Language Arts
Mathematics
Physical Education
Science
Social Studies

ThemeWorks: Under the Ground offers a number of ideas for teachers of young children who are putting together a unit on animals and other things under the ground. The unit kicks off with a hunt for buried treasure in the classroom. Studies of underground animals (such as moles, worms, groundhogs, bats, and ants) and plants (seeds, peanuts, and carrots) follow. Subways and caves are also examined. Activities include songs, games, recipes, plays, craft projects, riddles, stories, experiments with soil types, and growing plants from seeds. In the culminating activity, "Carnival in the Caves", students dress up as underground animals or as people who work underground. Contains numerous illustrations, masters for picture cards, a resource list, and a curriculum chart.

Grade Level
K-3

Length
64 pages

Date Published
1991

THE BOTTOM
L I N E

"Great for young kids. Teachers can get lots of ideas from this."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Information is factual. Materials encourage inquiry.	
	Depth	Very strong on fostering awareness.	
	Emphasis on Skills Building	Challenges learners to use critical and creative thinking skills.	
	Action Orientation	Not Applicable.	
	Instructional Soundness	Material is learner-centered, and interdisciplinary. Different ways of learning are employed.	Does not state goals or objectives.
	Usability	Materials are adaptable and long-lived.	Text supplies little information or support for teachers.

"An effort is made to involve parents as well as students."

"It is obvious that a career educator developed these materials."



Ranger Rick's NatureScope- Trees are Terrific!



IN A NUTSHELL

Written by: National Wildlife
Federation

McGraw-Hill
11 West 19th Street
New York, NY 10011-4285

phone: (800) 722-4726

website:

www.pbg.mcgraw-hill.com

Cost: \$19.95 + s&h

SUBJECTS

Fine Arts

Health

Science

The lessons in this volume are designed to teach children the basics of tree ecology and biology. The first five chapters address tree structure and classification, how trees grow, the forest as an ecosystem, how forests are managed, and how trees have influenced human history. Lessons address not only trees themselves, but also the animals and plants which depend on trees for survival. Activities range from the use of tree keys for identification to making recipes with foods harvested from trees. The final chapter contains additional ideas for craft projects related to trees and forest ecology.

Objectives, age ranges, materials, and related subjects are listed for each lesson, as well as answers to questions and explanations of experiments for teachers. Student worksheets and handouts are all included. The text is illustrated with photographs, drawings, maps, and charts. The text also includes a list of extra questions (along with answers) as an appendix, a glossary, and a bibliography.

Grade Level
K-8

Length
94 pages

Date Published
1998

THE **BOTTOM**
L I N E

"Helps students understand how sensitive and how supportive trees are to us and to our environment."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Information is factual and up to date. There is a balance of reviewers and an openness to different viewpoints.	
	Depth	Ideas are developed and connected throughout material.	Lacks a conceptual framework.
	Emphasis on Skills Building	Uses a variety of critical and creative thinking skills. Communication skills are practiced throughout.	Very little application of skills to issues.
	Action Orientation	Discusses some ways that people can attempt to help conserve the rainforest.	
	Instructional Soundness	Material is interdisciplinary and learner-centered. Employs different ways of learning and has both indoor and outdoor activities. Objectives are clearly stated for each activity.	A few activities may be too advanced for selected age group.
Usability	Lessons are clear and long-lived. Activities require inexpensive materials. Student pages can be easily copied.		

"Valuable knowledge for students. This is very well put together."
 "If an educator needed to teach a unit on trees, he or she only needs to pick up this booklet and get busy."



Growing Together with the Treetures:

Activity Guide Series 1



IN A NUTSHELL

Written by: Bobbi Schnell &
The National Tree Trust

International Society of
Arboriculture
Order Department
PO Box 3129
Champaign, IL 61826-3129

phone: (800) 863-7175
website: www.treetures.com

Cost: \$8.95 + s&h

SUBJECTS

Fine Arts
Health
Language Arts
Science

Treetures are imaginary characters crafted to help children learn about trees. With names such as Chlorophyllis, Rootie, and Arbor E. Tum, the characters provide mnemonics to teach important facts about trees and tree parts, and appear in stories that help explain tree biology. The book consists of two different sets of activities, one designed for K-3 and the other for grades 4-6. The K-3 section includes simple coloring and art activities that focus on identifying tree parts, making a Treeture book, and playing a photosynthesis game. The activities for 4-6 graders include experiments on transpiration, a community debate, tree word games, leaf rubbings, and other art projects, and lessons about tree products. Student worksheets and handouts are included. Illustrations consist of drawings, charts and diagrams.

Grade Level
preK-6

Length
58 pages

Date Published
1997

THE BOTTOM
LINE

"A stimulating, creative approach to getting little ones into the magic that is trees."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Includes tree stories from diverse cultures. Information appears accurate.	Affiliations of contributors not cited.
	Depth	Teaches different concepts for deferent age levels. Develops awareness of trees, their functions, and tree products.	
	Emphasis on Skills Building	Encourages use of imagination. Stresses skills throughout.	
	Action Orientation	N o t A p p l i c a b l e .	
	Instructional Soundness	Makes use of different ways of learning.	Provides minimal background information for teachers. Lacks goals and objectives. May be too simplistic for grades 5 or 6.
	Usability	Easily reproduced. Information is long-lived. Correlates activities to science benchmarks. Pages are easy to read and are clearly laid out.	Does not substantiate all claims.

"Too much time is spent introducing the cute but stereotypic characters."

"I really like that K-3 had their own book to follow along, to color, and to make their own."



Turning the Tide on Trash:

A Learning Guide on Marine Debris



IN A NUTSHELL

United States Environmental
Protection Agency,
Office of Water

National Center for
Environmental Publications
& Information
P.O. Box 42419
Cincinnati, OH 45452
Reference #842-B-92-003

phone: (800) 490-9198
website: www.epa.gov

Cost: No charge

SUBJECTS

Fine Arts
Language Arts
Mathematics
Science
Social Studies

The lessons in this collection are intended to provide students with an understanding of problems associated with marine debris. The first unit addresses the kinds of debris found in and near oceans, and traces that debris back to its source. It then looks at the human behaviors which led to it entering the ocean. The second unit addresses the damage done by marine debris. The final unit looks at efforts to clean beaches and marine areas and includes a community education campaign. Each unit consists of three to six activities and background material.

Activities include board games, trash inventories, research projects, experiments, and artwork. Other features include a glossary, a resource list, nature clip-art designs, and listings of activities by subject matter and learning skills. Illustrations consist of charts, photographs, and drawings.

Grade Level
4-8

Length
78 pages

Date Published
1992

THE BOTTOM
L I N E

"Many of these activities are long-term and really get the students involved."

	Key Characteristics	Strengths Noted	Other Considerations
What the REVIEWERS Said !	Fairness and Accuracy	Discusses international agreements. Provides information on regulations governing waste disposal at sea.	Does not list sources of information. Resource lists do not include economic or business organizations. Presentation not always balanced.
	Depth	Clearly states concepts. Builds awareness of both local and global effects of marine debris.	Primary focus is on the United States.
	Emphasis on Skills Building	Connects skills to issues.	Learning skills may be overstated.
	Action Orientation	Looks at personal, national, and global responsibilities.	Advocates particular actions, rather than encouraging development of action steps.
	Instructional Soundness	Makes use of a variety of learning styles. Activities build on each other and make connections to learners' lives.	Curriculum is not inquiry based.
	Usability	Book is easy to photocopy. Lessons are not location-specific and are adaptable to river debris issues.	

"Activities may need more time than is available in school."

"Good information on sources, solutions, and prevention of marine debris."



Understanding Ecosystem Management



IN A NUTSHELL

Written by: Shelly Smith, Richard Brook, & Mary Tisdale

Bureau of Land Management
The Environmental Education
& Volunteers Office
1849 C Street NW
MS-406LS
Washington, D.C. 20240

phone: (202) 452-5078

fax: (202) 452-5199

e-mail: www.blm.gov/education/education.html

Cost: No charge. Material can be downloaded from the website.

SUBJECT

Science
Social Studies

These materials consist of a reprint of an article describing basic terms and concepts of ecosystems, how ecosystems are affected by humans, and the main ideas and practices of ecosystem management. An accompanying two-sided poster provides more details on the same topics, as well as a case study for student discussion. In addition, the article gives brief suggestions for sixteen activities dealing with ecosystem management that teachers can conduct in a school setting. The article is illustrated with color photographs, time lines, and drawings.

Grade Level

4-7

Length

8 pages

Date Published

1994

What the REVIEWERS Said!

Other Considerations
Strengths Noted

The material presented is balanced and unbiased. The authors show the link between current actions and long-term consequences, and make the information relevant to students. The materials stress citizenship and the importance of sound decision making. The activities lack objectives and specific goals, and at times are thin with regard to procedure.



Understanding Ecosystem Management



IN A NUTSHELL

Written by: Shelly Smith, Richard Brook, & Mary Tisdale

Bureau of Land Management
The Environmental Education
& Volunteers Office
1849 C Street NW
MS-406LS
Washington, D.C. 20240

phone: (202) 452-5078

fax: (202) 452-5199

e-mail: www.blm.gov/education/education.html

Cost: No charge. Material can be downloaded from the website.

SUBJECT

Science
Social Studies

These materials consist of a reprint of an article describing basic terms and concepts of ecosystems, how ecosystems are affected by humans, and the main ideas and practices of ecosystem management. An accompanying two-sided poster provides more details on the same topics, as well as a case study for student discussion. In addition, the article gives brief suggestions for sixteen activities dealing with ecosystem management that teachers can conduct in a school setting. The article is illustrated with color photographs, time lines, and drawings.

Grade Level

4-7

Length

8 pages

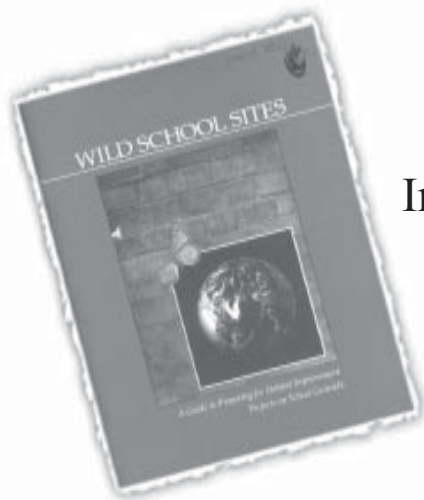
Date Published

1994

What the REVIEWERS Said!

Other Considerations
Strengths Noted

The material presented is balanced and unbiased. The authors show the link between current actions and long-term consequences, and make the information relevant to students. The materials stress citizenship and the importance of sound decision making. The activities lack objectives and specific goals, and at times are thin with regard to procedure.



WILD School Sites:

A Guide to Preparing Habitat Improvement Projects on School Grounds



IN A NUTSHELL

Written by: Paul Schiff & Cindi Smith-Walters

Council for Environmental Education/Project WILD
707 Conservation Lane
Suite 305
Gaithersburg, MD 20878

phone: (301) 527-8900
fax: (301) 527-8912
e-mail: info@projectwild.org
website: www.projectwild.org

Cost: \$5.00 + s&h

SUBJECT

Fine Arts
Language Arts
Mathematics
Science
Social Studies

This booklet provides instruction for students and educators who wish to develop areas on school grounds for habitat conservation and wildlife education activities. The first three chapters explain the rationale behind such projects, the seven major concept areas of Project WILD, and the basic components of a wildlife habitat. Included are suggestions for team building, selecting an appropriate site, developing and implementing an action plan, and obtaining the support of parents and community members. The text provides sample ideas to show how school areas can be turned into project areas. An appendix lists specific Project WILD learning activities that relate to developing habitat areas. Schools which complete these projects can apply for certification as WILD School Site. The book is illustrated with black-and-white photographs.

Grade Level	adult
Length	56 pages
Date Published	1993

What the REVIEWERS Said!

Strengths Noted

Other Considerations

The goals of this work are clearly stated. Reviewers felt that it was a helpful and motivational how-to guide to developing a school site. They noted, however, that the guide lacks detail in many areas where educators would want more information, such as in describing some of the more complex projects. Connections are made between specific activities and curricular requirements. Students are involved with decision making and are encouraged to come to their own conclusions. The instructions were clear, sequentially ordered, and easy to follow. Learner outcomes and sources of information were not clearly identified.



Waste: A Hidden Resource



IN A NUTSHELL

Edited by: Michelle Racich

Keep America Beautiful, Inc.
1010 Washington Blvd.
Stamford, CT 06901

phone: (203) 323-8987
fax: (203) 325-9199
e-mail: keepamerbe@aol.com
website: www.kab.org

Cost: \$40.00 + s&h

SUBJECTS

Economics
Language Arts
Mathematics
Science
Social Studies

This is a collection of lessons and activities related to municipal solid waste, hazardous waste, and the issues related to them. The thirty-four activities can be used independently or as a unit. The text begins with overviews and background on waste and describes composting, types of plastics, toxicity, and disposal systems. The activities are divided into chapters entitled Solid Waste Issues, Solid Waste Solutions, and Enrichment Materials. Activities consist of simulation and board games, science experiments, model construction, household surveys, and development of data banks. Each lists time requirements, materials needed, objectives, key concepts, and vocabulary, as well as suggestions for extension and evaluation exercises. The text includes references, a glossary, safety instructions, and an activities list arranged by subject. Masters of handouts and worksheets are included.

Grade Level
9-12

Length
224 pages

Date Published
1993

THE **BOTTOM**
L I N E

"Thorough and thought-provoking coverage of the waste management and recycling industry."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Facts are well documented. Reviews conducted by technical experts.	Many statistics are dated. Does not explore different viewpoints or encourage inquiry.
	Depth	Fosters awareness of solid waste issues. Focus is on concept development.	
	Emphasis on Skills Building	Encourages creative and critical thinking. Employs analysis, calculation, and classification.	Weak on action skills.
	Action Orientation	Materials encourage students to analyze their role in the issues discussed.	Sets stage for action but does not follow through.
	Instructional Soundness	Lessons are interdisciplinary and make use of different learning styles. Makes connections to learners' everyday lives.	Not particularly learner-centered.
	Usability	Easy to use. Lessons follow consistent format. Professional development programs are available.	Permission to copy materials is not given.

"Students learn that you can't please all of the people."

"Clear, concise and understandable to both learner and leader."



The Waste Hierarchy: Where is "Away"?



IN A NUTSHELL

Written by: Chemical Education
for Public Understanding
Program (CEPUP)

VWR Scientific Products
Science Education
P.O. Box 5229
Buffalo Grove, IL 60089-5229

phone: (800) 727-4368
fax: (800) 676-2540
e-mail: sarwel@sargentwelch.com
website: www.sargentwelch.com

Cost: \$19.99 + s&h teacher's guide
\$169.99 + s&h for complete kit

SUBJECTS

Mathematics
Science
Social Studies

The waste hierarchy refers to four levels of waste treatment: landfill, incineration, reuse/recycle, and source reduction. This teaching unit uses this hierarchy to introduce the issue of solid waste, to make students aware of their own waste generation, and to give them practice in issue resolution. The first of six exercises introduces the hierarchy and involves students in measuring the waste created by their own household. In the four activities that follow, students conduct scientific and mathematical experiments on the four levels of waste treatment. The final activity is a role-play in which students consider the positive and negative consequences of different waste disposal plans. Activities list time requirements, background information, safety suggestions, discussion questions, and answers to student worksheets. Text includes a glossary, transparency masters, and a conceptual overview. A kit containing all the supplies needed for the activities is also available.

Grade Level
6-9

Length
154 pages

Date Published
1993

THE **BOTTOM**
LINE

"Shows students that science plays a useful role in their everyday lives, and that what they are learning in science will help them understand their environment."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Cites information sources and participants in field test. Encourages inquiry and exploration of different viewpoints.	May understate the problems associated with landfills and incinerators.
	Depth	Presents concepts in context. Addresses history as well as current issues. Includes problems faced in lower-income areas.	
	Emphasis on Skills Building	Makes use of math/science skills. Students are challenged to think critically.	
	Action Orientation	Challenges students to find ways to reduce their own waste generation.	
	Instructional Soundness	Makes connection to everyday lives. Clearly states goals and objectives. Activities are learner-centered and interdisciplinary.	Most learning is in the classroom. May be too advanced for stated age group.
	Usability	Material is clear, logical, and easily adaptable	Cost of kit (chemicals and supplies) is an additional expense.

"May be used by beginning and experienced educators."

"This is a great tool for teaching about waster reduction. It lets students experiment and form their own conclusions."



Water Matters:

Water Resources Teacher's Guide, Volume 1



IN A NUTSHELL

Written by: Sue Cox Kaufman

National Science Teachers
Association
P.O. Box 90477
Washington, D.C. 20090-0477

phone: (800) 722-NSTA
fax: (703) 522-6091
website: www.nsta.org

Cost: \$8.96 + s&h
(price reflects 10% membership discount)

SUBJECTS

Mathematics
Science
Social Studies

The package consists of a thirty-two page teacher's guide and two sets of three posters. Each of the posters addresses a different water topic: how humans use water, how wastewater is treated, and the functions of wetland ecosystems. The reverse side of each poster contains background information and instructions for one or more learning activities. There are two different versions of text, allowing the posters to be used with diverse grade levels. The teacher's guide provides additional background information, teaching suggestions, a directory of government and private agencies that supply water education materials, a list of other resources, and brief descriptions of twelve additional activities. Among the activities are journaling, creating models of water filtration systems, conducting local research, and conducting personal water use surveys. Illustrations in the guide and posters consist of charts, graphs, and drawings.

Grade Level	3-8
Length	32 pages
Date Published	1994

THE BOTTOM
LINE

"The use of posters is a good technique to facilitate group interactive learning. A pleasant change from the usual textbook or CD-ROM."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Identifies sources of information. Material appears factual.	Latest statistics are from 1990.
	Depth	Very strong on building awareness.	Does not go into great detail on many topics.
	Emphasis on Skills Building	Students are challenged to brainstorm and compare different solutions to water use problems.	Little emphasis on action skills.
	Action Orientation	N o t A p p l i c a b l e .	
	Instructional Soundness	Makes connection to learners' everyday lives. Activities suggest different teaching methods.	Does not list objectives and learner outcomes.
	Usability	Information presented clearly. Posters are colorful and helpful. Provides suggestions for expansion and further research.	Would be difficult to use with larger classrooms due to size of posters.

"Could be used as supplemental material during water related instruction."

"Terms and concepts were reinforced by attractive poster illustrations."



The Water Sourcebook:

A Series of Classroom Activities for Grades 9-12



IN A NUTSHELL

Prepared by: Auburn University
at Montgomery & Troy State
University

Water Environment Federation
Publications Order Department
601 Wythe Street
Alexandria, VA 22314-1994

phone: (800) 666-0206
fax: (703) 684-2492
e-mail: msc@wef.org
website: www.wef.org

Cost: \$10.00 + s&h

SUBJECTS

Economics
Fine Arts
Language Arts
Health
Mathematics
Science
Social Studies

This resource contains more than seventy classroom exercises focusing on water and water use issues. The activities are arranged by subject in five chapters: Introduction to Water, Drinking Water and Wastewater Treatment, Surface Water Resources, Groundwater Resources, and Wetlands and Coastal Waters. A complete set of water fact sheets is included. Lessons include student and teacher sheets, answer keys, objectives, time and material requirements, background information, and vocabulary. Extension activities and resources are also listed. Among the activities presented are simulation games, puzzles, laboratory experiments, study of water samples, discussions, research projects, and art projects. Appendices include a glossary and lists of resources by agency or organization type, some of which are arranged by state. Illustrations consist of drawings, diagrams, graphs, and maps. An elementary level sourcebook for grades 3-5 is also available.

Grade Level	9-12
Length	886 pages
Date Published	1997

THE BOTTOM
L I N E

"This project was well thought out. I'm impressed with the quality and depth of the knowledge presented."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Contains an abundance of factual information. Information is accurate and reflects different perspectives and approaches. Activities were field-tested in classrooms.	Some statistical information will need to be updated.
	Depth	Includes simple to complex water issues. Concepts are well defined. Material is appropriate for different developmental levels.	
	Emphasis on Skills Building	Lessons encourage critical thinking, scientific investigations, and independent inquiry. Extensions encourage further application of skills.	
	Instructional Soundness	N o t A p p l i c a b l e .	
	Action Orientation	Activities are interdisciplinary and connected to the learner's everyday life. Objectives are clearly stated.	Weak on assessment. Does not expand the learning environment beyond the classroom.
	Usability	Binder format is helpful in that it makes pages accessible for copying.	

"This unit can be used by social studies, language arts, or science classes. Very practical."

"This is the most in-depth coverage of the subject I've ever seen."



Written by: Judith Swift

Sea World
500 Sea World Drive
San Diego, CA 92109-7995

phone: (800) 23-SHAMU
TDD: (800) TD-SHAMU
fax: (619) 226-3634
website: www.seaworld.org

Cost:

K-3 Teacher's Guide \$4.00 + s&h
4-8 Teacher's Guide \$4.00 + s&h

SUBJECTS

Language Arts
Science

Water:

Teacher's Guide



IN A NUTSHELL

These two guides contain activities designed to introduce students to the chemical and physical properties of water, and to the importance of water to people. The activities deal with water's molecular structure, heat conductivity, buoyancy, and ability to dissolve toxins. Through laboratory experiments and other research, students examine salinity, the movement of water in soil and through plants, water pressure, how animals deal with salt water, and the amount of water used in their own households. Although the guides are similar in structure and organization, each contains unique activities for its given age group.

Each includes a vocabulary list, objectives, a poster of the water cycle, background information on water's chemistry, and a list of additional resources. Illustrations consist of photographs, drawings, maps, and charts. Some extension activities are suggested.

Grade Level
K-3, 4-8
Length
24 pages each
Date Published
1995

THE BOTTOM
LINE

"Good, basic information and water-related experiments for teachers."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Encourages different perspectives. Provides up to date information. Seems to be factually accurate.	Does not provide references for specific facts. Does not always provide all relevant information.
	Depth	Covers molecular to global significance of water.	Weak connection between concepts and facts.
	Emphasis on Skills Building	Provides some opportunities for creative thinking. Activities encourage learners to arrive at their own conclusions.	Experiments are weak in terms of analytical thinking.
	Action Orientation	N o t A p p l i c a b l e.	
	Instructional Soundness	Includes some outdoor activities. Lists goals for unit and for individual activities. Provides pre- and post-tests.	Does not specify learner outcomes. Material is minimally interdisciplinary. Some of the K-3 activities may not be age-appropriate.
	Usability	Very readable. Step by step instructions presented logically.	Background information may be insufficient.

"This material will be valuable for some, but probably is too basic for trained science teachers."

"A nice set of introductory water materials."



Wetlands:

Critical Issues/Critical
Thinking Experiences
for Youth
Currently Out of Print



IN A NUTSHELL

Written by: Mary Kroll

National 4-H Supply Service
7100 Connecticut Avenue
Chevy Chase, MD 20815-4999

phone: (301) 961-2934
fax: (301) 961-2937
website: www.fourhcouncil.edu

Cost: \$5.00 + s&h

SUBJECTS

Science
Social Studies

This leader's guide contains four activities designed to increase knowledge about wetlands while developing critical thinking skills. Through these activities, students learn to identify wetlands, and decide where to direct limited dollars for wetland restoration. Two role plays involve making choices about wetland habitats. The guide provides step-by-step instructions, time requirements, background information, role play cards, worksheets, and discussion questions for each activity. A resource list, footnotes, and additional leader information on wetlands and on group management are also included. The text comes with a color poster that defines wetlands, gives reasons why students should be concerned about them, and shows a timetable of wetland conservation efforts from the 18th century to the present.

Grade Level	7-9
Length	28 pages
Date Published	1995

THE BOTTOM
LINE

"If you would like to involve your students in four great activities on wetlands that teach concepts and critical thinking, you'll love this booklet."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Encourages discussion of different perspectives. Information is referenced.	
	Depth	Emphasizes concept of interdependence. Builds on economic, social and environmental concerns.	Lacks a clear conceptual framework.
	Emphasis on Skills Building	Encourages critical thinking, decision making, and communication skills.	Weak in basic laboratory and field observation skills.
	Action Orientation	Students are encouraged to examine consequences of their own actions.	Actions listed are simulated; little link to local area or to actual steps that students can take.
	Instructional Soundness	Includes both classroom and field-based activities.	Text does not list subject disciplines, goals, or objectives.
	Usability	Material is clearly written. Activities are adaptable.	

"A brief overview of wetland issues—too brief to be used alone."

"Contains lots of good, usable ideas."



Wetlands:

An Interdisciplinary Unit for Science and Language Arts



IN A NUTSHELL

Written by: Jean L. Pottle

Dino Productions
P.O. Box 3004
Englewood, CO 80155

phone: (303) 741-1587
fax: (303) 741-8927
website: www.dsUPER.net/~dinoprod/index.htm/

Cost: \$14.95 + s&h

The twenty-eight chapters in this book provide students with an introduction to different kinds of freshwater and saltwater wetlands. Lessons are arranged by wetland type including bogs, marshes, prairie potholes, swamps, estuaries, and tidal marshes. Each lesson provides brief information about a wetland organism or issue. Individual lessons are dedicated to specific wetland organisms, such as herons, muskrats, cranberries, mangroves, and carnivorous plants. Other chapters deal with phenomena of the wetland, such as succession, erosion, or quicksand. Some lessons invite students to write opinions on human interactions with different wetlands, such as the disappearance of prairie potholes or the environmental effects of farming peat. Students are frequently instructed to write or draw their thoughts and observations. The keeping of a journal is an important component of this curriculum. Learners are encouraged to review what they have learned in previous lessons, and two chapters are specifically to help students evaluate their learning. A bibliography of fiction and non-fiction works related to wetlands is included.

Grade Level
6-8

Length
76 pages

Date Published
1997

SUBJECTS

Fine Arts
Language Arts
Health
Science
Social Studies

**THE BOTTOM
LINE**

"Even the introduction is interactive."

"Too complex for primary levels, and too simple for upper levels. It is unclear what audience this material is for."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Provides historical perspective and includes folklore from different cultures. Encourages learner to reflect on information and to form own opinions.	Does not cite sources of information. Questions are worded to elicit a preferred answer.
	Depth	Provides information on changes in wetlands over time. Addresses related concepts such interdependence of human and animal populations.	Uses vocabulary to explain concepts which may not be appropriate to targeted age group.
	Emphasis on Skills Building	Promotes critical thinking skills and creative writing skills.	Some activities may unrealistically expect technical skills or other preparation on the part of the student.
	Action Orientation	Provides examples of people who "make a difference."	Does not encourage personal action taking or provide suggestions of what students can do.
	Instructional Soundness		Geared mainly to independent study.
	Usability	Includes clear illustrations.	Does not provide instructions for teachers such as time requirements, objectives or outcomes.

"Would probably be appropriate for a home schooling program. It requires a self-motivated learner with good reading skills. Material is structured but almost totally self-contained."



What a Waste!

A Teacher's Resource for Integrating the Solid Waste Crisis into the Classroom



IN A NUTSHELL

Edited by: Millie M. Horosko

The Southwest Connecticut
Regional Recycling
Operating Committee
125 East Avenue
Norwalk, CT 06856

phone: (203) 381-9571

fax: (203) 377-1930

e-mail: gmsm@pcnet.com

Cost: \$10.95 + s&h

SUBJECTS

Fine Arts
Language Arts
Mathematics
Science
Social Studies

The nine chapters of this book are designed to increase elementary school students' awareness of the scope and origins of solid waste problems, and their own role in addressing these problems. The first four chapters contain lessons and activities that define solid waste, and explore where it comes from, how it affects nature, and how people dispose of it. The remaining chapters introduce reusing, reducing, recycling, and composting, and offer suggestions on responsible consumerism. Activities consist of discussions, measurements of trash, field trips, word games, and independent research. Students are asked to design more efficient packaging for products, make art projects out of refuse, create their own recycled paper, complete poems or stories about trash, and to brainstorm ways that their actions can make a difference. Each activity lists related subjects, goals, focus, time requirements, and possible extensions. Worksheet masters are included when necessary. The text includes a glossary resource lists, and suggestions for school recycling.

Grade Level
3-6

Length
100 pages

Date Published
1992

THE BOTTOM
LINE

"The materials offer a strong connections to learners' everyday lives, including having them bring waste items from home."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Cites references. Encourages students to form own opinions.	Some bias detected against packaging and landfills and in favor of recycling. Little reflection of cultural or regional differences.
	Depth	Fosters awareness of built environment. Concepts are presented in historical context.	
	Emphasis on Skills Building	Promotes environmental problem solving.	Contains few opportunities for students to come up with new or unique solutions.
	Action Orientation	Encourages students to assess their own behavior.	Does not include examples of successful action projects.
	Instructional Soundness	Uses different styles to convey information. Makes subject relevant to learners' lives. Lists goals and objectives.	
Usability	Layout is clear and easy to follow. Includes support materials and how to access instructional support.	Binding makes pages difficult to copy.	

"One viewpoint is expressed over and over: the need to recycle within our communities."

"Our students and teachers would enjoy using many of these activities."



Wild About Life!

Activity Guide



IN A NUTSHELL

Written by: Mariam Westervelt
& Elizabeth Wooster

Karol Media

phone: (800) 528-4773

Cost: No charge

The video component of this package consists of four brief segments. The story follows four high school students who are trying to produce an educational film on biodiversity. In the process, they research information on the Internet, review short films dealing with individual species, interview a leukemia patient who has been treated with medicine from a once-endangered plant, and discuss among themselves the importance of protecting biodiversity. Important vocabulary words appear in print on the screen. The accompanying activity guide contains overviews of the four segments along with objectives, key words, and a series of discussion questions and possible answers. The guide also contains ten complete activities, drawn from a number of sources, which can be used as extensions or reinforcement activities to complement the video. Activities include action projects, models, games, and surveys of community attitudes. Illustrations consist of charts, drawings, and photographs. An appendix lists field offices of the United State Fish and Wildlife Service.

Grade Level	4-12
Length	42 pages & video
Date Published	1997

SUBJECTS

Health
Language Arts
Science
Social Studies

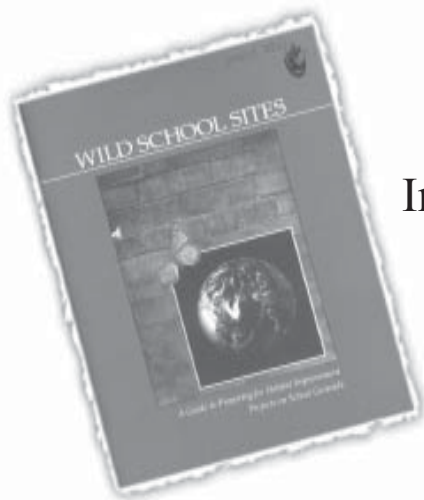
THE BOTTOM
L I N E

"Positive tone and message. I would like to see how kids react to these activities."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Open to inquiry.	Does not list field testing information. Presentation is not well balanced.
	Depth	Reflects and includes both local and global scales.	Focus is on large animals; doesn't adequately cover plants, insects, fish or other less charismatic creatures.
	Emphasis on Skills Building	Promotes environmental problem solving.	
	Action Orientation	Gives examples of successful interventions.	Does not include examples of successful action projects.
	Instructional Soundness	Activities appear learner-centered.	Not all activities have goals or objectives listed.
	Usability	Format of curriculum is helpful. Guide and video are easy to use.	Short on background material.

"Most skills come from the Activity Guide. If these activities are not completed, it's just another video."

"Good overview of biodiversity, endangered and threatened species."



WILD School Sites:

A Guide to Preparing Habitat Improvement Projects on School Grounds



IN A NUTSHELL

Written by: Paul Schiff & Cindi Smith-Walters

Council for Environmental Education/Project WILD
707 Conservation Lane
Suite 305
Gaithersburg, MD 20878

phone: (301) 527-8900
fax: (301) 527-8912
e-mail: info@projectwild.org
website: www.projectwild.org

Cost: \$5.00 + s&h

SUBJECT

Fine Arts
Language Arts
Mathematics
Science
Social Studies

This booklet provides instruction for students and educators who wish to develop areas on school grounds for habitat conservation and wildlife education activities. The first three chapters explain the rationale behind such projects, the seven major concept areas of Project WILD, and the basic components of a wildlife habitat. Included are suggestions for team building, selecting an appropriate site, developing and implementing an action plan, and obtaining the support of parents and community members. The text provides sample ideas to show how school areas can be turned into project areas. An appendix lists specific Project WILD learning activities that relate to developing habitat areas. Schools which complete these projects can apply for certification as WILD School Site. The book is illustrated with black-and-white photographs.

Grade Level	adult
Length	56 pages
Date Published	1993

What the REVIEWERS Said!

Strengths Noted

Other Considerations

The goals of this work are clearly stated. Reviewers felt that it was a helpful and motivational how-to guide to developing a school site. They noted, however, that the guide lacks detail in many areas where educators would want more information, such as in describing some of the more complex projects. Connections are made between specific activities and curricular requirements. Students are involved with decision making and are encouraged to come to their own conclusions. The instructions were clear, sequentially ordered, and easy to follow. Learner outcomes and sources of information were not clearly identified.



Wormania!

Live Worms & Song



IN A NUTSHELL

Written by: Mary Appelhof,
Bill Brennan, Canton Gauthier
& Barbara Loss Harris

Flower Press
10332 Shaver Road
Kalamazoo, MI 49024

phone: (616) 327-0108
fax: (616) 327-7009
e-mail:
nancy@wormwoman.com
website:
www.wormwoman.com

Cost: \$34.90 + s&h

SUBJECTS

Science

This video features the "Worm Woman" (Mary Appelhof), teaching "Billy B." (Billy Brennan) and his family about the world of worms. Through photography and computer graphics, worms of North America and elsewhere in the world are shown and described. Worm reproduction, anatomy, feeding habits, and locomotion are explored, accented by four worm-related songs. Instructions for setting up a worm composting bin are given. A teaching guide includes a pre- and post-test with answers, learner outcomes, an index, and seven units covering different topics on the video.

Each unit lists the time code to the corresponding section of the video, key ideas, vocabulary, extension questions, exploration activities, and trivia questions about worms. Related activities and reading from Appelhof's previous books are also cited.

Grade Level	3 & up
Length	video & teacher's guide
Date Published	1995

THE BOTTOM
LINE

"Excellent photography of worm behavior and physiology is interpreted with acting and singing."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Provides accurate and detailed information.	All people shown in the video are middle-class Caucasians.
	Depth	Discusses worm biology, physiology, and the importance of worms to humans and the ecosystem.	
	Emphasis on Skills Building	Activities involve classification and measurement.	
	Action Orientation	N o t A p p l i c a b l e.	
	Instructional Soundness	Provides cross-references to more complete curricula by the same author. Lists key ideas and defines important vocabulary.	Some children may be put off by the music and acting. Vocabulary is rather advanced for the targeted age group.
	Usability	Photography in video is very clear and precise.	Teacher's Guide is too small to photocopy.

"Thirteen-year-olds, I imagine, would not find this video 'cool'."

"Thorough coverage of worm composting."



Worm Worlds



IN A NUTSHELL

Written by: Alan R. Berkowitz
& Patrick Bohlen

NAAEE Publications &
Membership Office
410 Tarvin Road
Rock Spring, GA 30739

phone: (706) 764-2926
fax: (706) 764-2094
e-mail: csmith409@aol.com
website: www.naaee.org

Cost:

\$2.45 + s&h for NAAEE members
\$2.70 + s&h for non-members

SUBJECT

Mathematics
Science

Worm Worlds is one of a series of schoolyard environmental investigations. It consists of a folder with instructions for conducting a multi-part experiment in worm habitats. Within the folder are masters of an equipment card, an action card explaining procedures, and a record sheet. Two different sites are used so students can compare how earthworms respond to different environmental factors. Students learn how to designate a quadrant for study and are given practice in observation and data collection. A materials list, preparation instructions, time factors for each part of the experiment, and suggestions for time and place are provided, as are debriefing questions and possible extension activities. There is also a brief list of additional resources on worms.

Grade Level
3-6
Length
4 pages
Date Published
1996

What the REVIEWERS Said!

Other Considerations
Strengths Noted

The instructions are concise but complete. Students are given an opportunity to engage in cooperative learning and to practice critical and analytical thinking skills. The information is long-lived and requires materials that are inexpensive. The experiment is simple to implement. Finding a location to conduct the experiment in urban settings or areas with heavily compacted earth could be a problem.



Zebra Mussel Mania:

Teacher's Guide for
Grades 5 & 6



IN A NUTSHELL

Developed by: John Barger,
Marjorie Burgett,
Jane Greenberg,
Marla Hostetler, Becky
Keim, & Katy Scukanec

Illinois-Indiana Sea Grant
Program
University of Illinois
65 Mumford Hall
1301 West Gregory Drive
Urbana, IL 61801

phone: (217) 333-9448
fax: (217) 333-2614
e-mail: r-goettel@uiuc.edu

Cost: \$45.00 + s&h

SUBJECTS

Fine Arts
Language Arts
Mathematics
Science
Social Studies

Zebra Mussel Mania was designed to be used in conjunction with the *Zebra Mussel Traveling Trunk*. The ten activities in this guide address specific features and problems caused by zebra mussels (e.g., their ability to clog water lines) as well as general problems and concerns raised by the introduction of exotic species into natural habitats. Activities are designed to fit into one or more 45-minute class periods. Each lists a scientific process skill, a concept to be explored, benchmarks for learning, objectives, instructions for students, connections to other areas of study, important vocabulary, and possible variations. Some activities call for videos, actual mussels or other materials from the traveling trunk. The guide also includes a pre- and post-test, fold out sheets describing different mussel types and their life cycles, fact cards, student sheets, a journal, transparency masters, and other material on laminated pages. It also includes suggestions for facilitating cooperative learning, a glossary, resource lists, and suggestions for using mussels in the classroom. The Traveling Trunk is available for rent or sale through the Sea Grant program.

Grade Level	5-6
Length	73 pages
Date Published	1997

THE BOTTOM
LINE

"A good deal of science is conveyed through the activities and there are interdisciplinary linkages built in."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Provides lists of agencies for further information.	Uses such terms as "evil," "menace," and "alien invaders" to describe zebra mussels.
	Depth	Thorough discussion of the concept of population growth and rapid colonization.	
	Emphasis on Skills Building	Requires measurement, observation, classification, prediction, and other scientific skills. Encourages students to think about how they arrived at conclusions.	
	Action Orientation	An action plan is developed at the end of the unit.	Actions consists of educating the public. Weak in the area of personal stake.
	Instructional Soundness	Lessons are learner-centered and interdisciplinary.	Uses mostly indoor activities. Connections to learners' lives are weak.
	Usability	Instructions are well organized, clear and easy to follow. Provides helpful teacher support.	Most activities are specific to zebra mussels. Cost may be prohibitive.

"There are probably more exercises here than are required to convey a basic working knowledge of the zebra mussel problem."

"Could be an excellent tool for teaching cooperative learning, but it lacks incentive for the students to care about this particular species."