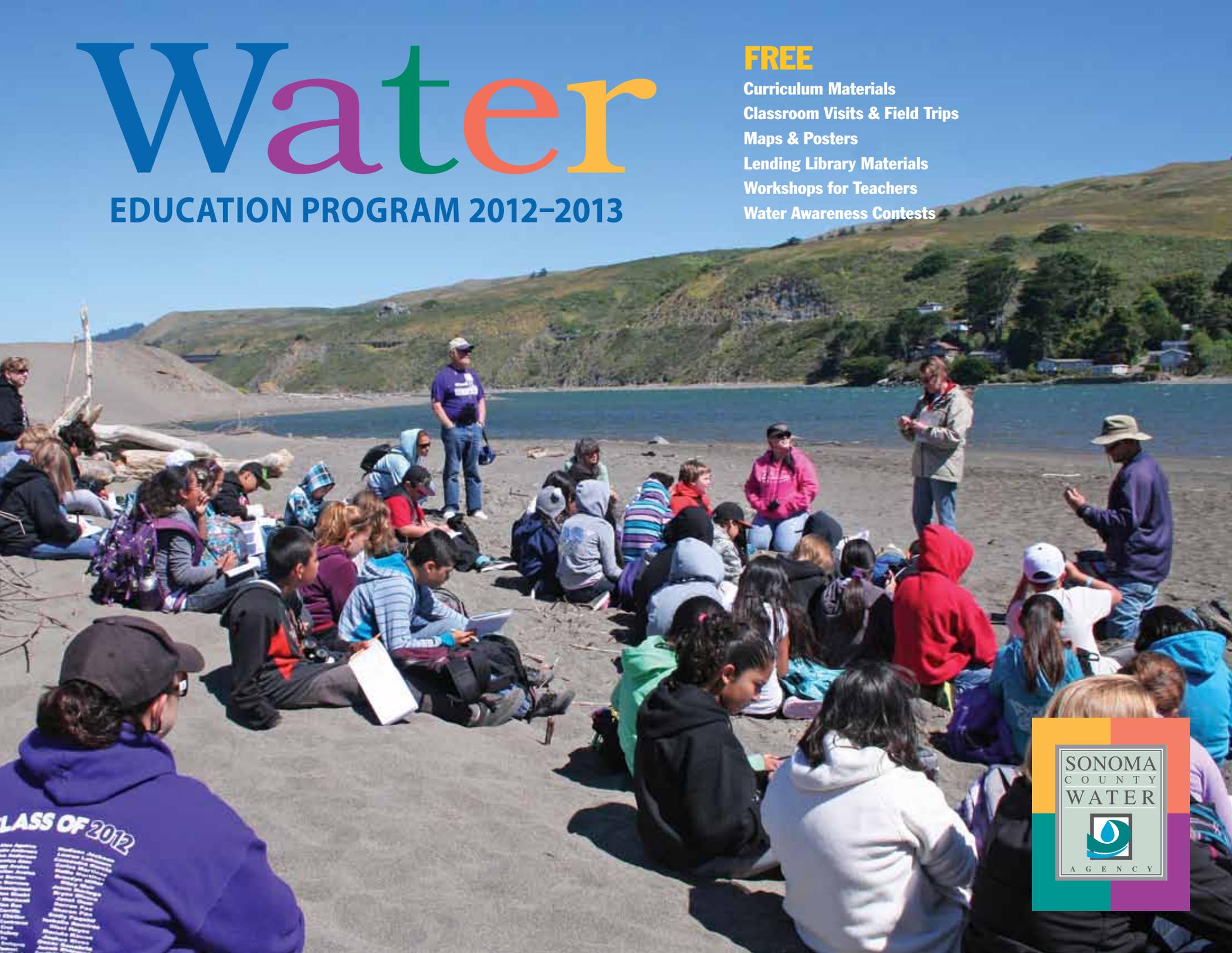


Water

EDUCATION PROGRAM 2012-2013

FREE

- Curriculum Materials
- Classroom Visits & Field Trips
- Maps & Posters
- Lending Library Materials
- Workshops for Teachers
- Water Awareness Contests



CLASS OF 2012



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 2012–2013 academic year our program includes classroom instructional presentations, field study opportunities, curriculum materials for grades K-12, sponsorship of the *Musical Watershed Assembly Program*, an after school 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 efficiency.

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

2012–2013 HIGHLIGHTS

Activities for 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** After school program
- **FREE** Curriculum materials for grades K-12
- **FREE** Lending library materials including videos, interactive models, books and printed materials



FREE Curriculum materials and student incentives are available for grades K-12, including student workbooks, maps and folders.

New this year—we are offering an after school program on Monday afternoons. Please refer to page 6 for additional details on this new component of our education program.

We are once again sponsoring *The Musical Watershed*, a school-wide assembly program that will include segments on students' connection to their drinking water source, water use efficiency and ways to save water, sustainability, water/energy connection, watershed ecology, storm water pollution prevention, endangered fish species in the Russian River watershed and benefits of drinking tap water instead of sodas or bottled water.

To assist you as educators we have planned some terrific **workshops** this year. As part of a new workshop series for teachers 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. 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.

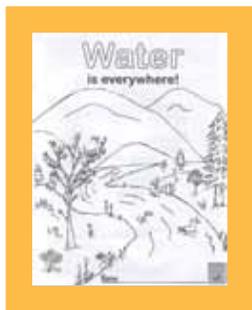
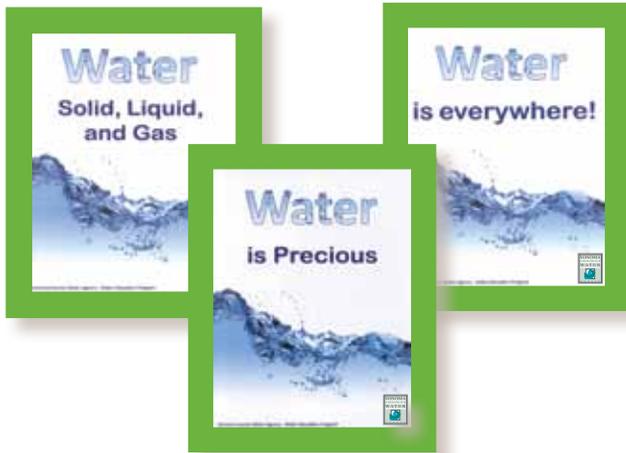
Sonoma County Water Agency Education Staff

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

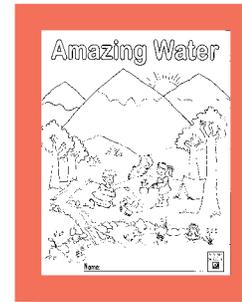


KINDERGARTEN

Water Is Everywhere

This 16 page coloring book was created by Sonoma County Water Agency staff to help local kindergarteners understand where their water comes from, why water is important and how to use water wisely. It also addresses many of the CA Science Content Standards

by teaching concepts such as water can be a liquid or a solid, characteristics of local landforms and that the earth is composed of land, water, and air.



FIRST GRADE

Amazing Water

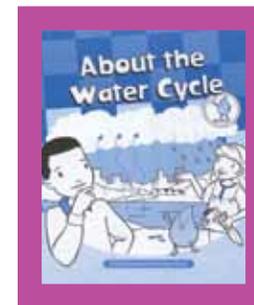
This 16 page coloring book was created by Sonoma County Water Agency staff to help local first graders understand where their water comes from, why water is important, and how to use water wisely. It also addresses many of the CA Science Content Standards by teaching concepts such as all living things need water to survive, the basic parts of plants and their functions and water can be a liquid, solid, or gas.



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)



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

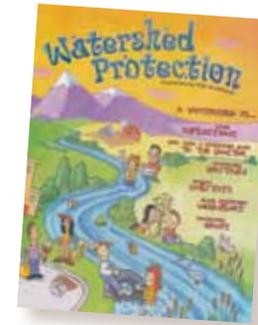
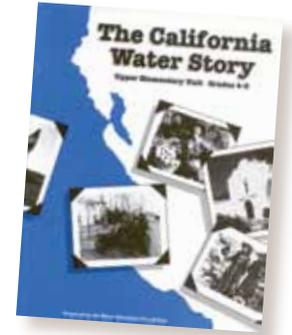


FOURTH GRADE

California Water Story

Contains a California Water Map, teacher's guide, trivia game, poster and DVD. 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.

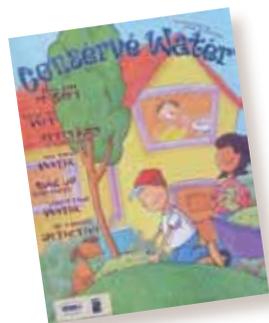


Students testing water quality in the Russian River.

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 use efficiency.



Salmon in the Russian River After School Program

This exciting new program, *Salmon in the Russian River*, is offered as an after school program available on Mondays. It is designed for students in 1st–6th grade and we can accommodate from 15–30 students at a time. The lessons are one-hour in length and two sessions can be facilitated in an afternoon at the same school site.

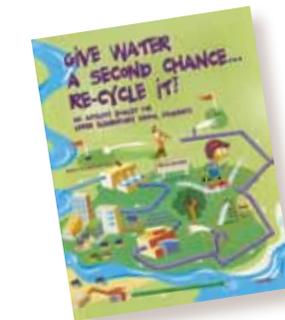
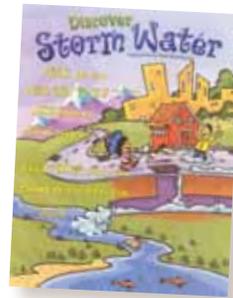
This is a hands-on interactive program where students will turn into migrating salmon as they “swim” through an outdoor obstacle course when weather permits. During rainy weather an indoor space needs to be provided.

Please contact Kory Hebner at Kory.Hebner@scwa.ca.gov or (707) 521-6204 to schedule your visit.

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

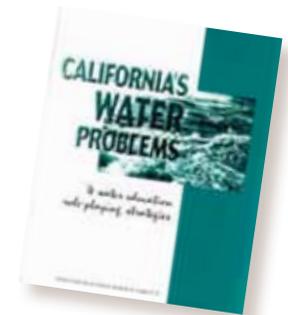
This stylized workbook includes information, puzzles, and mazes featuring the water cycle and the water “recycle.” The activity book guides the students down the drain and through the sewer system to the “water laundry” and shows how wastewater is cleaned and can be used again. (16 pages)



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)



GRADES 9-12

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)

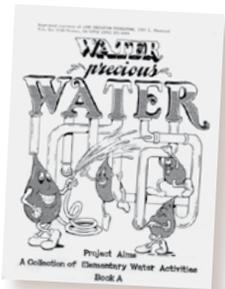
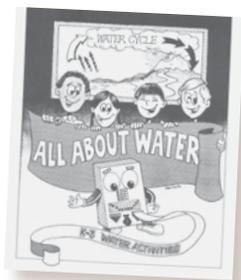
CURRICULUM GUIDES

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 efficiency 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



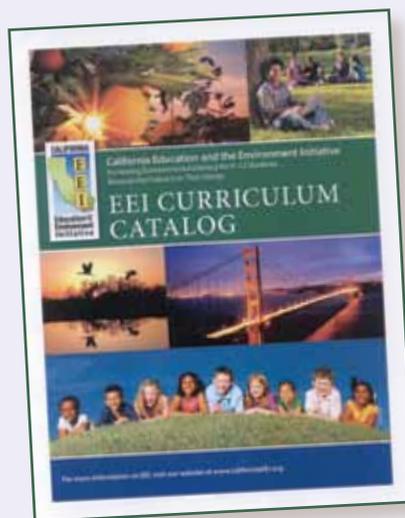
Grades 4-6



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



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.



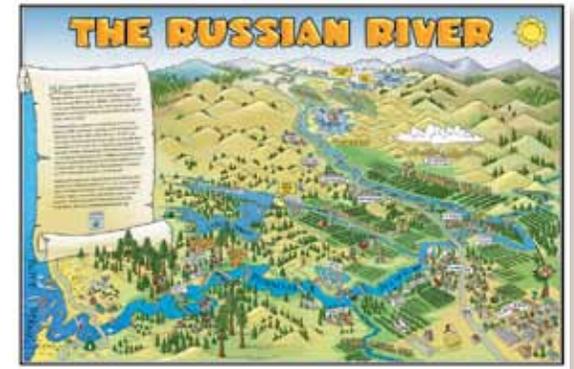
Water Cycle Poster All Ages

Measures 24" x 36"



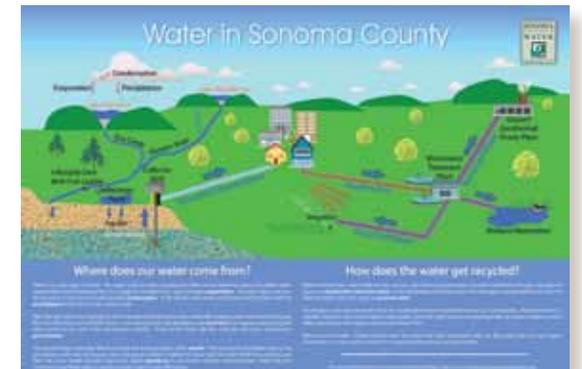
How We Can Save Water Poster Grades K-3

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



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.

STUDENT INCENTIVES ARE AVAILABLE IN CLASS SETS

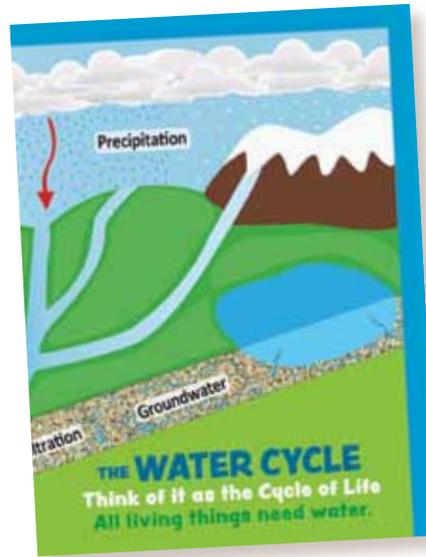
Rain Gauge – All Grades

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"



Pocket Folders – All Ages

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



HELP KEEP
CREEKS CLEAN

Fish Tattoos – All Grades

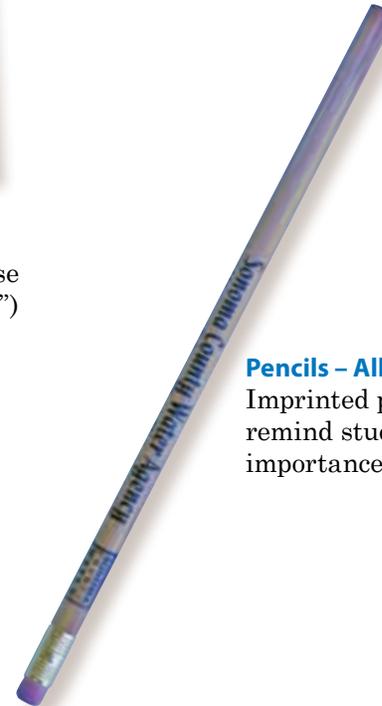


Use Water Wisely Stickers All Grades

Colorful stickers with water conservation messages.



Fish Erasers All Grades



Pencils – All Grades

Imprinted pencils remind students of the importance of water.

Rulers – All Grades

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



We invite you to visit our Lending Library

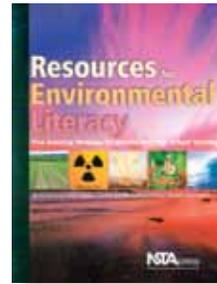


In addition to the videos and models we have loaned out in the past, we have expanded our lending library to include books. We have a physical library where you can come and preview videos, fill up a book bag with water related books, or check out classroom sets of student guides. If visiting us does not work into your schedule you can still call us at 521-6204 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**

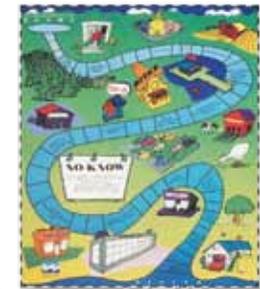


Book Bags can be assembled by specific or general subject matter and are available for grades K-12 at our lending library. Order form is at the end of this booklet.

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

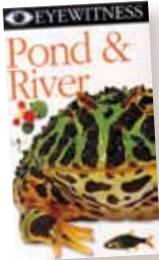
This interactive sand-tank model is designed to simulate some of the groundwater conditions common throughout California.



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.



FREE 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 students' connection to their drinking water source, water use efficiency and ways to save water, sustainability, water/energy connection, watershed ecology, storm water pollution prevention, endangered fish species in the Russian River watershed, and benefits of drinking tap water instead of sodas or bottled water. 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

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

This Project WET workshop is part of a NEW Sonoma County Science and Environmental Education Development Series for teachers. This workshop series is being facilitated by members of the Sonoma County Environmental Education Collaborative (SEEC). Workshops are either three or six hours with some scheduled to take place during the week and others on weekends. Teachers are able to earn CEU's by attending. For information about some of the other workshops being offered as part of this series, please check the Sonoma County Office of Education Grapevine Newsletter or contact Mike Roa at the Sonoma County Office of Education mroa@scoe.org.

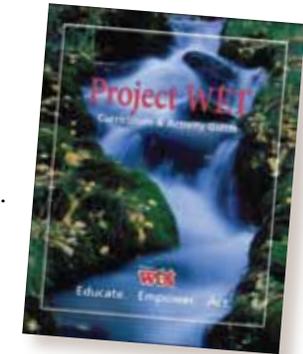


LOCALLY FOCUSED



Recommended for
K-12 educators
SATURDAY FEBRUARY 2, 2013
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 64 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: Fee for this workshop is \$15.00. We are also asking for a \$25.00 placeholder check which will be returned to you at the workshop. 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 Amazing Water	_____
◆ Second Grade About the Water Cycle	_____
◆ Third Grade Water Play–English Juegos de Agua–Spanish	_____ _____
◆ Fourth Grade Watershed Protection CA Story (one per classroom)	_____ _____
◆ Fifth Grade Conserve Water	_____
◆ Sixth Grade Discover Storm Water Recycled Water	_____ _____
◆ Grades 7-12 Project Water Science (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
404 Aviation Blvd
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 _____

After School Program Grades 1-6 _____

We will contact you regarding availability and scheduling.

Teacher Workshop Registration

Register me for the following workshop:

Project WET

Saturday, February 2, 2013 • 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



Russian River Water Quality Test
Use this guide to help determine the water quality of the Russian River.

1 Temperature
Find the thermometer in the kit for 30 seconds.
*Take care to quickly take the thermometer out of the water to prevent it from breaking.

2 pH Level
Hold the colored end of the strip against water for 15 seconds.
*Read at 90 degrees to the sun.

3 Turbidity
Turbidity is the cloudiness of water that the water has.
Use your eyes to determine the turbidity of the water.



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.



This brochure was printed using soy based inks on Endeavor Velvet 80# coated paper (50% Recycled, 30% PCW—Post-Consumer Waste, processed chlorine free, and Forest Stewardship Council™ Certified). Recycle this booklet at the end of the year.