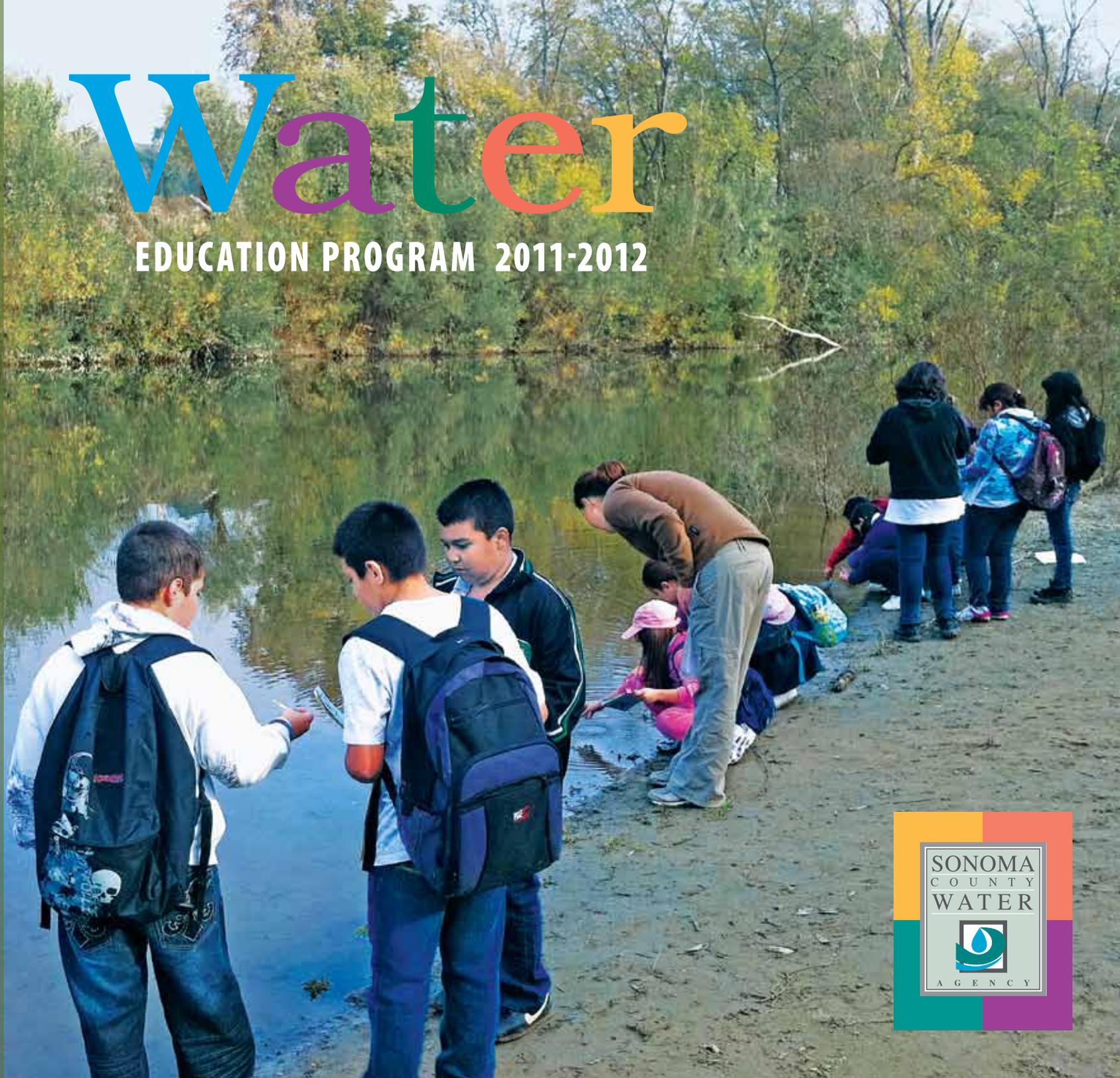


FREE

water

EDUCATION PROGRAM 2011-2012

- Curriculum Materials
- Student Workbooks
- Classroom Visit and Field Trip Opportunities
- Maps & Posters
- Lending Library Materials
- Workshops for Teachers
- Musical Watershed Assembly Program
- Water Awareness Contests



SONOMA
COUNTY
WATER



AGENCY

Dear Teachers,

The Water Education Program is a comprehensive approach to helping educators teach students the value of water as an important natural resource. Water conservation and stewardship of our local watersheds are promoted throughout the program. Students are encouraged to use water wisely and make environmentally sustainable choices to help secure a reliable source of freshwater now and in the future.

Our programs and materials are **FREE to teachers in our service area** and are made possible through the Sonoma County Water Agency and your local water providers. We provide engaging lessons and hands-on activities that present the hydrologic cycle, physical properties of water, water supply systems, treatment of wastewater, and pollution prevention. The curriculum materials and instructional visits listed in this packet have been carefully developed to support the existing California State Frameworks and are aligned with the California Science Standards.

For the 2011 – 2012 academic year our program includes classroom instructional presentations, field study opportunities, curriculum materials for grades K-12, sponsorship of the *Musical Watershed Assembly Program*, a lending library of videos, interactive models and printed materials, staff development workshops for teachers and production of the *Hydro Herald Newsletter*.

At our spectacular 140-acre Russian River Field Study site in Forestville we will be offering a **fifth-grade** program that focuses on the source of the students' drinking water, water quality, salmonids, watershed dynamics and water conservation.

For **sixth graders** we are conducting a wetlands education program where students explore the links between wastewater treatment, recycled water and wetlands. For this program, students will visit the Sonoma Valley Wastewater Treatment Plant and explore Hudeman Slough wetlands that are being restored using recycled water from the treatment plant they just visited.

2011-2012 HIGHLIGHTS

Activities for in your Classroom and in our Watershed

- **FREE** Classroom instructional presentations for grade three
- **FREE** Field study opportunities for grades five and six (includes bus transportation)
- **FREE** School-wide musical assembly program with ZunZun
- **FREE** Teacher trainings and workshops
- **FREE** curriculum materials for grades K-12
- **FREE** lending library materials including videos, interactive models, books and printed materials



For **third-grade students** we will continue to offer a **two-lesson** sequence held at the school site that covers the water cycle, water conservation, physical properties of water and pollution prevention. All lessons are hands on and designed to be developmentally appropriate.

FREE Curriculum materials and student incentives are available for grades K-12, including student workbooks, maps and folders. **New this year are localized K-1 workbooks and reading books!**

We are once again sponsoring *The Musical Watershed*, a school wide assembly program that teaches about sustainability, water pollution, recycling, watershed ecology, storm drain run-off, sanitary sewer systems and water conservation.

To assist you as educators we have planned some terrific **workshops** this year. We have scheduled an updated **Project WET** (Water Education for Teachers) workshop that addresses local water issues and that is aligned with the new Environmental Education Initiative. We also will be holding a **Water Cycle “Make & Take” Workshop**. For workshop descriptions and dates please refer to the teacher workshop section of this brochure.

Another great teacher resource is our **Lending Library**. In addition to videos and models we have expanded our lending library to include books. The Lending Library is open M – F from 8:00 a.m. to 5:00 p.m. and is located at 404 Aviation Boulevard in Santa Rosa. We have included an order form for lending library materials in this brochure.

We hope that you will **look to us as a resource for water education**, whether it is teacher workshops, curricula, supplemental materials or directly working with your students.

Sonoma County Water Agency Education Staff

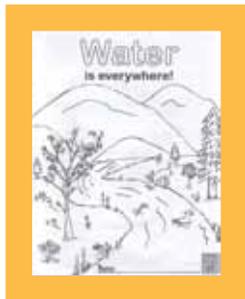
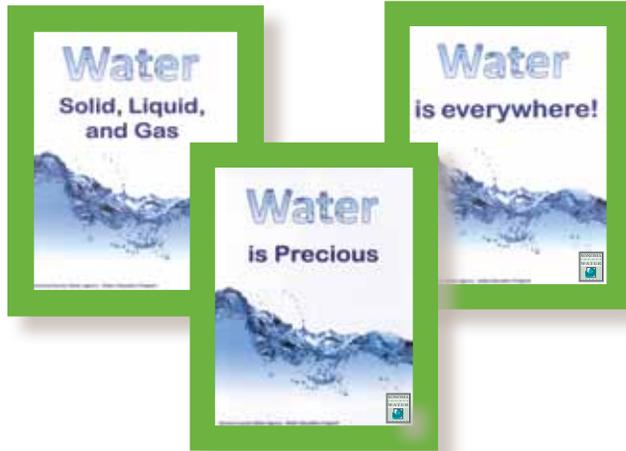
CLASSROOM MATERIALS



For detailed descriptions please visit our website:
www.sonomacountywater.org



Localized Classroom Books to be used with student workbooks for Kindergarten and First Grade



KINDERGARTEN **Water Is Everywhere**

A workbook to be used with the classroom books above. Concepts include the fact that all living things need water and that people use water in many ways. (16 pages)



FIRST GRADE

Water Is ...

A workbook to be used with the new classroom books. This coloring book focuses on the three forms of water and how water is used around the planet. (16 pages)



Water Is

Your Best Friend

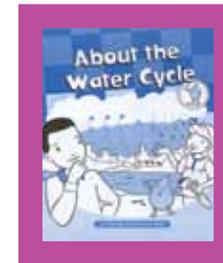
A delightful coloring book that teaches the three forms of water and how we use water in our daily lives. Includes teacher's guide. (13 pages)



SECOND GRADE

About the Water Cycle

Using puzzles, games, and coloring activities, students learn how water cycles through the environment and what they can do to help keep water clean and use it wisely. (8 pages)



Water Fun For You

A book filled with coloring pages, crossword puzzles and word games for younger children. Topics include "water words," the different forms of water, salt and fresh water, and how we get our drinking water. (16 pages)

CLASSROOM MATERIALS



For detailed descriptions please visit our website:
www.sonomacountywater.org

THIRD GRADE

Water Play Juegos de Agua

A colorful activity book about water. It includes messages to be decoded, puzzles, crosswords, and mazes. (15 pages)

(available in English & Spanish)

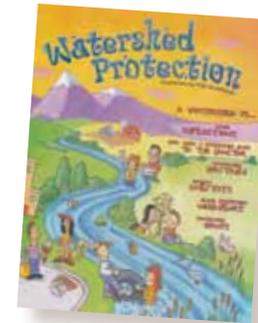
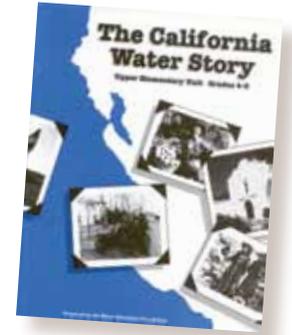


FOURTH GRADE

California Water Story

Contains a California Water Map, teacher's guide, trivia game, poster and video. Concepts emphasized are California geography, hydrologic cycle, history of water use in California, water use today, personal water conservation, and protecting the quality of water.

(One per classroom)



Watershed Protection

This colorful booklet features creative hands-on investigations, educational games and stories that answer the following:

What is a watershed? How can you protect a watershed? What habitats support different plants and animals? (16 pages)

Grade 3: Classroom Instructional Series



This program includes two, 60-minute lessons conducted by Water Agency staff in your classroom. Through hands-on experiments and discussions, students explore how their attitudes and daily habits affect their water supply source.

Topics covered include:

- What water is and how the water cycle works
- Unique characteristics of water
- Pollution Prevention
- Ways we can use water wisely

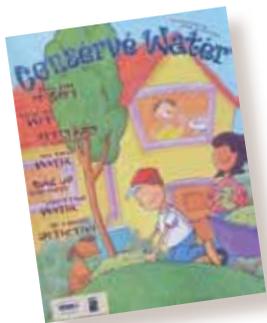
This program is available during the months of December, January, February and early March. We are able to visit three classrooms at a school. Please coordinate with other teachers at your site before signing up (see request form included in this packet). This classroom series supports the California Science Standards.



Grade 5: Field Study Program

How Do We Get Our Drinking Water?

Bring your class out to the Russian River and our groundwater pumping facilities to experience firsthand the source of our drinking water. The program consists of a one hour pre-site visit to your classroom by Water Agency staff and a follow-up field trip to the Russian River. We will focus on the Sonoma County Water Agency's water supply and transmission system, water quality testing and the natural history of salmon and steelhead in the Russian River Watershed. Students practice their lab skills by collecting water samples and performing hands-on water quality testing. They use microscopes to observe the variety of aquatic macroinvertebrates that provide food for larger creatures throughout the river ecosystem. **FREE** buses are provided for the field trip. We are able to accommodate two classrooms from a school site. This program is available during the months of September, October, November, March, April and May.

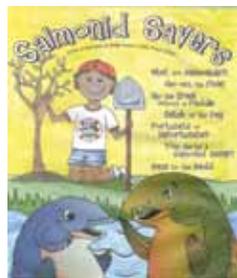


FIFTH GRADE **Conserve Water**

This full color (16 pages) booklet contains games, puzzles and activities designed to teach students about water conservation.

Salmonid Savers

A student workbook that focuses on salmon in California. Includes engaging puzzles, stories, and gives students ideas on how they can help in the recovery of these fish. (16 pages)



Captain Hydro **El Capitán Tlaloc**

A carefully crafted story featuring Captain Hydro, hero of water conservation, who battles his relentless foe, the Water Bandit. This action-packed comic book is full of activities that compare and contrast natural and man-made water cycles, study water supply issues and problems, depict treatment of drinking water and wastewater, and review the consequences of water pollution. (40 pages) Teacher's guide includes follow-up activities and an extensive water bibliography. **(available in English & Spanish)**





Grade 6: Field Study Program

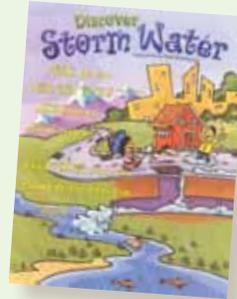
Water, the Ultimate Recycled Resource

Wetlands ecology, recycled water and sanitation are the themes woven throughout this component of the Water Education Program. A one hour pre-site visit to the classroom by Water Agency staff is followed by a field trip to the Sonoma Valley Wastewater Treatment Plant and Hudeman Slough where recycled water from the treatment plant is used for wetlands enhancement and restoration. This unit gives students a better understanding of where their water goes when it goes “down the drain” and introduces them to all the positive uses of recycled water, the interconnectedness of the water in our environment, and the sustainability of water resources in the area. At the field study site, emphasis is placed on what makes a wetland ecosystem distinctive, and why wetlands are important. Students will investigate wetland plants and soils, and will be provided with binoculars to observe the diverse wildlife living and foraging in this habitat. This program is available during the months of September, October and November. FREE buses are provided for the field trip.

SIXTH GRADE

Discover Storm Water

This full color activity book features informative text and activities designed to teach awareness of storm water and how to prevent pollution. (16 pages)



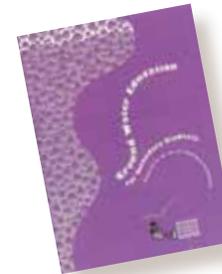
Recycled Water

This stylized workbook includes information, puzzles, and mazes featuring the water cycle and the water “recycle.” The activity book guides the students down the drain and through the sewer system to the “water laundry” and shows how wastewater is cleaned and can be used again.

GRADES 7-12

Project Water Science

Project Water Science offers lesson plans for the study of water chemistry and how water relates to the environment. It includes a lesson plan book for teachers with 14 laboratory exercises suitable for junior high and high school science classes in either physical, earth or integrated science and is correlated to California State Science Standards. (One per classroom)



Groundwater Education for Secondary Students

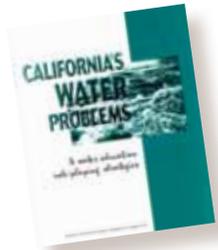
This is a great resource for teaching middle and high school students about groundwater and the prevention, reduction and elimination of groundwater pollution. The 52-page booklet contains lesson plans, lectures, demonstrations, laboratory exercises, games and assessment activities. Each lesson has clearly defined objectives, complete teacher instructions and is correlated to California State Standards for Science. The lessons are designed to teach the following concepts: What is groundwater? What is an aquifer? What is the relationship between ground and surface water, and why is it important to conserve groundwater? The Water Wonder Workout game is included and is a fun way for students to learn about drinking water quality. This guide also includes a California Groundwater Map. (One per classroom)

(See the lending library section in this brochure for a groundwater model that can be checked out for a two week period.)

GRADES 7-12

California Water Problems

California Water Problems is a series of four role-playing scenarios designed to give students first-hand experience at working out a solution to real-life problems involving the management of California's water. (One per classroom)

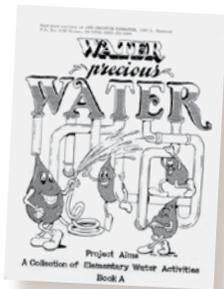
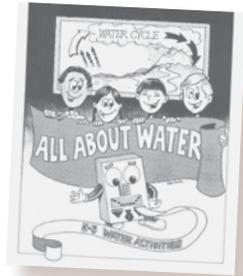


CURRICULUM GUIDES

These guides are designed to provide lessons and background information for teachers. Some guides include reproducible pages for student use.

All About Water Grades K-3

This 100-page reproducible curriculum guide contains 26 water-related activities and science experiments that involve students in observing, communicating and comparing. The activities are interdisciplinary and can be used with science, art, math, social studies, music and language arts. Topics include water quality, the water cycle, fresh water and salt water, water conservation and water distribution.



Water Precious Water Grades 2-6

An AIMS booklet with "hands-on" water projects for the classroom. Students uncover a variety of interesting facts about water by conducting a series of four activities that focus on some of the properties of water.

CALIFORNIA EDUCATION AND THE ENVIRONMENT INITIATIVE (EEI)

The EEI Curriculum teaches select academic content standards to mastery within the context of the environment, and makes learning both engaging and relevant. EEI is a unique opportunity to formally include environment-based education into your classroom.

Each DVD comes with a summary of the lessons included on the grade specific disc.



Grades K-3



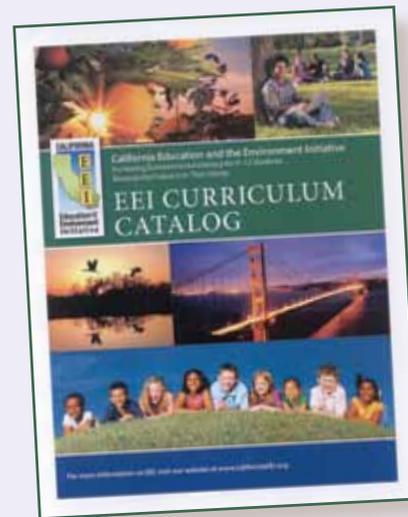
Grades 4-6



Grades 6-8



High School



*Increasing
Environmental
Literacy for
K-12 Students...
Because the
Future is in
Their Hands*

*California Education and
the Environment Initiative*

MAPS, POSTERS, AND FOLDERS



Russian River Watershed Map
All Ages

This 24" x 36" three-color map highlights the major and minor waterways that flow through the Russian River Watershed.



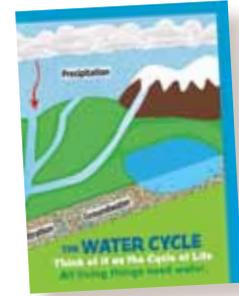
Russian River Relief Map
All Ages

This colorful 24" x 36" map shows the topography of the Russian River Watershed.



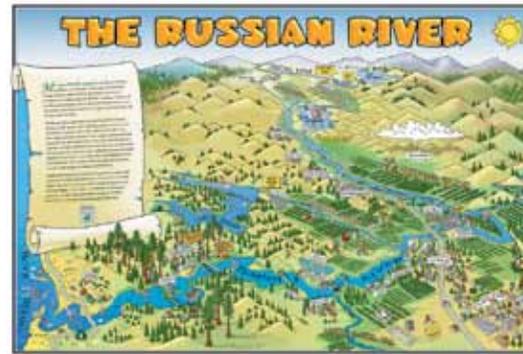
How We Can Save Water Poster
Grades K-3

A colorful 24" x 15 1/2" poster illustrating ways we can save water at home.



Pocket Folders – All Ages

“The Water Cycle” is the theme of these vibrant folders. (printed area 12" x 18")



Russian River Cartoon Map
All Ages
24" x 36"

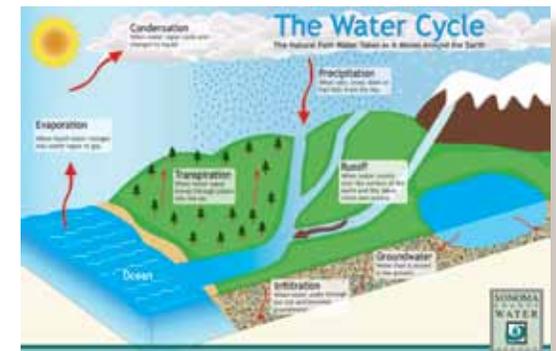


Water in Sonoma County Poster
All Ages

This 24" x 36" schematic illustrates both how we get our water in Sonoma County and the different ways we reuse it.



Water Cycle Poster
All Ages
Measures 24" x 36"



STUDENT INCENTIVES ARE AVAILABLE IN CLASS SETS

Rain Gauge – All Grades

Involve your students in water science by measuring, recording and graphing rainfall.
(one per classroom)



Pencil Sharpener
All Grades
Blue rectangular
1-3/4" x 1-3/8"



Use Water Wisely Stickers

All Grades

Colorful stickers with water conservation messages.



Fish Erasers
All Grades

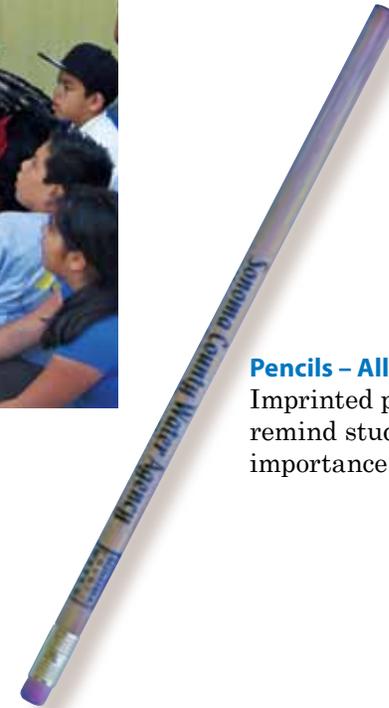
Rulers – All Grades

12" flexible vinyl ruler imprinted with water conservation tips; scaled in inches and centimeters.



HELP KEEP
CREEKS CLEAN

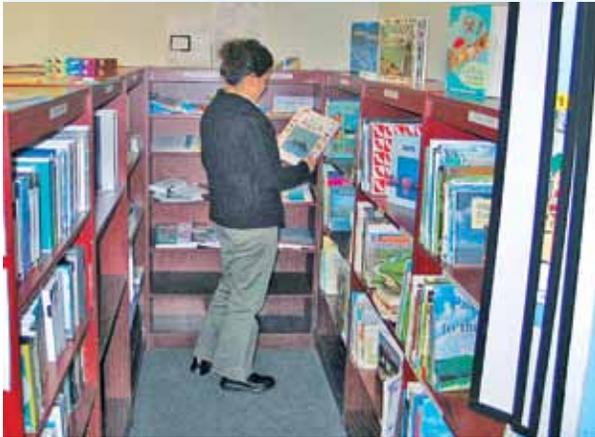
Fish Tattoos – All Grades



Pencils – All Grades

Imprinted pencils remind students of the importance of water.

We invite you to visit our Lending Library

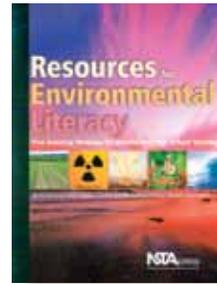


In addition to the videos and models we have loaned out in the past, we have expanded our lending library to include books. We now have an actual library where you can come and preview videos, fill up a book bag with water related books, or check out classroom sets of student guides. If visiting us does not work into your schedule you can still call us at 521-6211 or 521-6209, and we can send you videos or put a bag of books together for you.

Models are available by phone reservation, and all materials are loaned for a two week period.

The Lending Library is open M – F from 8 a.m. – 5 p.m. and is located at 404 Aviation Boulevard (off Airport Boulevard in Santa Rosa).

SOME OF THE ITEMS AVAILABLE FROM THE LENDING LIBRARY



**Resources for Environmental Literacy
Grades 6-12**



Book Bags can be assembled by specific or general subject matter and are available for grades K-12 at our lending library. Order form is at the end of this booklet.

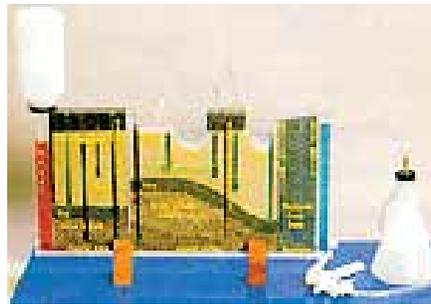
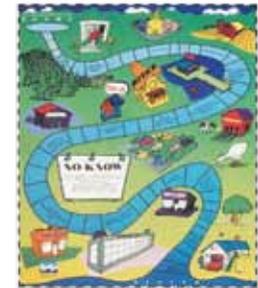
For videos see next page.



**Complete Set of Layperson's Guides
from the Water Education Foundation
Grades 9-Adult**

No-Know Game Grades 5-Adult

This 17 x 22 inch plastic mounted board game teaches children and adults about the source of their drinking water, what pollutants water may encounter as it moves through the watershed, and how to avoid contributing to nonpoint source pollution. Game comes with four playing pieces, dice and 64 game cards.



Groundwater Model • Grades 5-Adult

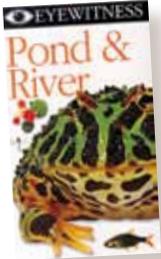
This interactive sand-tank model is designed to simulate some of the groundwater conditions common throughout California.



Enviroscape Model • Grades 3-Adult

This tabletop watershed model depicts a community and a local water supply source.

VIDEOS / DVDS



Most features are available in VHS and DVD and are loaned for two weeks. For detailed descriptions of the videos available please visit



our website:
www.sonomacountywater.org

Life Cycle of the Salmon • All Ages • 6 minutes

Professor Water and the Amazing Water Cycle • All Ages
28 minutes • VHS only

Professor Water: Fantastic Facts About H2O • All Ages
28 minutes • VHS only

Water – Who Needs It? • Grades K-6 • 14 minutes

Water Follies: A Soak Opera • Grades K-12 • 7 minutes

Take A Look at Rain • Grades 2-6 • 10 minutes

Whaddya Know About H2O? • Grades 3-8
Includes teacher guide • 30 minute • VHS only

Our Water Cycle • Grades 4-6 • 12 minutes • DVD only

The Water Cycle • Grades 4-6 • 12 minutes

Science Court: Water Cycle Video • Grades 4-6 • 22 minutes

The Groundwater Adventures of Walter Wet • Grades 4-6
12 minutes

Inside the Weather • Grades 4-6 • 15 minutes • DVD only

Fountains of Columbia • Grades 4-6
Teacher-student lesson plan book is included • 11 minutes

Conserve Everyday • Grades 4-8 • 16 minutes

Waterhog Haven • Grades 4-9 • 6 minutes

Down the Drain • Grades 4-9 • 30 minutes

High School Video Contest Winners • All Ages

The Russian River – A Historical Perspective
Grades 4-adult • 22 minutes

CONTESTS



What Do You Know About H2O? • Grades 4-adult
22 minutes

The Story of Streams • Grades 5-9 • 15 minutes

Go With the Flow • Grades 5-12 • 7 minutes

Eyewitness Pond & River Video • Grades 6-9
35 minutes

Water: To the Last Drop • Grades 6-12 • 51 minutes

Setting A Course – The California Bay Delta
Grades 7-12 • 1 hour

The Hydrologic Cycle: Water in Motion • Grades 7-12
20 minutes

H2O – 2010 • Grades 8-12 • 25 minutes

The Fate of the Jewel • Grades 9-12 • 57 minutes

Groundwater Quality: Managing the Resource
Grades 10-12 • 15 minutes

Conjunctive Use: A Comprehensive Approach to Water Planning • Grades 10-12 • 11 minutes

California Water Recycling • Grades 10-12 • 25-minutes

Looking Ahead: May is
Water Awareness Month

Poster Contest for 3rd & 4th Graders

In honor of Water Awareness Month the Sonoma County Water Agency and your local water suppliers sponsor a poster contest for 3rd and 4th graders. Winning entries are then featured in the following year's Water Awareness Calendar. Additional information will be coming to your school in February outlining this year's theme, contest rules and submission deadline.



Video Contest for High School Students

In honor of Water Awareness Month, the Russian River Watershed Association sponsors a video contest for high school students. Cash awards are split between the students who create the winning video and the high school they attend. The winning videos are used as public service announcements and as educational outreach materials. Specific information on this contest will go out to area high schools in January. To view past winning videos go to our website at www.sonomacountywater.org or check out these videos at the lending library.



Musical Watershed Assembly Program

ZUNZUN is back, bringing a new **Musical Watershed Assembly** to schools in Sonoma and Marin counties. This 45-minute assembly engages students with musical segments focused on sustainability, water pollution, recycled water, watershed ecology, storm drain run-off, sanitary sewer systems and water conservation. **Students are made aware of how their actions impact the watershed around them and what they can do to help preserve and protect it.** Students and teachers are active participants in the program—getting up on stage, singing, dancing, and playing a variety of folkloric instruments. ZunZun’s programs are always lively, participatory, multilingual (Spanish, Portuguese, English) and energetic. This highly acclaimed group has performed in 14 countries throughout the Americas and have appeared on regional, national and international radio and television. This assembly program is sponsored by the Sonoma County Water Agency and is **FREE** to participating schools.

To book a ZunZun Assembly - please call ZunZun directly at 831.426-0684 or contact them by email at zunzun@zunzuntunes.com

TEACHER WORKSHOP OPPORTUNITIES

Teachers, Let us help you teach about water...

Water Cycle Workshop "Make & Take"
Recommended for K-5 educators
WEDNESDAY JANUARY 18, 2012
3:30 – 5:30

Spend a couple of hours after school and make your own colorful Water Cycle Felt Board. We will also distribute several additional activities for use in your classroom when teaching about the water cycle. All materials and patterns will be provided. This workshop will be held at the Sonoma County Water Agency 404 Aviation Blvd., Santa Rosa.



LOCALLY FOCUSED



**Recommended for
K-12 educators**
SATURDAY FEBRUARY 4, 2012
9:30 – 3:30

Immerse yourself in water issues with our new locally-oriented Project WET workshop. The goal of Project WET is to promote awareness, appreciation and knowledge of California's water resources. We have tailored the workshop to our region with activities that highlight local water issues and concerns.



***The Project WET guide includes
over 90 innovative activities that are hands-on,
easy to use and fun!***

Project WET is correlated to California State Standards as well as the EEI (Education and the Environment Initiative) Standards and can be used when teaching science, math, language arts, social studies and environmental studies. All participants will receive a Project WET curriculum guide. Teachers can earn (.6) CEU credit for attending this workshop. This workshop is being held at the Sonoma County Water Agency Russian River Field Study Site, 9750 Wohler Road, Forestville.

Lunch and snacks will be provided.

Workshop Sign Up: To register for one or more of our workshops: register online @ www.sonomacountywater.org Once we receive your registration, a confirmation and location map will be mailed to you. Questions? Please call the Water Education Program at (707) 521-6211



FREE CLASSROOM MATERIALS

(You must be teaching the grade level of the materials you are requesting)

Student Workbooks (one per student)

Grade Level	Quantity
◆ Kindergarten Water Is Everywhere	_____
◆ First Grade Water Is.... Water Is Your Best Friend	_____ _____
◆ Second Grade About the Water Cycle Water Fun For You	_____ _____
◆ Third Grade Water Play – English Juegos de Agua – Spanish	_____ _____
◆ Fourth Grade Watershed Protection CA Story (one per classroom)	_____ _____
◆ Fifth Grade Conserve Water Salmonid Savers Captain Hydro El Capitán Tlaloc – Spanish	_____ _____ _____ _____
◆ Sixth Grade Discover Storm Water Recycled Water	_____ _____
◆ Grades 7-12 Project Water Science (one per classroom) Groundwater Education (one per classroom)	_____ _____
◆ Grades 9-12 California Water Problems (one per classroom)	_____

WATER EDUCATION REQUEST FORM

To place orders for materials or request classroom or field study instruction, **copy and complete this form or order online at: www.sonomacountywater.org** (click on education)

Mail or fax this form to:
Sonoma County Water Agency
Water Education Program
P.O. Box 11628
Santa Rosa, CA 95406-1628
Fax # (707) 528-2080

Curriculum Guides

All About Water (K-3)	_____
Water Precious Water (2-6)	_____
EEI Grades K-3	_____
EEI Grades 4-6	_____
EEI Grades 6-8	_____
EEI High School	_____

Supplemental Materials

(one per classroom)	
Water Cycle Poster	_____
Russian River Cartoon Map	_____
Russian River Watershed Map	_____
Russian River Relief Map	_____
How We Can Save Water Poster	_____
Water in Sonoma County Poster	_____
Rain Gauge	_____

Student Incentives

(one per student)	
Pencil Sharpener	_____
Rulers	_____
Pencils	_____
Fish Erasers	_____
Colorful Water Stickers	_____
Folders – Water Cycle	_____
Fish Tattoos	_____

Order form

Teacher _____

Grade Level _____

School _____

Phone # (_____) _____

Fax # (_____) _____

E-mail address _____

Send Classroom Materials To:

School _____

Street Address (Do not list a P.O. Box)

City _____ State _____ Zip _____

Orders are filled within two weeks of receipt and will be mailed to your school.

Instruction Request

Name _____

School _____

Classroom Instruction Grade 3 _____

Field Study Instruction Grade 5 _____

Grade 6 _____

We will contact you regarding availability and scheduling.

Teacher Workshop Registration

Register me for the following workshops:

Water Cycle “Make & Take”

Wednesday, January 18, 2012 • 3:30 – 5:30

Project WET

Saturday, February 4, 2012 • 9:30 – 3:30

Lending Library Order Form



LENDING LIBRARY ORDER FORM

To place an order, copy and complete this form and fax to (707) 528-2080 or order online at www.sonomacountywater.org (click on education). Videos and books can be mailed to you or you can pick them up at 404 Aviation Boulevard (off Airport Boulevard in Santa Rosa). Models cannot be mailed and must be picked up. All materials are loaned for a two week period.

Teacher _____

E-mail address _____

Grade Level _____

School _____

Address for Mailing Items:

I would like to borrow the following videos / DVDs:

- 1) _____
- 2) _____
- 3) _____
- 4) _____



Please put together a bag of books for me. I am especially interested in books covering:

- general water information
- water conservation
- fish and wildlife
- trees / botany
- nature guides
- watersheds
- wetlands
- folk tales
- weather and natural disasters
- habitats
- books in Spanish
- hands-on activities

Printed Materials

- Layperson's Guides
- Resources for Environmental Literacy
- Classroom Set of "Where Does Your Water Come From?"

Games / Interactive

- No-Know Game

Models:

- Enviroscape Model
- Groundwater Model



The Sonoma County Water Agency provides clean, drinking water to 600,000 people in Sonoma and Marin counties. Our water supply system serves eight major cities and water districts in the North Bay who help support the Water Education Program. The principal contractors include: the cities of Santa Rosa, Petaluma, Rohnert Park, Sonoma, and Cotati, the Town of Windsor, and the North Marin and Valley of the Moon Water Districts.



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