



Roaring Fork Conservancy *Education Program*

Visit our website www.roaringfork.org

Since 1997, Roaring Fork Conservancy has taught students about the precious resource that unites our valley — water. Watershed education programs are available to school, youth and civic groups year round. All our programs incorporate inquiry learning, hands-on activities, and relevant place-based content for students in the Roaring Fork Valley. Our programs are taught at your school classrooms, field locations throughout the Roaring Fork Valley, and at the River Center located in Basalt, Colorado.

STANDARDS

All programs are correlated to the Colorado Academic 2020 Standards, Next Generation Science Standards, and North American Association of Environmental Education Standards. We strive to help teachers meet curriculum needs.

OUR VISION

Our vision is that students in the Roaring Fork Valley and beyond, will gain a connection to our watershed. Through hands-on experiences, students will learn about their rivers creating value and awareness through exploration.

GENERAL INFORMATION

Since 1996, Roaring Fork Conservancy has inspired people to explore, value, and protect the Roaring Fork Watershed. We bring people together to protect our rivers and work hard to keep water in local streams, monitor water quality, and preserve riparian habitat. As one of the largest watershed organizations in Colorado, Roaring Fork Conservancy serves residents and visitors throughout the Roaring Fork Valley through school and community-based Watershed Education programs and Watershed Science and Policy Projects including regional watershed planning, water resource policy initiatives, stream management, and restoration.

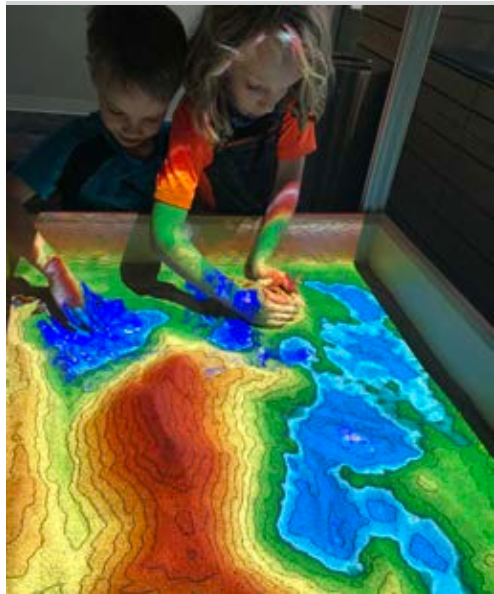
**FOR ADDITIONAL PROGRAMS, DATES AND REGISTRATION,
PLEASE VISIT WWW.ROARINGFORK.ORG**

**Fishing in Schools • Teacher Education Workshops
Watershed Adult and Family Explorations • The Brooksher Watershed Institute**



Organizing a program with RFC

- ☐ Email info@roaringfork.org to request dates for programming.
- ☐ Complete a Program Request form found on our website under School Programs or by email request.
- ☐ Select your program (see pages 4-7 for programs listed by standards and grade levels).
- ☐ Invoice payment and confirmation call.
- ☐ Send home parent letter and liability waivers (for programs located outside of school or River Center).
- ☐ Collect medical and liability waivers from parents for field programs.
- ☐ 2 days before program, review what students should bring (review how to dress on page 3).
- ☐ Prior to your arrival, give students access to RFC Intro video and a fun online activity.
- ☐ Print student journals (if needed).
- ☐ Enjoy an action packed learning experience with your students!



PRE-TRIP LOGISTICS

A logistics email will be sent to you prior to the field trip that will include waivers, letter home to parents, online extension activities, daily program schedule, and logistics for the students.

ROLE OF THE TEACHER DURING RFC PROGRAMMING

We want to give your student the best possible experience. Our educators need to be focused on delivering content, creating playful experiences, and safety. Educators do not have in-depth knowledge of specific student's needs, so teachers need to be responsible for redirecting disruptive behavior.

ONLINE PROGRAMMING OPTIONS

- Subjects include investigations on: macroinvertebrates, trout, riparian plants, ecology survey, erosion and interactive watershed maps.
- Students will learn how to observe, journal, and create scientific illustrations.
- We also offer interactive activities using local watershed data and issues.

We can offer multi-class series, full day programs, or single classes

SAMPLE SCHEDULE FOR FULL-DAY PROGRAM

Morning Session at the River Center

- Group 1
- Group 2
- If there are more sections, teachers can contact Basalt Library or the Art Base for programs or plan independent time.

Lunch (Outside classroom or near Old Pond Park)
In-classroom option during inclement weather.

Afternoon Session at the River Center

- Group 3 & 4
- Group 1 and 2 (independent time)

CLASSES INCLUDED IN SERIES (Series programs can be customized)

PROGRAM NAME AND AGE GROUP	K-2	<ul style="list-style-type: none">• Dee Dee the Fryingpan River Dipper• Watery World• Busy Beavers• Captain Cutthroat (Trout)• Riparian Bats
	3-5	<ul style="list-style-type: none">• Macroinvertebrates, Aquatic Insects• Riparian Birding Olympics and Adaptations• Augmented Reality Sand Table: Creating and Seeing Watersheds• Water History Trunk• Geomorphology: A field study
	6-8	<ul style="list-style-type: none">• Augmented Reality Sand Table: Mapping how water flows• Enviroscope: Modeling a community's impact on water• Macroinvertebrates: Water Quality Indicators• Storm Drain Hunts: Nonpoint sources of pollution• Riparian Ecology Survey• Water Chemistry and Snow Science
	High School	<ul style="list-style-type: none">• Augmented Reality Sand Table: Water use and storage• Interactive virtual watershed map• Snow Science• Water in the West• Plumbing the Colorado: Where does the water go?

FALL

Long sleeve shirt
Shorts or pants
Hiking boots or sturdy walking shoes
Waterproof rain jacket or poncho
Wool or warm socks
Warm hat
Gloves (if needed)
Sunglasses

WINTER

Long sleeve shirt
Fleece mid-layer
Insulated winter jacket
Long underwear
Insulated snow pants
Hiking boots or sturdy walking shoes (preferably waterproof)
Winter hat
Winter gloves (thick, not thin)
Wool or warm socks

SPRING

Long sleeve shirt
Shorts or pants
Hiking boots or sturdy walking shoes (preferably waterproof)
Waterproof rain jacket or poncho
Wool or warm socks
Sunglasses

SUMMER

T-shirt
Hiking shorts or pants
Hiking shoes or tennis shoes
Hat
Sunglasses
Sunscreen



Watershed Education

ELEMENTARY SCHOOL

RFC Lesson Grade Level Location	Program Description	Learning Target/Standard
Erosion In Action - Stream Trailer 3rd - 6th Grade Classroom or River Center	Get your hands wet creating rivers and watching geomorphology happen in a working stream trailer. Available May through October.	<ul style="list-style-type: none"> Students use models to understand erosion and human impacts Earth's surface changes constantly through a variety of processes and forces
Macroinvertebrates K - 6th Grade Classroom, River Center or Field Trip	Explore and identify real aquatic river insects using identification guides and microscopes.	<ul style="list-style-type: none"> Organisms have structures with different functions Classification, interaction and interdependence Interaction between living and nonliving Life cycle and habitat
Busy Beavers K - 3rd Grade Field Trip	Learn all about beavers through story telling, anatomy models and exploration of beaver signs and activity.	<ul style="list-style-type: none"> Organisms have structures with different functions Classification, interaction and interdependence Interaction between living and nonliving Life cycle and habitat
Riparian Food Chains 3rd - 6th Grade Classroom, River Center or Field Trip	Become part of the food chain and learn about energy transfer in ecosystems	<ul style="list-style-type: none"> Classification Interaction Interdependence
Trout, Trout, Trout! K - 3rd Grade Classroom, River Center or Field Trip	Enjoy a visit from Captain Cutthroat and learn about trout anatomy and habitat needs.	<ul style="list-style-type: none"> Organisms have structures with different functions Interaction between living and nonliving things
Dee Dee the Fryingpan River Dipper K - 4th Grade Classroom, River Center or Field Trip	Learn all about our favorite aquatic song bird through storytelling, dress up, and habitat exploration.	<ul style="list-style-type: none"> Organisms depend on their habitat's nonliving parts to satisfy their needs Adaptations
Riparian Bird Olympics 4th - 6th Grade Classroom, River Center or Field Trip	Compete in games using the adaptations of birds while exploring their habitat.	<ul style="list-style-type: none"> All living things share similar characteristics Living things also have differences that can be described and classified
Art & Science of Birds or Bats K - 6th Grade Classroom, River Center or Field Trip	Enjoy playing games using art to learn about bird/bat anatomy and habitat needs.	<ul style="list-style-type: none"> All living things share similar characteristics Living things also have differences that can be described and classified

PLEASE NOTE: All Programs can be adapted to different grade levels and different seasons – just ask!



Watershed Education

ELEMENTARY SCHOOL

RFC Lesson Grade Level Location	Program Description	Learning Target/Standard
Weather Stations 4th - 6th Grade Classroom, River Center or Field Trip	Become a weather scientist by creating hypotheses and testing them with weather instruments.	<ul style="list-style-type: none"> Weather changes are measured by differences in temperature, air pressure, wind and water in the atmosphere and type of precipitation
Water Cycle Game 4th - 6th Grade Classroom, River Center, or Field Trip	Become a drop of water and roll the dice to find out where you will land.	<ul style="list-style-type: none"> Matter exists in different states such as solids, liquids, and gases Matter can change from one state to another by heating and cooling
Watery World K - 2nd Grade Classroom, River Center, or Field Trip	Explore the properties and states of water through hands on activities and stories.	<ul style="list-style-type: none"> Solids and liquids have unique properties that distinguish them
Water History 2nd - 6th Grade Classroom or River Center	Explore real artifacts from Colordao History while learning about how water shaped our past.	<ul style="list-style-type: none"> Colorado History
Augmented Reality Sand Table: Creating and Seeing Watersheds 4th - 6th Grade Classroom or River Center	Use and create maps to understand earth systems and renewable resources. Play with an Augmented Reality Sand Table to learn about water and geology!	<ul style="list-style-type: none"> Earth and sun provide a diversity of renewable and non-renewable resources. Earth's surface changes constantly through a variety of processes and forces
Life Zones 4th - 6th Grade Classroom or River Center	Use beautiful illustrations and activity guides to learn about the life zones in Colorado.	<ul style="list-style-type: none"> Use geographic tools to research and answer questions Connect across human and physical systems
Snow Science K - 6th Grade, Location varies	Geology and Nature of Science	<ul style="list-style-type: none"> Earth's surface processes interact Solids liquids and Gas
Terrific Trees 2nd - 6th Grade Field or River Center	Ecology and Life Science	<ul style="list-style-type: none"> Internal and external structures of plants Obtain and use energy Healthy ecosystems
Sum of the Parts 4th - 6th Grade Classroom, River Center, or Field Trip	Science, Social Studies and Art	<ul style="list-style-type: none"> Human impact on our environment

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Watershed Education

MIDDLE AND HIGH SCHOOL

Program Name	Main Subject	2020 Standards & Main Focus
Macroinvertebrates: Indicators of Water Quality (Aquatic Insects) Classroom, River Center, or Field Trip	Biology	<ul style="list-style-type: none"> Population Dynamics Environmental interactions Biological components of stream health Dichotomous keys
Cutthroat Trout Native Species & Local Adaptations Classroom, River Center, or Field Trip	Biology	<ul style="list-style-type: none"> Anatomy Genetics Ecosystems are dynamic in nature; characteristics can vary over time Disruptions to any physical or biological component of an ecosystem can lead to shifts in all of its populations
Wetlands and Riparian Ecology River Center, Field Trip	Ecology	<ul style="list-style-type: none"> Biotic and abiotic factors Living and nonliving interactions Food chain and energy transfer
River Ecology Rafting Field Trip	Ecology	<ul style="list-style-type: none"> Abiotic and biotic factors Understanding how human activities and the Earth's surface processes interact
Water Quality Field Trip, River Center	Chemistry	<ul style="list-style-type: none"> Molecules and reactions Understanding how human activities and the earth's surface processes interact Chemical and physical indicators of stream health
Science Through Art Classroom, River Center, or Field Trip	Art, Biology	<ul style="list-style-type: none"> Drawing from life Rendering scientific macroinvertebrate illustrations Observation of living systems
Plumbing the Colorado Classroom or River Center	Social Studies	<ul style="list-style-type: none"> Geographic tools Role of consumers Inferences and predictions Consumption of resources Western development and expansion

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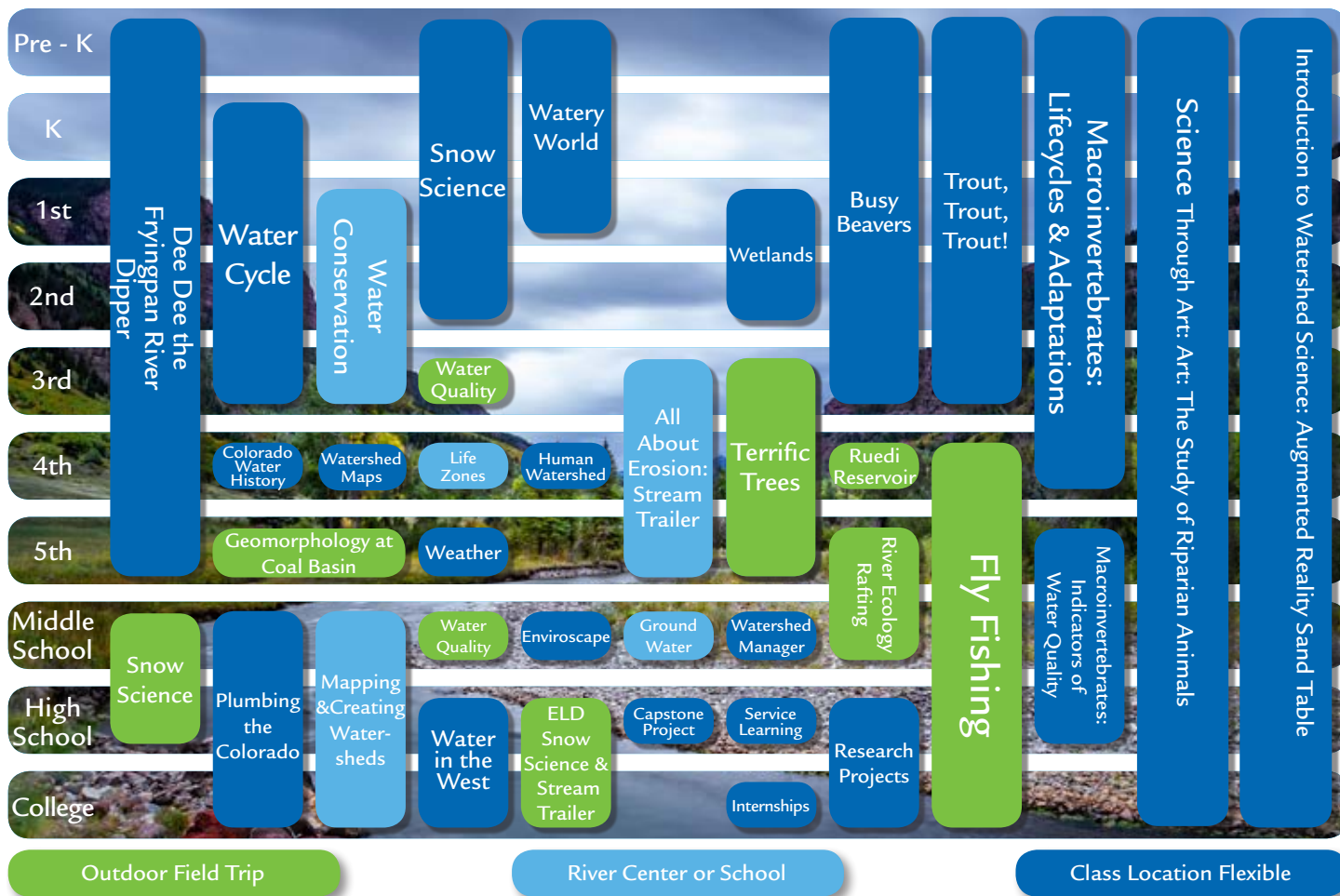
Watershed Education

MIDDLE AND HIGH SCHOOL

Program Name	Main Subject	2020 Standards & Main Focus
Water Manager Classroom, River Center, or Field Trip	Social Studies	<ul style="list-style-type: none"> Role of consumers Resource use and consumption
Water in the West Classroom or River Center	Social Studies	<ul style="list-style-type: none"> Economic Systems Water law and history Reservoirs & Dams
Snow Science Field Trip (Classroom if deep snow nearby)	Geology, Chemistry, Nature of Science	<ul style="list-style-type: none"> Digital information as wave pulses Volume Density
Stream Trailer & Groundwater Interactive Model Classroom or River Center	Geology	<ul style="list-style-type: none"> Earth systems Mapping History Natural hazards Geological forces
Weather, Climate & Surface Water Classroom, River Center, or Field Trip	Earth Science	<ul style="list-style-type: none"> Water Cycles Water Movement
Enviroscape: Non-Point Source Pollution Classroom or River Center	Earth Science	<ul style="list-style-type: none"> Humans' dependency and impact on the environment
Augmented Reality Sand Table: Understanding Watersheds and Maps	Geology and Social Studies	<ul style="list-style-type: none"> Earth systems Mapping Geological forces Role of consumers
Geomorphology and Land Use	Geology and Social Studies	<ul style="list-style-type: none"> Characteristics of places and regions and human interactions Best management practices Earth systems and processes, erosion and weathering

PLEASE NOTE: Our programs can be adapted to different grade levels and different seasons – just ask!

Roaring Fork Conservancy Water Education Programs by Grade



Many RFC programs can be adapted for different grade levels or core subjects. Please contact RFC's education staff if you are interested in custom water education programs.



Education

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www.roaringfork.org