

Watershed Education Program Guide



*Helping you learn about
the ways and wonders of water!*

Pomperaug River Watershed Coalition

39 Sherman Hill Road, Suite C103, Woodbury, CT 06798
203-263-0076 • www.pomperaug.org • info@pomperaug.org

**Do you want to learn
more about water?**

*PRWC can help!
Give us a call at (203) 263-0076.*



Keeping our water pure and plentiful begins with each individual living in the watershed. *Pomperaug River Watershed Coalition is committed to helping everyone in our community understand that we all live downstream.*

Through our extensive educational programs, PRWC offers a number of hands-on activities to schools, home-school and scouting groups, and community organizations. *The activities can be fun for student from age 3 to 103, and programs will be tailored to suit the age level of the audience. Most activities can be taught indoors or out, depending on your group's needs.*

School & Community Education Programs

PRWC offers all kinds of educational programs to help you learn about your water. Programs are suitable for all ages and will be tailored to the audience. If you are looking for something different than what is listed, just ask. PRWC is constantly developing new programs and might already have something lined up to suit your needs. Programs are linked to the CT Learning Standards.

In the following pages, you will find more information about each of the programs listed below and the topic(s) it covers.

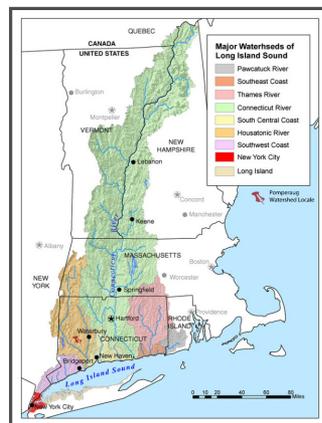
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What is a Watershed?

Most of you have watched a rainstorm, seen water flow down a street, and seen a river swell with rising water. Yet, have you ever stopped to consider where the rain that falls high in the hills ends up or how rivers flow together creating a network of drainage? Using watershed models, students will learn to make predictions about where water will end up after it rains and make observations about how streams flow together. Students will determine which hills feed a particular stream and learn how to define a watershed.

Adapted from: [Project WET](#).



CT Science Standards-CMT: 3.4—B7; 4.1—B9; 4.3—B13; 6.3—C7,C8; 7.3—C19

Connecticut Waterway Communities

Rivers have been a vital resource for water, food, transportation, energy, and general livelihood for communities throughout history. Students will explore the history of settlements along rivers throughout Connecticut, with extra focus on the Pomperaug River and its tributaries, to see how people's needs changed through time. Students will also learn about the historic mills, how they harnessed the power of the river, the changes they made to the land around them, and what goods they produced.



CT Science Standards-CMT: 3.4—B7; 4.2—B11

CT Social Studies Curriculum Framework: K-4 Standard 1, Strands 1.1—1.6 with correlation to NCSS 3 "People, Places, and Environment"

To Schedule a Program Call: 203-263-0076

Incredible Journey

Imagine you are a drop of water falling from a cloud. Think of all the places you could land – on the ground, in a lake, river, or ocean. Then, think about what might happen to you from there! You could soak deep underground into the aquifer, give a thirsty plant or animal a drink, flow into another body of water, or evaporate back into a cloud only to fall to the earth once again. Students will journey through the water cycle from the perspective of a water drop, and see how there is much more to the cycle than just precipitation, evaporation, and condensation. Students will also learn how much water is on the planet and where we find it.

From: Project WET.



CT Science Standards-CMT: 3.1—B2; 4.3—B12, B13; 6.3—C7,C8; 6.4—C10, C11; 7.3—C19; 9.7—D20

Stormwater in a Jar

Pretend you are a fish happily swimming along in your favorite stretch of the river. It starts to rain, and you notice that the water is becoming dirtier as this storm water flows into the river. When stormwater falls or runs through areas where many people live, it often washes nutrients and toxic chemicals from streets, parking lots, and lawns into storm drains. Students will learn which common pollutants can be found in stormwater, how they get into our nearby waterbodies, and how to reduce or eliminate stormwater pollution.



CT Science Standards-CMT: 3.4—B7; 6.4—C10, C11; 9.8—D24; 9.9—D25, D26

Sum of the Parts

You have just inherited a piece of waterfront property and a large sum of money to boot. You are given free range to do whatever you please on the land. Using creative artistic and/or writing skills, participants sketch out their wildest dreams. Then, students will look at how their land and their neighbors' land was developed, see what type of impact their individual and collective activities could have on the quality of the water, and begin to understand that everyone lives downstream. *From: Project WET.*

CT Science Standards-CMT: 3.4—B7; 4.1—B9; 4.3—B12, B13; 6.3—C7,C8; 6.4—C10, C11; 7.3—C19; 9.9—D25, D26

The Long Haul

With the flip or twist of the faucet, modern technology puts clean, potable water at our fingertips. Sometimes, people simply take this for granted. In this activity, students will transport themselves back in time or to a developing country where it was far more difficult to obtain water for everyday needs—drinking, cooking, cleaning. Students experience what it is like to physically haul the amount of water an average American uses everyday. Having to actually carry a portion of the water you use each day promotes an appreciation for water distribution systems and water consumption. It also makes you to think about ways to conserve water and to use water more efficiently. *From: Project WET.*



Outdoor setting is preferred.

CT Science Standards-CMT: 3.4—B7; 6.4—C10, C11; 7.3—C19; 9.9—D25, D26; 10.6—D43, D45

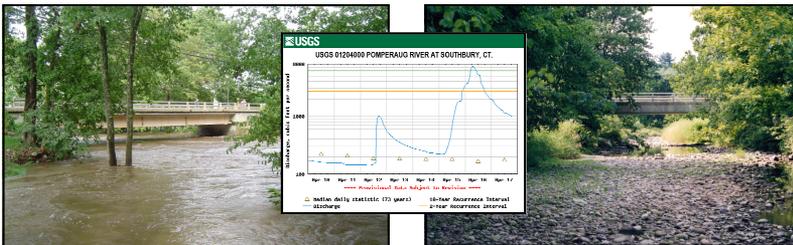
“Your in-class, hands-on, water-focused activities are an important and treasured component of our science curriculum. Your programs provide our students with authentic science applications. Students’ awareness of their environment is enhanced, and their awareness of the importance of water in their physiology and daily lives is heightened.”

*~ Jody Ian Goeler, Superintendent,
Regional School District No. 14*

High-Low History

In Connecticut, we have experienced water-related events such as floods, ice storms, nor’easters, and drought. In our changing climate, it appears that damaging floods are occurring more often, while we also face longer drier periods in between. How can we predict these patterns and how do we prepare for the conditions? Data collection and historical records for groundwater levels, streamflow, and precipitation are all critical components to assess water availability, to allocate water supplies, and to predict flooding issues. In this activity, students will examine real stream data, learn what the term “100-year flood” really means, and how to plan for extreme water-related events both at home and in our community. Adapted From: Project WET.

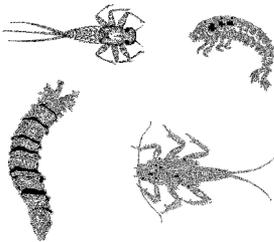
CT Science Standards-CMT: 6.3—C8; 9.7—D20; 9.9—D25, D26



Macroinvertebrate Mania^{*†}

What can a small, spineless, water dwelling creature tell you about the health of a stream? LOTS! Participants will be introduced to life in the stream, adaptations for life in fast moving water, and which creatures can only live in clean water. We can bring the bugs to you or bring you to the bugs! Either way, we will see how many different macroinvertebrates we can find which we can then use to gauge the health of the stream.

CT Science Standards-CMT: 4.1—B9; 4.3; 6.2—C4, C5, C6; 6.3—C7,C8; 6.4—C10, C11; 7.2—C15; 7.3—C19



** This activity can be done indoors or outdoors. For an indoor program, we will bring the creatures to you. During an outdoor program, you will be involved in collecting the creatures from the river.*

† Rates vary for field based programs, please call for more information.

To Schedule a Program Call: 203-263-0076

Field Trip: River Health Check-Up †



Come get your feet wet and give the river a health check up. This program is tailored to meet the interests of your group and can be as simple or as in-depth as you would like. The trip can be a guided walk along the river bank where we will discuss the different river processes that we see in action. Or it might include using test kits, probes, and other tools. Students will learn how to examine water chemistry, how to measure streamflow, and how to document the physical appearance of the in-stream and streamside habitat. Indoor sessions are offered to prepare your group for the trip or as a follow-up after the trip to discuss the data you collected.

CT Science Standards-CMT: 4.1–B9; 4.2–B11; 4.3–B13; 6.1–C1, 6.2–C4, C5, C6; 6.3–C7,C8; 6.4–C10, C11; 7.3–C19; 9.7–D20; 9.8–D22, D24; 9.9–D25, D26; 10.6–D43

† Rates vary for field based programs, please call for more information.

EnviroScape® Model

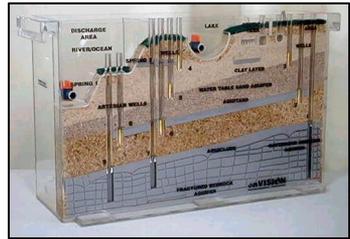
With a large model landscape, spray bottles and “pollutants” at your fingertips, you will observe where water flows when it rains and what types of things make up a typical watershed. We will also look at different ways people use the land and identify potential sources of pollution. We will help you distinguish between point source pollution and non-point source pollution. Finally, and most importantly, we will help you come up with ways to reduce or eliminate potential sources of pollution in your own backyard. *Ideal for groups of 12 people or fewer or an exhibit hall setting.*



CT Science Standards-CMT: 3.4—B7; 4.2—B11; 4.3—B13; 6.4—C10, C11; 9.9—D25, D26

EnVision® Groundwater Model

With this aquarium-sized model filled with layers of sand, gravel, clay, and rock, you will observe how water flows underground and how wells pump water out of the ground. You will see the critical interaction between groundwater and our rivers and streams. We will also look at how



different activities can pollute our groundwater, which – for most people in rural Connecticut – serves as our drinking water. Finally, we address ways we can help keep our drinking water clean and safe. *Ideal for groups of 12 people or fewer or an exhibit hall setting.*

CT Science Standards-CMT: 6.4—C10; 7.3—C18, C19; 9.8—D22; 9.9 D24, D25

In-School Program Fees

- First program: \$75.00 plus mileage
- Additional class(es) on same day are \$70 each.
- We can teach up to 4 classes in a single day, and offer a bulk rate of \$250 plus mileage for this option..
- Class size is a maximum of 27 students

Community Organization Fees

- \$5/person—minimum \$50 for a one-hour program
- Community organizations with current membership in the Pomperaug River Watershed Coalition are entitled to one FREE program per calendar year.
- Community Organizations include Scouts, Garden Clubs, Retirement Communities, etc.
- Maximum audience size determined by the venue.

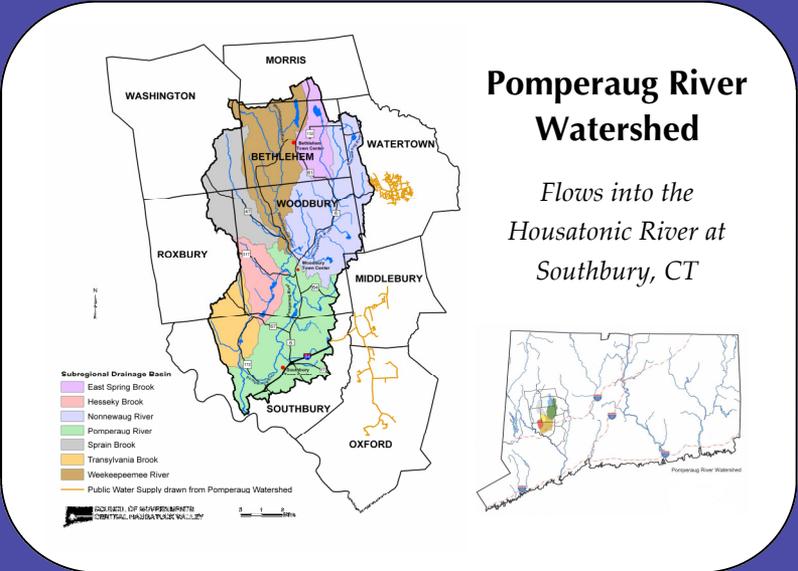
Scheduling

First choose your program(s) and pick 2-3 dates from your school or organization calendar. Then, contact PRWC's Outreach Director by phone at (203) 263-0076 or by email at outreach@pomperaug.org with the following information:

1. School or organization name
2. Contact person name, email, phone
3. Name of program or topic
4. Preferred date(s) and time(s)
5. Number and age of audience members

We will do our best to accommodate your request and will work with you to best suit the needs, interests, and learning objectives for your group.

The Pomperaug River Watershed Coalition—based in Woodbury, Connecticut—promotes the use of science and education to ensure the availability of high quality water in the Pomperaug Watershed communities.



The non-profit organization was founded in 1999 by area residents concerned about the pressures that community growth could have on the quality and quantity of water in the Pomperaug River, its tributaries, and its underlying aquifer. Through science, education, and collaborative partnerships, we are keeping the Pomperaug pure and plentiful.