



009
Gee-Wow! Adventures in
Water Education 1991

Cost: booklet, \$12
(includes shipping); videotape,
\$39.95 plus \$3.99 shipping

Ecology Center
417 Detroit St.
Ann Arbor, MI 48104
313/761-3186

Developed as part of the
Groundwater Education in Michigan
(GEM) Program, this curriculum assists
in teaching to groundwater, pollution
prevention, and general water concepts.
Lessons may be taught as a unit or used
separately to supplement other class-
room activities. Includes 28 activities
and a video, *It's Found Underground:
Groundwater Our Buried Treasure*; also an
index cross-referenced by title, grade,
subject area and activity type.

010
The Great Lakes in My World
Publication date not listed

Cost: \$5 plus \$2 shipping

Lake Michigan Federation
59 E. Van Buren, Suite 2215
Chicago, IL 60605
312/939-0838

Activities are designed to increase
awareness and appreciation for the
Great Lakes using an interdisciplinary
approach. Activities cover cultural
issues, current management concerns,
and natural processes. Manual includes
a listing that indexes Great Lakes mate-
rial to the appropriate grade and sub-
ject area.

011
The Groundwater Adventure
1989

Cost: student workbook, \$1.25;
teacher's guide, \$9;
shipping for set \$3.65

Water Environment Federation
Public Education Dept.
601 Wythe St.
Alexandria, VA 22314-1994
703/684-2400

This curriculum is part of the
Water Environment Federation's pack-
age designed to educate the public
about important water quality issues.
Topic materials are provided in a
"building block" approach to allow
flexibility in fitting the materials into an
existing school curriculum. Each set
includes a video and student activity
guide. Activities in this set address
ways to clean up groundwater contami-
nation in more detail than other
curricula.

012
Groundwater: A Vital
Resource 1986

Cost: free (one copy only)

Tennessee Valley Authority
Office of Natural Resources and
Economic Development
Environmental/Energy Education
Program
Knoxville, TN 37902
Chattanooga Publications, Carol
Davis 615/751-7338

A series of 23 activities on four top-
ics: the water cycle, water distribution
in soils, water quality, and community
impacts on groundwater. Each topic
includes activities for a range of ages.
Strong technical/science orientation.
Limited integration with daily life of
the youth.

013
Groundwater Education
Program, Parts 1, 2 & 3 1984

Cost: free

East Michigan Environmental
Action Council
21220 W. Fourteen Mile Rd.
Birmingham, MI 48010
615/632-2101

These materials are designed to
enhance groundwater quality through
action-oriented groundwater programs
at the local level. Developed as an in-
school science unit, with the help of a 4-
H extension specialist. Contents of this
kit are comprehensive, including for
each of the 3 parts: a teacher's guide;
booklet with information and sug-
gested activities; an Arlegan County 4-
H Resources catalog; equipment
needed for classroom activities; addi-
tional resources including other curric-
ula; fact sheets; and informational tests.
Materials need to be adapted for
younger end of suggested grade range.

014
Groundwater Protection
Curriculum Guide (and
"Groundwater—the Hidden
Resource" videotape) 1989

Cost: video on a loan basis; allowed
to copy

Missouri Dept. of Natural
Resources
Technical Assistance Program
P.O. Box 176
Jefferson City, MO 65102
314/751-3131

Information, video, and activity
ideas designed to familiarize students
with the source of their drinking water,
the management of waste water, how
groundwater becomes polluted, and
how groundwater pollution can be pre-
vented. Information materials provide
in-depth background about Missouri
hydrogeology.



015
Groundwater Resources and
Educational Activities for
Teaching (GREAT) 1989

Cost: groundwater models,
1 box/\$15, or 1 model free with
inservice. PUBLICATION NO
LONGER AVAILABLE.

Conservation Education Center
R.R. 1, Box 53
Guthrie Center, IA 50115
515/747-8383

Material is arranged in six units
with the first one covering the basics of
groundwater and hydrogeology in
Iowa. The other five units cover Iowa's
groundwater issues in priority as
agreed upon by Iowa groundwater
interest groups. These include fertiliz-
ers and pesticides, abandoned waste
sites and landfills, leaking underground
storage tanks and hazardous materials
management, point source groundwa-
ter pollution, and land-applied wastes
and sewage treatment. Curriculum
should be accompanied by a set of six
groundwater posters and a one-foot
plexiglass groundwater model.

016
Groundwater Study Guide—
Department of Natural
Resources 1991

Cost: \$10 plus tax

Wisconsin Agency Document Sales
Box 7840
202 S Thornton Ave
Madison, WI 53707
608/266-3358

Resource packet and activity ideas.
Activities focus on the water cycle and
hydrogeology, groundwater contamina-
tion, water and waste water treatment,
water conservation and groundwater
use rights. Written materials may be
challenging for 6th graders, the
younger end of suggested grade range.

083
Hands-On Save Our Streams.
The Save Our Streams
Teachers' Manual for Grades
1-12. 1994

Izaak Walton League of America
Save Our Streams Program
707 Conservation Lane
Gaithersburg, MD 20878
1/800/BUG-IWLA

Written for grades 1-12, the man-
ual uses a watershed concept to teach
about land use effects on stream quality.
Highlights include human activities
such as agriculture, mining, commer-
cial/industrial, forestry, and construc-
tion. Activities are written for the entire
1st-12th grade audience and left to the
educator to adapt to the appropriate
age. Combines the SOS monitoring pro-
gram techniques into field activities.
Appendices include SOS Stream Survey
forms, sampling instructions and a use-
ful Volunteer Water Monitoring
Bibliography.

092
Healthy Environment—Healthy
Me: Exploring Water Pollution
Issues, 4th Grade 1991

Cost: \$29 includes shipping

Resource Center of Environmental
and Occupational Health Sciences
Institute
Public Education and Risk
Communication Division
681 Frelinghuysen Rd.,
P.O. Box 1179
Piscataway, New Jersey 08855-1179
908/932-0110

Part of a series of environmental
and occupational health curricula
designed to supplement school curri-
cula in grades K-6. The series provides a
different topic for each grade. This topic
is presented in 15, 45-to 60- minute
units. Many units focus on wastewater
treatment. Describes how water
becomes polluted and how to prevent
pollution, but does not emphasize how
drinking water is treated before use.

017
A Hidden Treasure.
Instructional Materials for
Groundwater Resource
Protection 1992

Cost: \$7 includes shipping and
handling

National FFA Organization
District Services
5632 Mt. Vernon Memorial Hwy
Alexandria, VA 22309
703/360-3600

Designed as a supplement for the
school curriculum, these materials
focus on the relationship between agri-
culture and groundwater. Includes
unique sections on "Best Management
Practices," groundwater protection in
urban settings, managing underground
storage tanks and water testing.
Students design management plan for
proper lawn care. Covers both rural
and urban issues.

018
Instructor's Guide to Water
Education Activities 1986

Cost: 1 free copy

Commonwealth of Pennsylvania
Dept. of Environmental Resources
Water Conservation/Technical
Assistance Program
P.O.Box 8761
Harrisburg, PA 19105-8761
717/541-7800

Intended as a general water cur-
riculum. Materials and activities inte-
grate water science concepts with water
use applications and impacts.



076
Investigating Groundwater:
The Fruitvale Story 1991
Cost: \$19.95 for curriculum only; \$150
(includes shipping) for complete
chemistry test kit and curriculum
Chemical Education for Public
Understanding
Lawrence Hall of Science
University of California
Berkeley, CA 94720
510/642-8718 for list of distributors

Designed for middle to high school
youth, this module closely resembles
steps taken in a real water contamina-
tion situation, e.g., identify the prob-
lem, research, community involvement,
decision-making and action. Requires
the use of a chemistry kit. Activities
build on each other; this curriculum
represents one module.

019
Investigating Streams
and Rivers 1992
Cost: \$7.50 plus \$3 shipping
Global Rivers Education Network
721 E. Huron Street
Ann Arbor, MI 48104
313/761-8142

Unique in that activities provide a
mechanism for learning some funda-
mentals of political action; e.g., making
contacts, group concerns about prob-
lem/issue of process, interview and
phone skills, developing action plans.
Excellent guidance in developing,
implementing and evaluating action
plan. Activities can be complemented
by participation in the Global Rivers
Environmental Education Network
(GREEN)-sponsored computer confer-
ences. Materials contain suggestions for
using computer network to enhance
student understanding. Manual
includes user evaluation/feedback
form. Recommended for use with Field
Manual for Water Quality Monitoring
by Mark K. Mitchell and Wm. B. Stapp.
However, only activities 4 and 5 require
use of manual.

077
Kids In Creeks: A Creek
Exploration and Restoration
Program 1993
Cost: Curriculum and videos avail-
able to workshop participants
San Francisco Estuary Institute
180 Richmond Field Station
1301 South 46th Street, #180
Richmond, CA 94804
510/231-9539

This program guide, created for
grades 3–12 in the San Francisco Bay
area, provides teachers with the rele-
vant information to conduct a creek
study program. Many options and
details have already been explored by
authors; e.g., a pre-arranged list of
organizations willing to participate in
the program, materials in the lending
library, and list of creeks in the region
that may be easily accessed by classes.
There are “Action Projects” at the end
of each activity for students to further
get involved in their community.

066
Kids Network—What’s in Our
Water? 1992
Cost: kit for 30 students, \$375; tuition
and telecommunications, \$115.
National Geographic Society
Educational Services
PO Box 98018
Washington, D.C. 20090-8018
202/857-7759 for information
800/368-2728 for ordering

Recommended for grades 4–6, this
curriculum represents a telecommuni-
cations-based science education, with
an emphasis on watershed studies. A
unique section highlights how geo-
graphical and cultural qualities can
influence water use. Unit support mate-
rials include access to Hot Line staff
and a “unit scientist,” a professional
who communicates to the class via elec-
tronic mail. Provides background for
students understanding risk decisions
using an activity which evaluates the
context and concentration of pollutants.
Planned sessions require a minimum 15
hours of class time during a six-week
scheduled communications calendar.
Curriculum package includes Teacher’s
Guide, Kid’s Handbook, Software

Manual, and software for Apple IIGS.
Computer and modem are required.

020
Living in Water: An Aquatic
Science Curriculum 1987
Cost: \$10 (includes shipping)
National Aquarium in Baltimore
Dept. of Education and
Interpretation
Pier 3, 501 E. Pratt St.
Baltimore, MD 21202
410/576-3870

Activities focus on a scientific
study of water, aquatic environments
and the plants and animals that live in
water. The curriculum covers both
marine and freshwater habitats. The
emphasis of the materials is on process
rather than content. Unique aspects
include answer keys that are provided
in language students would likely use,
and activities which teach students
about describing something they can’t
see by measuring it and correlating
their data. Many appendix materials
are provided to facilitate ease of teacher
preparation/presentation (over 100
pages).

021
Local Watershed Problem
Studies—Elementary School
Curriculum 1982
Cost: \$7.75 (includes shipping)
University of Wisconsin
Water Resources Center
1975 Willow Dr.
Madison, WI 53706
608/262-3577

A collection of lessons written by
teachers with a variety of backgrounds.
Lessons vary in degree of detail. Focus
is on interface between land use and
water pollution. Includes instructions
on how to build water testing equip-
ment. Provides many stories and folk-
lore examples to enhance student
enjoyment of a particular topic and to
support language arts education goals.
The appendix includes suggestions for
citizen and government action in con-
trolling non-point source pollution in
urban areas and rural areas, and a dis-
cussion on role of values in environ-
mental education.



022
Local Watershed Problem
Studies—Middle and High
School 1982

Cost: \$16.65 (includes shipping)

University of Wisconsin–Madison
Water Resources Center
1975 Willow Dr.
Madison, WI 53706
608/262-3577

Similar to the elementary level program, but contains unique attitude survey form. Though developed for Wisconsin, simulation activities could be adapted for other locales. Lessons typically take from several days to several weeks of class meetings. Some units are not directly related to water issues.

023
Los Marineros 1994

(English and Spanish version
available)

Cost: \$30 (includes shipping) for
English edition; \$50 for English
and Spanish edition
(includes shipping)

National Oceanic and Atmospheric
Administration
Under Secretary for Oceans and
Atmosphere, Rm. 5128
14th & Constitution
Washington, D.C. 20230
202/482-3436
Publication information
805/682-4711

While providing basic education about marine science, activities focus on the local resource, the Santa Barbara Channel. Units include physical characteristics of the channel, flora and fauna, human history, and marine policy. Materials were developed for a program predominantly reaching low-income minority students who have limited access to special programs. Activities are designed to increase self-esteem and career awareness. Materials include an interesting “invitation” activity that encourages development of group identity and arouses student excitement. Activities provide a good interface between school and nonformal settings. Appendices include suggestions for marine careers, marine

educational resources, teaching sheltered English, and starting a marine education program. Provides extensive material on marine flora and fauna.

078
Mapping Fish Habitats.
Teacher’s Guide. Grades 6–10
1992

Cost: \$10 (plus shipping)

Great Explorations in Math and
Science (GEMS)
Lawrence Hall of Science
University of California
Berkeley, CA 94720
510/642-7771

Written for grades 6–10, students design an aquarium to draw conclusions using basic scientific concepts: predicting, observing, recording, experimenting, analyzing and interpreting. Students also learn fundamental ecological concepts such as ecosystem, habitat, home range, and territory. Through daily observations and experiments, students draw conclusions about fish in their natural environment. Experiments include changing one component of fish habitat and mapping the fish’s behavior based on the change.

067
My World, My Water and Me!
A Teachers Guide to Water
Pollution Control
Publication date not available

Cost: free

Association of Environmental
Authority
2333 Whitehorse-Mercerville Rd,#4
Mercerville , NJ 08619

Curriculum emphasizes how water gets polluted and the impacts of pollutants on living things. It uses the arts extensively to convey human uses and impacts. Materials use a unique strategy to tie all the activity concepts together; students write a story, in sections, as the unit proceeds. The students provide details and adventures for each step. Teachers will need to select activities most relevant to the aspects of the water pollution story they wish to emphasize.

024
Naturescope: Diving Into
Oceans 1989

Cost: \$7.95 + \$3.25 for shipping

National Wildlife Federation
1400 16th Street NW
Washington, DC 20036-2266
1/800-822-9919

Instruction in these materials provides a unique layout that, in several cases, may be used independently by the student. Activity descriptions are clearly explained and illustrated. Topics include the physical ocean, life in the ocean, life along the coastline, and human impacts. Each topic includes an activity for primary, intermediate, and advanced age ranges. Activities are not dependent on each other. Materials include some beautiful drawings of sea life. Excellent supplementary resource list.

025
Naturescope: Wading Into
Wetlands 1989

Cost: \$7.95 + \$3.25 for shipping

National Wildlife Federation
1400 16th Street NW
Washington, DC 20036-2266
1-800-822-9919

Instruction in these materials provides a unique layout that, in several cases, could be used independently by the student. Activity explanations are clearly explained and illustrated. Topics include: what makes a wetland, saltwater wetlands, freshwater wetlands, wetlands and people. Each topic includes an activity for primary, intermediate, and advanced age ranges. Activities are not dependent on each other. Excellent supplementary resource list.



026
North Dakota State University
Extension Service—Water
Activities Packet 1988

Cost: 35 cents per fact sheet

ND State Univ. Extension Service
Fargo, ND 58105
701/231-8118

Activities are presented in a fact sheet format listing background information and related activities on single water topics. Units include *Water is Important*, *Water Conservation*, *What is Water?* Instructor materials provide more information about the topic and further studies ideas. Activities are provided as illustrations or examples of discussion topics.

027
Our Great Lakes Connection
1985

Cost: 1 copy free

UW—Extension Environmental
Resources Center
216 Agriculture Hall
1450 Linden Dr.
UW-Madison
Madison, WI 53706
608/262-0020

These materials were designed to enable the teacher to integrate activities about the Great Lakes into a regular classroom program. Ideas for the activities were provided by teachers and Great Lakes specialists. Materials emphasize use and development of a variety of learning skills. Activities focus on the historical/cultural role of Great Lakes in people's lives. History, geography and economics form the basis of the content, but materials include some emphasis on pollution impacts and lake effects on weather and climate.

028
Our Groundwater
1992 (draft form)

Cost: check on availability

University of Vermont Extension
Service
802/656-3024

One of 3 packets designed as a supplement to the classroom. The others are "Our Surface Water" and "The Water Around Us." Uses demonstrations to convey four main ideas about groundwater.

029
Our Surface Water
1992 (draft form)

Cost: Check on availability

University of Vermont Extension
Service
802/656-3258

One of 3 packets designed as a supplement to the classroom. The others are "Our Groundwater" and "The Water Around Us." Provides directions for a pond and a stream field trip and instructions on how to conduct a water quality survey.

080
Paddle-to-the-Sea:
Supplemental Curriculum
Activities for Use with Holling
Clancy Holling's *Paddle-to-
the-Sea* 1991

Cost: \$10

Ohio Sea Grant College Program
Ohio State University
1314 Kinnear Rd.
Columbus, OH 43212-1194
614/292-8949

Developed for use in grades 3-6, this interdisciplinary curriculum is designed to reinforce the concepts introduced in the story *Paddle-to-the-Sea*. Activities center around topics pertinent to the Great Lakes region such as surrounding land use, historical uses of the lakes, and Great Lakes ecology. Most activities are pencil/paper and seat work-oriented.

082
Plastic Eliminators: Protecting
California Shorelines 1993

Cost: \$5 plus shipping

California Aquatic Science
Education Consortium (CASEC)
Graduate School of Education
Santa Barbara, CA 93106
805/893-2739

Designed for 10 to 15-year-olds, this activity guide aims to increase awareness of plastic marine debris. The first portion of the guide focuses on awareness, while the remaining activities deal with taking action in the youth's community. Activities culminate into an Adopt-A-Beach and Cleanup, but after youth have learned how plastics can affect marine animal life and how to reduce plastic consumption.

030
Project Water Works 1990

Cost: \$25 plus shipping

American Water Works
Association
6666 W. Quincy Ave.
Denver, CO 80235
303/794-7711 or 800/926-7337

Requires classroom setting and computer. Extensive preparation by instructor needed. Emphasis on water science and water management. Water management section of software emphasizes importance of values in decision-making, yet identifies "right and wrong" answers to simulated water management scenarios.



093
Project W.U.L.P. (Wetland Understanding Leading to Protection) 1994

Cost:

Outdoor Skills Center
P.O. Box 84
Plymouth, WI 53073
414/893-5210

This multidisciplinary wetland unit is designed for middle school-aged students. Activities are sequential, beginning with general knowledge of wetland functions and human impacts, then proceeding to comprehensive, well thought out field activities. Some activities are specific to Wisconsin wetlands. Authors attempt to pull together a complete wetland unit taught entirely in the classroom or in the classroom accompanied by field experiences. Unit includes an extensive, multimedia wetland resource list.

094
River Cutters 1992

Cost: \$10 plus shipping

GEMS-Lawrence Hall of Science
University of California
Berkeley, CA 94720
510/642-7771

Written for grades 6–9, River Cutters is an earth science unit in the GEMS series that addresses today's river issues. For a broad understanding of water issues, educators may want to integrate this unit with other water curricula. Authors simulate geological time using a diatomaceous earth model throughout the unit. Materials for the model are easily created in the classroom or at home. Activities include investigations of potential impact of toxic waste dumps and dams on rivers.

079
Sea Sampler: Aquatic Activities for the Field and Classroom 1986

Cost: \$4.24 includes shipping

South Carolina Sea Grant Consortium
287 Meeting Street
Charleston, SC 29401
803/727-2078

Elementary—grades K–6. Addresses a variety of science and ecological concepts such as salt water characteristics, osmosis, food web, niche and communities. Includes 7 field and 14 classroom activities. Detailed background information is not provided for teacher or student, but resources to find the information are listed.

Secondary—grades 7–12 (separate edition). Similar activities as the elementary edition addressing similar topics relating to coastal/salt water living. This curriculum deals with more integrated skills and concepts, e.g., taxonomy, food web/energy flow.

031
A Sense of Water, elementary edition 1984

Cost: \$10 plus \$4 shipping

Southern Arizona Water Resources Association
48 N. Tuscon Blvd, Suite 106
Tuscon, AZ 85716
602/881-3939

Materials provide a set of short activities which can be integrated into a variety of disciplines and grade levels. Activities are organized according to sections, including dependency of life on water; the science of water including water ecology; climate; water distribution and use; pollution potential of water; and the role of water in culture. Each lesson is indexed by chapter reference, grade, subject, length of activity, concept, key vocabulary and credits. Includes suggestions for evaluation, subject and topic index. A unique perspective includes activities which address the concept that water of varying degrees of contamination may still have uses.

032
Sensing the Sea—
(K–1) & (2–3) (two booklets) 1978

Cost: \$2 per copy

Marine Education Center
VA Institute of Marine Science
Gloucester Point, VA 23062
804/642-7000

Activities center around set-up and care of saltwater aquarium. Focuses on process skills of investigation, especially observation and hypothesis. Unique aspects include questioning skills—mostly through the teacher proposing divergent questions and students suggesting possible solutions, rather than the “correct” answer. Book 2 teaches difference between observation and inference.

033
4-H Sportfishing Aquatic Resources Education Program (SAREP)

1989 (reviewed); revised in 1994

Cost: \$13 includes shipping. Leaders manual is provided free at training sessions.

Cornell CES
Cornell University Media Services
Ithaca, NY
607/255-2814

These activities are designed to help “hook” kids with a broader message about aquatic resources and the need to respect and conserve them. They were intended as the basis for 4-H club meetings and activities. Activities published individually in 20 separate booklets include almost everything about fishing from “how to fish” in a variety of settings to “minimizing your intake of fish contaminants.” Note explicit commitment to affective learning. Binder contains all supplemental materials listed in Activity Booklets. Introductory chapters include teaching and leadership tips.



034

Stop, Look and Learn About Our Natural World Vol. 1, Grades K–2 (Water Conservation section reviewed) 1991

Cost: \$30 per 3-volume set plus shipping costs. First 3-volume set is free.

Nebraska Natural Resources
Commission
Stop, Look and Learn
Box 94876
Lincoln, NE 68509
402/471-2081

The water-related sections were reviewed: Unit 2 of Volume 1 (27 of 216 pages). Other units cover soil, plant, tree, and wildlife conservation. Materials were developed with a resource conservation orientation. Some K-2 students may need assistance in reading worksheet instructions. Many activities combine content and study skills. Includes guide that references activities according to subject area, skill, page number and topic.

035

Stop, Look and Learn About Our Natural World Vol. 2, Grades 3–4 (Water Conservation section reviewed) 1991

Cost: \$30 per 3-volume set + shipping. First 3-volume set is free.

Nebraska Natural Resources
Commission
Stop, Look and Learn
Box 94876
Lincoln, NE 68509
402/471-2081

Only the material in the water conservation unit (49 pages) was reviewed. Other units in this 244-page booklet include soil, plant, tree and wildlife conservation. Materials were developed with a resource conservation orientation. Worksheet language may be too advanced to be read independently by some 3rd and 4th graders. Additionally, some 3rd and 4th graders may not have the math skills to complete or understand computations included in the materials. Many activities combine content and study skills. Includes guide that references activities according to subject area, skill, page number, and topic.

036

Stop, Look and Learn About Our Natural World Vol. 3, Grades 5–6. (Water conservation section only reviewed) 1991

Cost: \$30 per 3-volume set plus shipping. First 3-volume set is free.

Nebraska Natural Resources
Commission
Stop, Look and Learn
Box 94876
Lincoln, NE 68509
402/471-2081

Reviewed unit on water conservation. Forty-four of book's 215 pages devoted specifically to water conservation. See comments about Volumes 1 and 2.

037

The Story of Drinking Water
1992 (accompanying comic book, 1990)

Cost: Teacher's guide, \$7 plus shipping; comic, 28¢

American Water Works Assoc.
6666 W. Quincy Ave.
Denver, CO 80235
303/347-6206

This comic book comes in a multilingual (English, Spanish and French) format about a variety of water issues. The Teacher's Guide includes 19 activities for hands-on experiences with topics mentioned in the comic book. Intended for classroom application. Excellent focus on plight of third world countries' water supply.

038

The Stream Scene:
Watersheds, Wildlife and
People 1990

Cost: \$15 (includes shipping)

Oregon Dept. of Fish and Wildlife
P.O. Box 59
Portland, OR 97207
503/229-5403

One of few curriculum focusing on riparian areas and intermittent streams. One of few that studies the effect of stream flow (water quantity) on plant communities. Takes a unique approach to populations using mathematical orientation. Includes appendices on making

field equipment; a description of the salmon-trout enhancement program; general stream survey terms; water resource agencies. Includes science background for instructors and activities for students on any particular topic. Without modification, material will likely be too advanced for middle school students.

084

Stream Study and Water
Quality Assessment
Curriculum 1991

Cost: Free

New Hampshire Fish and Game
Department, 2 Hazen Drive
Concord, NH 03301
603/271-3211

Designed for grades 5–8, this curriculum focuses on stream ecology (physical, biological and chemical monitoring). Also addresses urban sources of water pollution and watershed concepts. An "Outline of Advanced Concepts and Activities for Stream Ecology and Monitoring" is included, although the material provided in this guide may not be sufficient for educator to carry out. Instructor may have to refer to the supplemental sources for detailed background information. The supplemental materials available: Interpreting Results of Water Quality Tests in Streams and Rivers. Frank Mitchell and Jeffery Schloss; and A Study Guide to New England's Freshwater Wetlands.

039

Surface Water 1988

Cost: teacher's guide, \$9; student guide, \$1.25 plus \$3.75 for both guides. *Surface Water* video, \$15 or \$49 for package.

Water Environment Federation
601 Wythe St.
Alexandria, VA 22314-1994
703/684-2400

Teacher's Guide provides background information and activities to complement the student video. Student Guide provides additional information about the water cycle, sources of water pollution, wastewater treatment, and citizen action. Materials address the concept of natural pollution, which is rather unique.



040

The Tapwater Tour 1989

Cost: \$41.95 plus shipping

LaMotte Co.
P.O.Box 329
Chestertown, MD 21620
1/800/344-3100

Activities enable students to test tap water and evaluate the water quality. Highly directive teacher materials, script provided.

085

Teacher's Guide to World Resources, Chapter Reprints: Oceans and Coasts

1994

Cost: \$6.95 for set of 8

World Resources Institute
Publications
P.O. Box 4852 Hampden Station
Baltimore, MD 21211
1/800/822-0504

Oceans and Coasts encourages high school students to explore the sources and effects of marine pollution, and steps taken to minimize the impacts of human activity. Subtopics include the role of oceans, pollution and fisheries. The unit format encourages teachers and students to engage in thoughtful discussion of oceans. Students receive fact sheets, maps, graphs and articles. Enrichment activities suggest that students map ocean pollution, examine aquaculture, investigate bioremediation and examine land use issues. To get the most out of this unit, students and teachers may require backgrounds in ocean ecology. Others in the series include: Watershed Pollution (see 086); Biodiversity; Sustainable Development; Natural Resource Economics; Population, Poverty, and Land Degradation; Energy, Atmosphere, and Climate; and Citizen Action.

086

Teacher's Guide to World Resources, Chapter Reprints: Watershed Pollution 1994

Cost: \$6.95 for set of 8

World Resources Institute
Publications
P.O. Box 4852 Hampden Station
Baltimore, MD 21211
800/822-0504

In the Watershed Pollution guide, activities focus on natural and human events that occur in watersheds. The guide presents perspectives on water use from developing and developed countries, and on water pollution and watershed dynamics. Authors included a chart for ideas referencing lesson plans and enrichment activities across geography, math, science, civics, government and history. Authors suggest how to integrate global environmental education into high school curricula through the national Goals 2000: Draft National Performance Standards. This guide is part of a series that contains a lesson plan, student handouts, overheads, and student enrichment activities. Other units include: Oceans and Coasts (085); Biodiversity; Sustainable Development; Natural Resource Economics; Population, Poverty, and Land Degradation; Energy, Atmosphere, and Climate; and Citizen Action.

041

Teaching Aquifer Protection: ("TAP notebook")
A curriculum supplement 1990

Cost: \$20 for out-of-state; \$15 for in-state. Includes shipping for both.

Clemson University
Bulletin Room, #82
P & A Building
Clemson, SC 29634
803/656-3261

Provides activities designed to supplement curriculum. Focuses on water quality protection and water conservation. Learning objectives are referenced to state basic science skills for easy interface with school curriculum. Written for South Carolina audience, but more broadly applicable.

087

Through the Looking Glass
Teacher's Guide 1991

Cost: \$10

University of New Hampshire
and University of Maine Sea Grant
Advisory Program
Kingman Farm, University of New
Hampshire
Durham, NH 03824

Curriculum focuses on marine awareness for elementary and high school students through a field trip to the Nature Center at Odiorne State Park, Rye, NH. Pre- and post-field trip activities complement and expand the concepts experienced during the trip. Strong emphasis to incorporate activities into the standard curriculum. Little to no background provided for teachers or students on follow-up activities; only suggestions to integrate marine awareness into the curriculum.

042

The Water Around Us (4-H)
1990

Cost: \$1.50 plus \$1 shipping

CTR Publications
Morrill Hall
University of Vermont
Burlington, VT 05405-0106
802/656-3024, Ext. 6

One of 3 packets designed as a supplement to the classroom. The others are "Our Groundwater" and "The Water Around Us." Provides directions for demonstrations and activities about the water cycle and water conservation.



043
Water Conservation In-School
Curriculum 1990

Cost: \$25 (includes shipping)

Univ. of Nevada CES
Carson City, NV
702/887-2252

Water education activities designed for easy integration into class activities. Binder separates materials by grade. Each unit contains lists of activities and materials needed, separated by day. When conducting activities, the teacher borrows box of equipment from the Cooperative Extension office. Goals and objectives not stated for each activity specifically, but for the unit overall. Many of same concepts presented at each grade level (especially grades 1 and 2). Grade 4 examines climate effects—not usual part of most water curriculum. Grade 5 curriculum emphasizes soil and erosion. Includes suggestion for activities for science fairs and an environmental education packet from the Garden Club of America. Reading level and concepts may be too advanced for suggested grade levels.

096
Water Highways; Water
Trade-offs

Cost: 1 sample, free;
a kit of 35 copies, \$40

Metropolitan Water District
Public Affairs Education Programs
P.O. Box 54153
Los Angeles, CA 90054-0153
213/250-6926

These materials were reviewed as a group; however, they stand independently. Educators may find that specific titles fill a need not provided by other more general curricula. To gain a complete sense of water issues in relationship to the ecosystem, all 4 guides are necessary. All provide students with real problems as a basis for learning about water. "Trade-offs" presents a unique cost-benefit study. All guides include separate student booklets, videos, maps, transparencies, and pre- and post-tests. Two other guides, Water Politics (095) and Water Quality (049), were reviewed separately.

089
Water Inspectors:
Examining H₂O 1991

Cost: \$5 (includes shipping)

California Aquatic Science
Education Consortium (CASEC)
Graduate School of Education
University of California
Santa Barbara, CA 93106
805/893-2739

One of five CASEC guides written for 10–15– year-olds. This activity booklet focuses on the physical characteristics of water; e.g., salinity, temperature, taste, hardness and clarity. Activities are designed to engage students in scientific testing methods, including making predictions and manipulating variables one at a time to determine which variables cause changes.

047
Water in Your Hands 1991

Cost: Teachers' guide—50¢;
comic book—50¢;
a complete set of guides—\$5.50
includes shipping. Available in
both English and Spanish

Soil and Water Conservation
Society
7515 NE Ankeny Road
Ankeny, IA 50021-9764
1/800/THE-SOIL

Curriculum consists of a comic-book style story about water with 4 accompanying activities. Relies on learning cycle strategy: exploration, concept development, and application. Suggests unique educational strategy of using journals for notes, reflections, and sharing them as parts of activities. Includes resource list for both students and teachers.

048
Water Magic/Splash!
Activity Book, K-3
1991, Water Magic; 1990, Splash

Cost: activity book, \$5.50;
comic, 28¢

American Water Works Assoc.
6666 W. Quincy Ave.
Denver, CO 80235
303/347-6206

Water Magic can be used separately or as a complement to *Splash! Activity Book*. The 23 activities cover a range of water science, water issues and water topics in our culture. Activities are varied and age appropriate. Most are appropriate for both the classroom and nonformal settings. Some activities do not relate well to stated objective. Illustrations and activity about groundwater may lead to a misunderstanding of groundwater and aquifer concepts.

095
Water Politics: A Water
Education Program for High
Schools 1994

Cost: \$

Metropolitan Water District of
Southern California
Education Programs
P.O. Box 54153, Los Angeles, CA
90054
213/217-6739

Designed for grades 9–12, curriculum emphasizes water use and water conflict issues. Covers such issues as conflicts among urban, agricultural and environmental interests; water conservation vs. developing new supplies, including the public participation component. Uses case studies on water rights, canal building, landfill development, protecting reservoir quality, risks and water quality; water transfer, and the affect of the media on public opinion, use of the Colorado River, and saving endangered species. Some case studies seem biased in favor of development and do not present the ecological impact of decisions on either side. Sways students and teachers towards certain conclusions. Includes a map of California aqueducts, "California Water Resources," and the California Water Story, a video. Teacher background materials are excellent.



063

Water Precious Water—
Book A 1988

Cost: \$14.95 plus 10% shipping cost

AIMS Education Foundation
PO Box 8120
Fresno, California 93747
209/255-4094

One of several publications from *Activities to Integrate Math and Science* (AIMS) in the grades 2–6 series. Limited duplication rights are granted with purchase of materials. Math activities often rely on an understanding of multiplication, division and percentages. Some activities are provided in both a low math (visual) and high math (multiplication/division) format. Water activities are related to other curriculum areas through “curriculum coordinates” which provide suggested activities for language arts, social studies and the arts. Predicting, measuring, calculating, estimating and collecting data and analysis skills are emphasized.

049

Water Quality: A Water
Education Program 1990

Cost: 1 sample, free; a kit with
35 copies, \$40

Metropolitan Water District of
Southern California
P.O. Box 54153
Los Angeles, CA 90054-0153
310/376-0611

Focuses on water quality as it
applies to a public water supply system. Includes text plus two activities.

050

Water Resource Education,
Critical Issue: Water You Can
Make A Difference (K-3)
publication date not listed

Cost: \$12 plus \$1 shipping

Cornell Cooperative Extension of
Nassau county
1425 Old Country Rd., Bldg. J
Plainview, NY 11803
516/454-0900

Binder contains K–3 kit and materials for grades 4–6. It is not immediately clear which materials are for teachers and which for students. K–3

activities cover the significance of water, the water cycle, information about the New York water supply, and hazardous household products. Materials for grades 4–6 include importance of water, the water cycle, water supply, water contamination, and water conservation.

051

Water Resource Education,
Water Resources: Youth
Education Curricula (K–6)
(7–9) 1992

Cost: \$12 plus \$1 shipping for each

Cornell Cooperative Extension of
Nassau County
1425 Old Country Rd., Bldg. J
Plainview, NY 11803
516/454-0900

See notes for K–3 version. This set contains some materials first developed for WET (North Dakota). The curriculum correlates with NY state syllabus—elementary science level III, Ecosystems. Reading level may be too advanced for 4th–6th graders.

052

Water Riches 1993

AVAILABLE TO NEBRASKA
RESIDENTS ONLY

Cost: Instructor’s manual with
video—\$70 includes shipping.

Cooperative Extension Service
University of Nebraska-Lincoln
Institute of Agriculture and
Natural Resources
Lincoln, NE 68583-0771
402/472-2824

Nebraska’s curriculum is reviewed since the Nebraska materials pioneered this approach. Unique approach includes videos that introduce each of 5 units and an accompanying “newspaper” with more information and activities for youth. Teacher packet provides guidance on how to use the material. Other unusual aspects include suggestions for review activities and activities to teach interviewing skills. Incorporates study skills. Indiana and Missouri also have a Water Riches curriculum

Indiana version:

Cost: instructor’s kit with video, \$70;
gameboard, \$10; tabloids, 1-5 units
bundled in 500 each.

Media Distribution Center
301 S. 2nd St.
Lafayette, IN 47901-1232
317/494-6794

Missouri version:

Cost: teacher’s guide, \$3.50 plus \$1
shipping; tabloid, \$1.50/set of 5 +
\$1 shipping

University of Missouri–Columbia
Columbia, MO 65211
314/882-2792

088

Water Sourcebook: A Series
of Classroom Activities for
Grades 3-5 1994

Cost: not available

Water Environment Federation
601 Wythe Street
Alexandria, VA 22314-1944
205/271-7938

Written by Tennessee Valley
Authority, this curriculum set serves as
a supplement to a school water education unit. Water Sourcebooks are available in a scope and sequence format: K-2, 3-5, 6-8, and 9-12. Each Sourcebook provides the same 6 chapters: Introduction; Drinking Water and Waste Water Treatment; Groundwater, Surface Water; Wetlands; and Coastal Waters. Chapters are correlated with math, science, language arts, social studies, and related arts curriculum goals. An important resource provided by this curriculum is a set of brief background act sheets on 29 water-related topics.



054

Water Watchers 1986

Cost: free

Massachusetts Water Resources Authority
Charleston Navy Yard
100 First Ave.
Boston, MA 02129
617/242-6000, ext. 4662

Curriculum aims to improve understanding of personal water conservation practices which will improve water conservation. uses water science kit and videos to complement written materials. Instructor materials do not include a separate listing of what materials will be needed when or what is included in the science kit. Provides a science and social studies alternative for most lessons. "Water Wizards" is the companion curriculum for grades 3-4.

056

Water, Water Everywhere 1991

Cost: \$24.95 for all three, plus \$7.35 for shipping.

Hach Company
Box 389
Loveland, CO 80539
1/800/227-4224

Includes teacher's guide to laboratory and field testing of water for a variety of parameters supplemented by a separate student text and teacher resource manual. One of few (if any) curricula to address radioactive waste. One of few curricula to address concept of how risk decisions are made in the water quality reference unit booklet. Includes homework activities.

057

Water Wise 1989, updated 1991

Cost: \$6.75 (includes shipping)

Cornell Cooperative Extension Media Services Resource Ctr.
7 Business and Technology Park
Ithaca, New York 14850
607/255-2080

For use in 5th-6th grade classrooms. Activities focus on the water cycle, the aquatic environment, and the causes, effects, and prevention of water pollution. Provides elementary science syllabus chart which correlates water activities with elementary science skills.

058

Water Wizards 1986

Cost: 1 copy free

Massachusetts Water Resources Authority
Charleston Navy Yard
100 First Ave.
Boston, MA 02129
617/242-7110, ext. 4662

Water delivery system and conservation emphasis. Excellent support material, instructions and diagrams for instructor. "Water Watchers" is the companion curriculum for grades 7-8.

059

Water Worlds 1988

Cost: \$5.35 (includes shipping)

Cornell Cooperative Extension Media Services Resources Center
7 Business and Technology Park
Ithaca, New York 14850
607/255-2080

These materials were designed to be used in a 4-H club setting. The folder provides leader and member guides, activity fact sheets and record keeping sheets. Basic focus is to give youth opportunities to explore and observe aquatic environments. Collection/sampling section includes tips on minimal impact sampling—a nice touch. Water careers is included as a suggestion to invite as guest lecturers people whose careers involve water. Reading material may be too advanced for the young end of the suggested age range.

045

WET Water Education for Teachers (Kansas) 1988

Cost: \$50 includes shipping

State 4-H Office
201 Umberger Hall
Manhattan, KS 66506
913/532-5800

This curriculum is not a version of the Montana and North Dakota WET materials. Materials cover the water cycle, the water supply, wastewater treatment/water treatment, water conservation, and water pollution. Contains activities for elementary, junior and senior high students. Doesn't delineate by grades. Appendix includes additional educational materi-

als, information specific to Kansas, and a bibliography of resources.

055

We Depend on Illinois (formerly Water: The Liquid of Life) 1991

Cost: free

Illinois Environmental Protection Agency
2200 Churchill Road, Box 19276
Springfield, IL 62794-9276
217/782-3397

Water education materials for use in fifth grade classrooms. Materials emphasize text, with some supportive activities. The six modules include earth as a closed system, the relationship of water to life, the hydrologic cycle, wastewater treatment, water protection, water testing and treatment, and lakes. Poster included.

090

Wet and Wild Water publishing date unknown

Cost: \$3 includes shipping

Indiana Department of Education
Office of School Assistance
Room 229 State House
Indianapolis, IN 46204-2798
317/232-9141

Written for a broad audience (K-12), authors work to grab the interest of youth by creating unique units. The six units approach water education through economics, water sports, famous sea and river explorers, and legendary myths about the Loch Ness Monster and the Lost City of Atlantis. A wide range of activities from simple counting to writing resumes and filling out job applications. The "Core Knowledge" (background information) consists of a list of facts, but some units provide detailed information. Activities are to be conducted indoors.



091
Wetlands: A Major North
America Issue
An Environmental Case Study
for Grades 6–9 1992

Cost: not available

Jerry Culen
Florida State Extension Service
904/846-0996

This study guide applies wetland study to four environmental education goals: (1) science foundations; (2) issue awareness; (3) issue investigation, and; (4) citizenship action. The author uses Dr. Seuss's *The Lorax* as the sample case study at each goal level. Students are introduced to several human attitudes about wetlands, as well as the effects of human activities on wetlands in a "Wetland Issues Web." Students then collect and analyze opinionnaires and questionnaires about the community's perception of wetlands. This data leads to the next goal level, Citizenship Action, where students suggest solutions to the identified problems. Author provides a section on "Types of Issue Action Methods" to assist students and adults with actions required to address community issues.

099
Wetlands and Wildlife:
Alaska Wildlife Curriuulum
Teacher Information Manuals
and Guides 1992

Cost: available to Alaska residents

U.S. Fish and Wildlife Service
1011 E. Tudor Road
Anchorage, AK 99503
907/786-3351

Materials provide information and teaching activities about Alaska's wetland habitats and animals for three different grade levels: K-3, 4-6, and junior/senior high school. Included are wetlands awareness, wetland ecology, human ecology, human impacts on wetlands, and migratory birds. The lower grade levels emphasize ecology while the activities for higher levels stress investigation and action skills. Field trip materials provide significant support for issues investigation activities.

060
What is Water? A Stream
Becomes an Ocean. What is
an Ocean? Marine Resources
1993

Cost: One copy free

4-H Marine Education
Virginia Cooperative Extension
c/o Barry Fox
Box 9081
Virginia State University
Petersburg, VA 23803
804/524-5848

Materials cover the four topics listed in the title. Designed as school curriculum or school enrichment. Includes leader and member guides.

100
Wild Louisiana. Aquatic
Activities for Environmental
Science

Louisiana State University and
Louisiana Sea Grant
College Program
Communications Office
Baton Rouge, Louisiana 70803-7507
504/388-6448

This curriculum is divided into three modules: Vanishing Wetlands; Gata Data; and Louisiana Redfish. Each unit includes a background information unit plan and a video unit plan (the video accompanies the curriculum). The curriculum is not clearly organized between the unit plans and the video unit plans. All units strongly emphasize the ecological and economical value of wetlands, redfish and alligators. All units incorporate ecological concepts including niche, habitat, eurtophication, ecosystem, biotic and abiotic factors.

061
Wise Water Ways 1990

Cost: teacher's guide, \$1.50; activity
guide, \$1 (prices include
shipping)

University of Nevada Cooperative
Extension Service
Reno, NV
702/731-3130

Three units designed for 3rd-5th grades. Emphasizes water conservation in a desert environment.

098
Wonderful World of Water
A Curriculum Guide for
Elementary Schools
publication date not listed

Cost: free to teachers

Westchester County Department of
Parks, Recreation, and
Conservation
19 Bradhurst Avenue
Hawthorne, NY 10532
914/593-2650

Designed for the K-5 audience, activities are divided into 4 units: the water cycle, water properties, the water ecosystem, and water use by humans. A few activities draw relationships between water transport and human physiological functions; e.g., nutrient transport by blood. Some activities may be too advanced for primary grades and will have to be adapted. Authors include a list of "Interdisciplinary Ideas" for the educator.

062
WOW! The Wonders of
Wetlands 1991

Cost: free for 1-2 copies + \$3.50
shipping

Environmental Concerns, Inc.
P.O. Box P, Education Department
St. Michaels, MD 21663
301/745-9620

This is an educator's guide to providing activities to help kids understand wetlands, the wetland community, and wetland issues. Information is presented in a dense, but lively and attractive format. One of a few curriculum that talks about "natural pollution," and the effect of weather upon water quality. Excellent use of kinesthetic games to demonstrate water-related dynamics. Unique insert for some lessons called "Nature in Your Neighborhood." Includes suggestions to modify activities for younger and more advanced students. Materials include restoration and action guides. Includes suggestion for community action projects at end.



State/regional reviewed curricula listed by state

Alaska

Wetlands and Wildlife:
Alaska Wildlife Curriculum
(U.S. Fish and Wildlife Service)

Arizona

A Sense of Water
(Southern Arizona Water Resources
Association)

California

Captain Hydro and the Further
Adventures of Captain Hydro
(East Bay Municipal Utility District)

Creek Watchers: Exploring the Worlds of
Creeks and Streams

Freshwater Guardians: Defending Our
Precious Supply

Plastic Eliminators: Protecting California
Shorelines

Water Inspectors: Examining H₂O
(California Aquatic Science Education
Consortium)

From Ridges to Rivers: Watershed
Explorations (4-H Watershed Project,
San Luis Obispo County)

Investigating Groundwater:
The Fruitvale Story
(Chemical Education for Public
Understanding, Lawrence Hall of
Science, University of California)

Kids In Creeks: A Creek Exploration and
Restoration Program
(Aquatic Habitat Institute)

Los Marineros
(Channel Islands National Marine
Sanctuary)

Mapping Fish Habitats
River Cutters

Great Explorations in Math and Science
(GEMS)
(Lawrence Hall of Science, University
of California)

Water Highways: Water Politics; Water
Quality; and Water Trade-offs
(Metropolitan District of Southern
California)

Water Precious Water. A Collection of
Elementary Water Activities,
Grades 2–6.
(Project AIMS)

Florida

An Activity Guide for Teachers:
Everglades National Park
(Everglades National Park)

Florida 4-H Marine Science Program
(University of Florida Cooperative
Extension 4-H)

Illinois

Water: The Liquid of Life
(Illinois EPA)

Wetlands: A Major North America Issue
(Southern Illinois University)

Indiana

Water Riches
(Indiana Cooperative Extension
Service)

Wet and Wild Water
(Indiana Department of Education)

Iowa

G.R.E.A.T.
(Groundwater Resource Education
Activities for Teachers; Iowa DNR)

Kansas

Water Education for Teachers
(Kansas Cooperative Extension Service)

Louisiana

Wild Louisiana: Aquatic Activities for
Environmental Science
(Louisiana State University and
Louisiana Sea Grant College Program)

Maine

Connections to the Sea
(University of Maine Cooperative
Extension, 4-H)

Maryland

Decision Making: The Chesapeake Bay
(University of Maryland, Sea Grant;
includes issues for all states directly
affected by the Bay)

Living in Water: An Aquatic Science
Curriculum
(National Aquarium in Baltimore; also
listed on national list)

Massachusetts

Water Watchers
Water Wizards
(Massachusetts Water Resource
Authority)

Michigan

Groundwater Education Program
(East MI Environmental Action Council)

Gee-Wow
(Ecology Center of Ann Arbor)

Missouri

Groundwater Protection
Curriculum Guide
(Missouri Department of Natural
Resources)

Water Riches
(Univ. of MO-Columbia Extension
Service; Nebraska version reviewed)

Nebraska

Stop Look & Learn About Our
Natural World
(Nebraska Natural Resources
Commission)

Water Riches
(Nebraska Cooperative Extension
Service; Indiana version reviewed)

Nevada

Water Conservation In-School
Curriculum

Wise Water Ways
(University of Nevada Cooperative
Extension Service)

New Hampshire

Coastal Issues: A Wave of Concern
(Sea Grant Extension Program
University of New Hampshire)

Stream Study and Water Quality
Assessment Curriculum
(University of New Hampshire-
Cooperative Extension)

Through the Looking Glass
(University of New Hampshire)

New Jersey

My World, My Water and Me
(New Jersey Department of
Environmental Protection and Energy)



New York

4-H Sport-Fishing Aquatic Resources Education Program
(Cornell Cooperative Extension Service)

Water Resource Education
(Cornell Cooperative Extension of Nassau County)

Water Wise: Lessons in Water Resources

Water Worlds
(Cornell Cooperative Extension Service)

Wonderful World of Water
(Westchester County Department of Parks, Recreation, and Conservation)

North Dakota

Water Education for Teachers
(North Dakota State Water Commission; different content than the Kansas Cooperative Extension WET; Montana version reviewed)

North Dakota State Extension Service Water Activities
(North Dakota State University Cooperative Extension Service)

Ohio

Always a River
(U.S. EPA)

The Great Lakes in My World
(Lake Michigan Federation and University of Ohio Sea Grant)

Paddle-to-the-Sea: Supplemental Curriculum Activities
(Ohio Sea Grant College Program, Ohio State University)

Oklahoma

Aquatic Environmental Education
(Langston University—Cooperative Extension)

Oregon

The Stream Scene: Watersheds, Wildlife and People
(Oregon Dept of Fish and Wildlife)

Pennsylvania

Instructor's Guide To Water Education Activities
(Pennsylvania Department of Environmental Resources)

Rhode Island

Active Watershed Education Program
(Southern Rhode Island Conservation District)

South Carolina

Sea Sampler: Aquatic Activities for the Field and Classroom
(South Carolina Sea Grant Consortium)

Teaching Aquifer Protection
(Clemson University Cooperative Extension Service)

Tennessee

Groundwater: A Vital Resource

Utah

A Comprehensive Water Education Book, Grades K-6
(International Office of Water Education)

Vermont

Environmental Education For Youth: Groundwater, Surface Water, Water Around us
(University of Vermont Cooperative Extension Service)

Virginia

Be Water Wise
(Virginia Water Resources Research Center, also listed in national materials section)

Sensing the Sea
(Virginia Institute of Marine Science)

Virginia CES/4-H Marine Project: What is Water? A Stream Becomes An Ocean. What is An Ocean? Marine Resources
(Virginia Cooperative Extension Service)

Washington

Clean Water, Streams and Fish: A Holistic View of Watersheds
(Washington State Office of Environmental Education)

Discover Wetlands
(Washington State Department of Ecology)

Wisconsin

Caring For Our Lakes
(University of Wisconsin Institute of Environmental Studies)

Groundwater: Wisconsin's Buried Treasure
(Wisconsin Department of Natural Resources)

Local Watershed Problem Studies
(University of Wisconsin Water Resources Center)

Our Great Lakes Connection
(University of Wisconsin Cooperative Extension Service)

Project W.U.L.P.—Wetland Understanding Leading to Protection
(Outdoor Skills Center)

Canadian Provinces

Adopt-A-Stream
(Friends of Environmental Education Society of Alberta—FEESA)



Reviewed curricula from national organizations or with national application

- | | |
|---|--|
| Hands-On Save Our Streams
(Izaak Walton League) | Water Quality Curriculum: Surface
Water Unit,
The Groundwater Adventure, Waste
Water
(Water Environment Federation, for-
merly Water Pollution Control
Federation) |
| A Hidden Treasure
(National FFA Foundation) | |
| Aquatic Wild
(Project Wild, Boulder, CO) | |
| Be Water Wise
(Virginia Water Resources Research
Center) | Water, Water Everywhere
(Hach Company) |
| EARTH: The Water Planet
(National Science Teachers
Association) | WOW, The Wonders of Wetlands
(Environmental Concern Incorporated) |
| Kids Network—What's in Our Water
(National Geographic Society) | |
| Healthy Environment, Healthy Me—
Exploring Water Pollution Issues
(Resource Center of Environmental and
Occupational Health Sciences Institute,
New Jersey) | |
| Investigating Streams and Rivers
(Project GREEN, Ann Arbor, MI) | |
| Living in Water
(the Baltimore National Aquarium;
also listed on state list) | |
| Naturescope: Diving Into Oceans
(National Wildlife Federation) | |
| Project Water Works
(American Water Works Association) | |
| Ranger Rick's NatureScope—Wading
Into Wetlands
(National Wildlife Federation) | |
| The Story of Drinking Water
(American Water Works Association) | |
| The Tapwater Tour
(LaMotte Company) | |
| Teacher's World Resource Guide: Oceans
and Coasts and Watersheds
(World Resource Institute, Washington,
DC) | |
| Wally the Water Molecule
(“Chem Kids,” Moreno, CA) | |
| Water Education for Teachers
(WET; different content from Kansas
versions) | |
| Water in Your Hands
(Soil and Water Conservation Society) | |
| Water Magic
(American Water Works Association) | |



Unique support materials for youth water education

The following materials were not considered as youth water education curriculum, but do provide an important resource for those developing youth water education programs.

Items are included in this list if they:

- Provide a water education resource not easily created locally
- Are cited frequently in water education bibliographies

Unique strategies for educating youth about water are described in a companion publication titled *Educating Young People About Water: A Guide to Unique Program Strategies*.

Published water education bibliographies are listed at the end of this section in “Selected Bibliographies, Directories and Catalogs.”

Materials listed in this section include:

- *Collections of water education activities*
- *General education resources*
- *Multimedia resources*

Collections of water education activities

Acid Rain Curriculum, grades 4–8 and 6–12
Acid Rain Foundation, Inc.
1410 Varsity Dr.
Raleigh, North Carolina 27606
919/828-9443

AIMS, Activities Integrating Mathematics and Science. Grades K-4 Series. Grades K-6 Series. Grades 5-9 Series
(AIMS Education Foundation)
AIMS Education Foundation
PO Box 8120
Fresno, California 93747
209/255-4094

BARK, Backyard Acid Rain Kit (Public Focus)
Public Focus
489 College St. Suite 500
Toronto, Ontario M6G1A5
416/484-8339

The California Water Story
California's Water Problems
Project Water Science
Water Education Foundation
717 K Street, Suite 517
Sacramento, CA 95814
916/444-6240
(provides supplemental materials: posters, film strips and fact sheets)

The Changing Chesapeake—an introduction to the natural history and history of the Chesapeake Bay for upper elementary and middle school children
(National Aquarium in Baltimore and US Fish and Wildlife Service)
National Aquarium in Baltimore
Pier Three
501 East Pratt Street
Baltimore, Maryland 21202
410/576-3800

Classroom GEMS (Groundwater Education in Michigan Schools)
SEE-North, A Regional Center for Science and Mathematics
3001 Church Road
Petosky, MI 49770
616/348-9700

Clean Water Resource Packet for Youth and Youth Educators
(University of Minnesota Extension Service)
(A compilation of materials to be photocopied at cost)
University of Minnesota
4-H Youth Development
340 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108
612/625-1731

Fisheries Education Units #16, 18
(Maine Department of Marine Resources)
“Estuarine Studies. An Activities Text for Maine Schools”
“Field Trip in the Classroom”
“Field Testing Manual for Water Quality”
Maine Department of Marine Resources
The Education Division
State House Station #21
Augusta, Maine 04333-0021
207/624-6550

Fishing for Fun and Learning
University of Wisconsin–Extension
Extension Publications
Rm. 245, 30 N. Murray St.
Madison, WI 53715
608/262-3346

Fishing...Get in the Habitat
MinnAqua
Minnesota DNR
Section of Fisheries
500 Lafayette Road, Box 12
St. Paul, Minnesota 55155
612/625-1291



- Friends: Special Water Edition. A Magazine for Young Readers from Georgia 4-H Clubs (available only to Clark County residents)
**University of Georgia
Cooperative Extension Service
College of Agriculture
Athens, Georgia
706/542-2657**
- Jefferson County 4-H Water Quality Project
**Christopher F. Feise
Washington State University
Water Quality and Aquatic Resources
7612 Pioneer Way E.
Puyallup, Washington 98371-4998
206/840-4556**
- KARE, Keystone Aquatic Resource Education. "Water Resources in Pennsylvania. An Earth Science/Biology Unit" (available only through training workshops)
**Pennsylvania Fish Commission
Bureau of Education and Information
PO Box 1673
Harrisburg, PA 17105-1673
717/657-4519**
- Lake Game for Youth. Lake Superior Game: Use vs. Abuse. (Minnesota Sea Grant)
**Your state's Sea Grant Program, or
Minnesota Sea Grant Program
University of Minnesota
Minneapolis, Minnesota 55414
218/726-8175**
- Lines on the Land. A "hands-on" soil and water conservation learning package for 6th–8th grades (National Association of Conservation Districts)
**National Association of Conservation Districts
PO Box 855
League City, Texas 77574
1-800/825-5547**
- The Mini Page
Washington Post. October 28, 1990. Treat Water Well
CONTACT: your local library
- My Wetland Coloring Book (U.S. EPA)
**U.S. Environmental Protection Agency
Region 6
1201 Elm Street
Dallas, Texas 75270
1-800/832-7828
214/665-6444 (TX residents)**
- Nontraditional Marine Education Activities: a planning guide (Virginia Sea Grant College Program)
**Educational Series Number 32
Publications Office
Gloucester Point, Virginia 23062
804/642-2111**
- OBIS, Outdoor Biology Instructional Strategies packets: Aquatic Animal Behavior; Breakwaters and Bays; Desert; Ponds and Lakes; Seashore; Streams and Rivers
**Delta Education
PO Box 915
Hudson, NH 03051-0915
1-800/258-1302
603/889-8899 (NH residents)**
- OEAGLS, Oceanic Education Activities for Great Lakes Schools. 27 interdisciplinary investigations for grades 5–9; four activities for primary grades; computer-based program; careers booklet. Activities can be ordered separately or in a package. (Ohio Sea Grant and The Ohio State University)
**Ohio Sea Grant
Education Office
283 Arps Hall
1945 N. High Street
Columbus, Ohio 43210
614/292-8949**
- The Outdoor Classroom: Experiencing Nature in the Elementary Classroom
**Indiana Department of Education
Room 229 State House
Indianapolis, IN 46204-2798
317/232-0530**
- Pond and Stream Safari: A Guide to the Ecology of Aquatic Invertebrates. 1993.
**Cornell Cooperative Extension
Media Services
Ithaca, NY 14853
607/255-5830**
- Project Earthcare. Soil and water stewardship activities
**Soil and Water, St. Louis County
Conservation District
St. Louis, Missouri
314/453-9811**
- Project WET Water Education for Teachers)
**Publications of the Watercourse and National Project WET:
—The Liquid Treasure Water History Trunk: Learning from the Past
—The Rainstick, A Fable
—Water Celebration! A handbook
—The Water Story**
- The Watercourse
201 Culbertson Hall
Montana State University
Bozeman, Montana 59717
606/994-5392**
- Ranger Rick's NatureScope Pollution: Problems and Solutions (National Wildlife Federation)
**National Wildlife Federation
1400 Sixteenth Street, N.W.
Washington, D.C. 20036-2266
1-800/432-6564
202/797-6800**
- Responsible Angling. The Oregon Angler Education Manual (Oregon Department of Fish and Wildlife, Oregon State University Extension Service)
**Outdoor Empire Publishing, Inc.
PO Box 19000
511 Eastlake Avenue, East
Seattle, Washington 98109
206/624-3845**
- The Rivers Curriculum Project
A 5-unit river series based on the study of a local river basin integrating biology, chemistry, earth science, geography, and language arts.
**The Illinois River Project
Southern Illinois University at Edwardsville
Box 2222 Edwardsville, IL
62026-2222
618/692-3788**



River Rangers: Protecting Our Water
Activity packet includes booklets,
stickers and badges for 250 stu-
dents. Training video available.

Unified Sewerage Agency
155 N. First Avenue, Suite, 270
Hillsboro, Oregon 97124
503/648-8621

Salt Marsh Manual, an Educator's
Guide

San Francisco Bay National
Wildlife Refuge
PO Box 524
Newark, California 94560
415/792-0222

TVA: A World of Resources
Tennessee Valley Authority
Environmental Education Program
Forestry Bldg.
Norris, TN 37828
615/632-1599

The Tardy Twins Meet Polluto, comic
and teacher's guide.

(East Bay Municipal Utility District,
Oakland, CA)
Innovative Communications
207 Coggins Drive
Pleasant Hill, California 94523
510/944-0923

Toward a Sustainable Agriculture:
A Curriculum

Center for Integrated Agricultural
Systems
University of Wisconsin-Madison
240 Agriculture Hall
1450 Linden Dr.
Madison, Wisconsin 53706
608/262-5200

Two H's and an O: A Teaching
Resource Packet on Water
Education

ERIC-Center for Science,
Mathematics, and Environmental
Education
The Ohio State University
1929 Kenny Road
Columbus, OH 43210-1080
614/292-6717

University of Minnesota 4-H Youth
Development fact sheet series:

"Wetland Restoration"
"Water Stewardship"
"Well-Water Testing"
"Household Hazardous Wastes"
University of Minnesota
4-H Youth Development
340 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108
612/625-9700

Water Can Be Fun. How to Create a
Successful Science Fair
American Water Works
Association

6666 W. Quincy Ave.
Denver, Colorado 80235

Water Ecology Topics. K-8 Group
Outdoor Activities for Stream,
Pond and Schoolyard
Youth Science Institute
296 Garden Hill Dr.
Los Gatos, California
408/356-4945

Water Fun For You
American Water Works
Association
6666 W. Quincy Ave.
Denver, Colorado 80235
303/794-7711

Water Play, activities and
teacher's guide
(East Bay Municipal Utility District,
Oakland, CA)
Innovative Communications
207 Coggins Drive
Pleasant Hill, California 94523
510/944-0923

Water Quality and Aquatic Resources
Protection Activities—a packet of
twenty 4-H activities, community
service and fair projects.

Christopher F. Feise
Washington State University
7612 Pioneer Way E.
Puyallup, Washington 98371-4998
206/840-4556

Water-related Teaching Activities

ERIC Center for Science
Mathematics and Environmental
Education
Ohio State University
1929 Kenny Rd
Columbus, OH 43210-1080
614/292-6717

Water, Water Everywhere

Seventy activities for elementary
through secondary level can be
ordered separately or in packets
organized by age.

Oregon State University-Extension
Sea Grant
Hatfield Marine Science Center
Newport, OR 97365
503/867-0271

Water Wise: A 4-H Water Program
Includes activity book, lesson
plans and video.

Shirley Bond, Extension agent
Hillsboro County Cooperative
Extension Service
5339 South County Road 579
Seffner, Florida 33584-3334

Wavelets: Marine Schoolhouse,
Series No. 1-27

Virginia Institute of Marine
Science/Sea Grant Marine
Advisory Services
Publications Office
Gloucester Point, Virginia 23062
804/642-7000



Wet and Wild: Six Bilingual
Supplementary Marine Curriculum
Guides for Teachers, K-6.
(English/Spanish)

Unit I—The Physical Ocean: Wet,
Wild and Deep

Unit II—Ocean Management: Who
Owns the Sea?

Unit III—Research: Innerspace
Explorers

Unit IV—The Biological Ocean: Hello
Down There!

Unit V—The Economic Sea: Riches of
the Sea

Unit VI—Marine Ecology: You Scratch
My Back, I'll Scratch Yours
(Sea Grant Institutional Program
Hancock Institute for Marine
Studies)

University of Southern California,
University Park
Los Angeles, CA 90089-1231
213/740-1961

Wetlands Protectors: Guarding Our
Wild and Watery Lands
California Aquatic Science
Education Consortium (CASEC)
Graduate School of Education
University of California, Santa
Barbara, CA 93106
805/893-2739

General education resources

General education material
includes fact sheets, supplemental
materials, maps, ideas for special
audiences, career information, etc.

Aquatic education materials being
developed or adapted for the
hearing-impaired
Federal Aid Division
U.S. Fish and Wildlife Service
911 N.E. 11th Avenue
Portland, Oregon 97232-4181
503/231-6128

Ask the Aquarium fact sheet packet
National Aquarium in Baltimore
Pier Three
501 East Pratt Street
Baltimore, Maryland 21202
410/576-3870

Carreras en las Ciencias Marinas.
(Careers in Marine Science)
UPR SG 04-F-158-44030 A/E-71
1984. #16

(University of Puerto Rico,
Sea Grant)

Programa Sea Grant
Departamento de Ciencias Marinas
Recinto Universitario de
Mayaguez
Mayaguez, P.R. 00708
809/832-4040

Drinking Water Week. Annual packet.

American Water Works
Association in cooperation with
the USDA, U.S. EPA, et al.
American Water Works
Association
6666 W Quincy
Denver, CO 80235
303/794-7711

Environmental Health Risk Education
for Youth: A Resource Manual
U.S. EPA
Communications and Public
Affairs
Washington, DC 20460
202/260-2090

Investigating the Marine Environment:
A Sourcebook. Volumes 1-3
Project Oceanology
Avery Point
Groton, Connecticut

Marine Science Methods for the
Classroom, fact sheets #1-9
Virginia Institute of Marine Science
Sea Grant Marine Advisory
Services
Publications Office
Gloucester Point, Virginia 23062
804/642-2111

Sandcastle Moats and Petunia Bed
Holes. A book about groundwater.
Virginia Water Resources Research
Center
Virginia Polytechnic Institute and
State University
617 North Main Street
Blacksburg, Virginia 24060-3397
703/961-5624

Puget Soundbook (Puget Sound Water
Quality Authority; also see
Maryland's and Green Bay,
Wisconsin's *Baybooks*) available from
those states' conservation agencies

Marine Science Center
18743 Front St. NE
PO Box 2079
Poulsbo, Washington 98370

USGS Water Resources Education
Initiative Program notebooks for
water resource specialists visiting
classrooms (USGS with Bureau of
Land Management, U.S. Fish and
Wildlife, U.S. EPA, the National
Science Teachers Association, and
the American Water Resources
Association)

Chief, Earth Science
Education Project
U.S. Geological Survey
Denver Federal Center
PO Box 25046 MS 414
Denver, Colorado 80225
303/236-4932

Water in the Global Environment. 1992
Pathways In Geography,
Series Title No. 3.
The National Council for
Geographic Education
16-A Leonard Hall
Indiana University of
Pennsylvania
Indiana, PA 15705

Water, Water, Everywhere . . . A
Guide to Marine Education in
Oregon
OSU Extension Sea Grant
Hatfield Marine Science Center
Newport, OR 97365
503/867-0271



Multimedia resources

Today, water educators have the luxury of choosing from a large assortment of non-print materials to supplement program delivery. These multimedia resources range from computer bulletin boards, networks and programs to audiocassettes, videos, satellite programs, hotlines and clearinghouses.

Online computer networks

Access Atlanta

Online youth summer camp database
The Journal-Constitution and Prodigy
To order Access Atlanta software call, 1/800/224-5285

Classroom Earth

An environmental education network that includes AcidRain Online Lab where groups enter water sample data and then download and compare data from others. Obtain through Internet by telnet>classroom_earth.ciesin.org?010.

A Directory of Electronic Bulletin Boards: Water Resources and The Environment. 1993.
University of Wisconsin—Extension Environmental Resources Center
216 Agricultural Hall
1450 Linden Drive
Madison, WI 53706
608/262-0020

EcoNet

International network and bulletin board for information on wildlife and other environmental topics. Used by groups and individuals to get information and participate in teleconferences.
econet-info@igc.apc.org
415/442-0220

EnviroNet

Designed to enhance science education at the middle and secondary levels in New England.
pcolombo@vmsvax.simmons.edu
617/521-2665

EPA's Nonpoint Source Electronic Bulletin Board System (NPS BBS) Access using a modem and telecommunications software by dialing 302/589-0205. The parameters are (N-8-1).
NPS Information Exchange (WH-553)
U.S. Environmental Protection Agency
401 m Street, S. W.
Washington, D.C. 20460

GREEN—Global River Environmental Education Network
721 E. Huron
Ann Arbor, MI 48104
313/761-8142
A water quality monitoring network that links classrooms internationally to share information about local watersheds. Uses EcoNet as a network source.

Ground Water Network
Includes several online databases.
614/761-3446

Hydroexplorer. Grades 4–6
Computer game that examines a California river from watershed to the ocean. Available in both Macintosh and IBM formats.
Water Education Foundation
717 K Street, Suite 517
Sacramento, CA 95814
916/444-6240

National Consortium for Environmental Education and Training (NCEET)
Environmental education materials on the Internet for teachers
School of Natural Resources and Environment
University of Michigan
Ann Arbor, MI 48109-1115
313/998-6726
via EE-Link: nceet-info@nceet.snre.umich.edu (NCEET lists portions of *Educating Young People About Water: A Guide to Goals and Resources*, 1st ed.).

National Geographic Kids Network
"What's in our Water?"
Online, interactive environmental education materials and programs for classrooms teachers.
See curriculum #066.
1/800/368-2728
301/921-1380

National Drinking Water Clearinghouse bulletin board
To join call 1/800/932-7459.

Computer software programs

EPA Shareware

Water-related computer programs include Wetlands Education, Groundwater Education, Water Conservation, Surface Water and Water Systems Education.

Public Brand Software
P.O. Box 51315
Indianapolis, IN 46251
1/800/426-8475

Stream Sampler Tour (for Macintosh computers)
Thames Science Center
Connecticut
Gallows Lane
New London, Connecticut 06320
203/442-0391

Watercard: A Hypercard Stack and Manual for Calculating Water Quality (University of Wisconsin Cooperative Extension)
University of Wisconsin Cooperative Extension
Environmental Resources Center
216 Agriculture Hall
1450 Linden Dr.
Madison, Wisconsin 53706
608/262-0020

Watershed Management Simulator, an interactive computer software program. Also available—The Watershed Manager teacher's guide.
The Watercourse
201 Culbertson Hall
Montana State University
Bozeman, MT 59717-0057
406/994-5392