



American Rivers
NATIONAL RIVER CLEANUP®



**FRESHWATER
RESOURCE
GUIDE FOR
ELEMENTARY
TEACHERS &
PARENTS**





“We do not inherit the earth from our ancestors, we borrow it from our children.”

– Unknown

James River, Virginia. Photo by John Henley Photography.

FRESHWATER RESOURCE GUIDE FOR ELEMENTARY TEACHERS & PARENTS

American Rivers, the country's leading river protection organization, created this compilation of teaching resources to assist educators and parents across the country to connect elementary-aged students to their hometown rivers and shape the next generation of river stewards and environmental advocates.

We have listed numerous free lesson plans and activities geared toward parents and elementary school teachers. They provide a variety of hands-on activities to help students interact with the environment and discover how they can best care for our nation's natural resources and rivers.

The recommended lesson plans adhere to state curriculum standards or the National Science Education Standards and contain information about pollution, recycling, clean water and sustainability.

The activities will give students an appreciation for and knowledge of the importance of clean water in their lives. We hope you also decide to take action in your local communities by hosting cleanups on your local river or stream.

ON THE COVER: (clockwise from top)

- Lower Salt River, AZ. Photo by Tom Corey Images & Natural Restorations
- East Fork Little Miami River, OH. Photo by Becky McClatchey
- Winooski River, VT. Photo by Larry Montague
- Lower Salt River, AZ. Photo by Tom Corey Images & Natural Restorations



American Rivers
RIVERS CONNECT US®

ABOUT AMERICAN RIVERS

American Rivers believes every community in our country should have clean water and access to a healthy river. Since 1973, we have been protecting wild rivers, restoring damaged rivers and conserving clean water for people and nature. With headquarters in Washington, D.C. and offices across the country, we are the most effective river conservation organization in the United States, delivering solutions that will last for generations to come.

Healthy rivers provide clean drinking water, reliable water supply, balanced wildlife habitats and safe places for families to play. With the help of our supporters, American Rivers has protected and restored more than 150,000 miles of rivers through advocacy efforts and on-the-ground projects.



East Rosebud, Montana. Photo by Mike Fiebig.



Klamath River, CA. Photo by Josh Miller.

American Rivers **NATIONAL RIVER CLEANUP®**

Millions of tons of trash end up in our nation's rivers and streams each year. And it is more than just an eyesore; trash can contaminate our drinking water and threaten wildlife. Volunteer-led river cleanups are an effective tool to engage students and communities, keep our waterways clean and draw attention to the issue of pollution. You and your students can work together to clean up your river and effectively restore waterways by keeping recreation areas safe, wildlife habitat healthy and waters swimmable and fishable.

For over 25 years, American Rivers' National River Cleanup® program has mobilized, supported and engaged millions of cleanup volunteers, students and organizers to keep our rivers safe.

FOR ADDITIONAL RESOURCES, TO ORGANIZE A CLEANUP OR
LEARN MORE, VISIT AMERICANRIVERS.ORG/CLEANUP.



Fox River, WI. Photo by Mandy McCarthy-Rinne.



Rappahannock River, VA. Photo by Johanna Bergenholtz.

K-5 LESSON PLANS & ACTIVITIES



Rocky Mountain National Park, CO. Photo by Matt Inden/Mile, Colorado Tourism Office.

HABITATS & WILDLIFE

[Lesson Plans and Webinars / National Wildlife Federation](#)

Student introduction to wildlife and wildlife behavior, habitat, species identification concepts and ecosystems.

[Planting a Tree / Dakota Valley Recycling](#)

Students in grades 1-3 learn basic plant needs and participate in a community service project to foster stewardship.

[Water is Life / Jeffers Foundation](#)

Lesson with activities exploring the concept of habitats, physical characteristics and behaviors of native animals.

RECYCLING & WASTE REDUCTION

[Lesson Plan: Breaking the Paper Chain / Dakota Valley Recycling](#)

Provides information for students in grades 4-5 to evaluate their daily use of paper products and learn the importance of paper reduction and its impact on our planet.

[The Life of a Soccer Ball / U.S. Environmental Protection Agency](#)

Placemat containing information about the life cycle of a soccer ball, tips to taking care of or reusing your old ball, a maze activity and more.

[Natural Inquirer / Cradle of Forestry in America Interpretive Association and USDA Forest Service](#)

Program with a variety of science education materials for pre-K through grade 12.

[Needs and Wants Lesson Plan / Dakota Valley Recycling](#)

Teaches students in grades 4-5 the difference between “need” and “want” and the impact of responsible consumer habits on environmental efforts.

[Personal Trash Choices Activity / California Coastal Commission](#)

Group activity introduces a complex real-world problem, demonstrates to students their impact on the local environment and how to combat the problem by evaluating their personal trash choices.

[Recycling & Waste Reduction Lessons & Activities / Wake County Government](#)

A compilation of grades K-5 lesson plans by unit and topic that meet NC state curriculum standards and have been reviewed and tested in formal classroom settings.

[Talking Trash & Taking Action / Ocean Conservancy and NOAA Marine Debris](#)

Flexible curriculum for all ages with lessons and activities about marine debris, instructions on how to organize a beach cleanup and debris prevention.

[WRAP: Waste Reduction Awareness Program / Jeffers Foundation](#)

Information and resources on how to reduce waste in elementary school lunches.

K-5 LESSON PLANS & ACTIVITIES *(cont.)*

WATER QUALITY

[Bridging the Watershed Curriculum Modules](#) / *Alice Ferguson Foundation*

Core modules on exotic invaders, runoff and sediment, litter, macroinvertebrates and water quality. Modules use the five E's of the teaching/learning cycle – Engage, Explore, Explain, Elaborate and Evaluate.

[Stream Side Science, Lessons by Grade](#) / *Utah State University Extension*

Ten lessons on aquatic macroinvertebrates, water sources and the water cycle. Includes graphing, ratios and charades activities.

[Water Lesson Plans](#) / *Pennsylvania State University*

Educator generated lesson plans about water and segmented by grade level.



Elwha River, WA. Photo by John Gussman.

ADDITIONAL RESOURCES

[Education Resources](#) / *Cradle of Forestry in America Interpretive Association*

Features Smokey Bear activities, videos and educator guide, Georgia-based environmental lesson plans, how to discover your forest, campfire safety and more. Great resource for all, especially Georgia and North Carolina educators.

[How to Start an After-School Environmental Club](#) / *Ann Arundel Co. Public Schools & Chesapeake Bay Foundation*

Guide including logistics on how to get started, suggested timeline, multiple games and activities, sample permission form and more.

[iNaturalist](#) / *California Academy of Sciences and National Geographic*

Mobile app that allows you to explore and share your plant and wildlife observations. Become a citizen scientist, learn about nature, connect with experts to help identify your observations and make meaningful contributions to science.

WATER RESOURCES

[All the Water in the World](#) / *U.S. Environmental Protection Agency*

Lesson about water sources and geography with a demonstration activity to show how water is distributed across different water sources using the concept of percentages.

[Drinking Water Activities for Students and Teachers](#) / *U.S. Environmental Protection Agency*

K-12 student activities and lesson plans to provide a basic understanding of drinking water vocabulary and where water comes from.

[Water: Sources, Use & Conservation, Grades 3-5](#) / *St. Johns Riverkeeper*

Lesson and activities about water sources, water usage and the important role of storm drains on water quality.

OUTDOOR SCHOOL YARD ACTIVITIES

[Organize a River Cleanup](#) / *American Rivers*

Resource dedicated to making your cleanup a success. Includes a step-by-step handbook to cleanup organization, recycling guide and more.

[Outdoor Curriculum Ideas](#) / *Jeffers Foundation*

Regular curriculum activities for the outside classroom for all subjects ranging from counting trees exercises to creating geographical maps of an area to a "noun hunt-walk."

K-5 LESSON PLANS & ACTIVITIES *(cont.)*

RECOMMENDED BOOKS

"A River Ran Wild"	by Lynne Cherry	grades K-3
"Flush"	by Carl Hiaasen	grades 5-6
"Letting Swift River Go"	by Jane Yolen and Barbara Cooney	grades K-3
"The Lorax"	by Dr. Seuss	grades 1-4
"Over and Under the Pond"	by Kate Messner	grades 1-2
"Redwoods"	by Jason Chin	grades K-2
"The Tree Lady: The True Story of How One Tree-Loving Woman Changed a City Forever"	by H. Joseph Hopkins	grades K-5
"Yo sé que el río me ama / I Know the River Loves Me"	by Maya Christina Gonzalez	grades 1-2



OTHER ACTIVITIES

DRAW A PICTURE

Instruct students to draw a picture of a river or creek, their favorite outdoor place, park or other outdoor area.

REDUCE YOUR SCHOOL'S ENVIRONMENTAL FOOTPRINT

Plan a school-wide event to turn off or reduce electricity for one hour, therefore reducing your school's environmental footprint.

RESEARCH AND WRITE A LETTER

Research and write a letter to candidates running for office. Instruct students to identify candidates' positions on environmental issues through research or by contacting the candidates or office holders. Welcome students to share their research with the class. Afterwards, instruct students to write a letter to candidates or office holders about a personal outdoor experience, why they think rivers and the environment need protection and ask the candidate or office holder to support environmental efforts and protect our water.

FUNDRAISING IDEAS

Supporting American Rivers or your favorite river group is a great way to get involved and make a difference. Here are some ideas to get you started.

COLLECT CHANGE TO MAKE CHANGE FOR RIVERS

Start a collection jar in your classroom. Ask students to raise funds by bringing in spare change from home. On or the Friday before Earth Day (April 22), ask students to wear green to school and donate \$5. Establish an end goal and use a fundraiser status "thermometer" to help students visualize the amount collected so far, and the target amount raised.

ORGANIZE A PAJAMA DAY

Organize a special day where students donate \$5 to wear their pajamas to school.

PIE A TEACHER

Recruit a few teachers and allow any student who purchases a ticket a chance to toss a whipped cream pie at a teacher.

RECYCLE PLASTIC BOTTLES

Check if your state offers a deposit-refund system for beverage containers. Start a collection for students to bring in plastic bottles. When the bottles have been collected, the leading teacher or parent takes them to a certified recycling facility or redemption center (depending on your state) where you can receive a state refund. For every plastic bottle, you may receive a refund of \$0.05 to \$0.10.



American Rivers envisions a nation of clean, healthy rivers that sustain and connect us. Through National River Cleanup® we have engaged more than 1.3 million volunteers who have participated in thousands of cleanups across the country, covering more than 250,000 miles of waterways and removing more than 25 million pounds of litter and debris.

Visit Our Site: Americanrivers.org/cleanup

Email Us: NationalRiverCleanup@AmericanRivers.org