



Droplets

CLEAN WATER: IT'S ALL ABOUT ME! 2018 Newsletter

- ◆ Find Your Watershed 2
- ◆ Classroom Presentations 3
- ◆ Dripial Pursuit 4
- ◆ Water Journal 5
- ◆ Going Green at USM 8
- ◆ Winning Artwork 9
- ◆ Exhibit Hall 10
- ◆ Entertainment 10

Protecting a Lake, Protecting Drinking Water

An Interview with Laurel Jackson, Water Resource Specialist

By: Megh Rounds, Former Environmental Educator at Portland Water District

We use water every day, whether it's for drinking, brushing our teeth, or washing the dishes. Where does all of that water come from, and whose job is it to make sure it's safe for us to use? I interviewed Laurel Jackson, a Water Resources Specialist at the Portland Water District, to find out the answers to our questions. It's her job to make sure the water in Sebago Lake, the drinking water source for a large part of southern Maine, passes all the tests necessary to be safe for use.

Megh: What is a Water Resources Specialist (WRS)?

Laurel: A water resources specialist is someone who works to make sure that lakes and rivers are clean and not being polluted. We test the water to make sure it is good quality, inspect places where we think pollution may occur, help people who want to make their land more lake-friendly, and try to spread the message that it is important to keep our water bodies clean.

Megh: How did you become a WRS?

Laurel: I was hired by the Portland Water District after graduating from college with a degree in Biology. After working in the lab for four years, I wanted to be able to work outside in the field, so I decided to become a water resources specialist.

Megh: What are some important tasks you're responsible for?

Laurel: Here's one task that may be surprising to some readers – we inspect septic systems! Sounds gross, right? Once in a while it can be, but most of the time we are inspecting the construction of a new system to make sure that it is going to work correctly. This is important because if a septic system is constructed improperly, human waste could end up in the lake! It's my job to make sure that doesn't happen.



Megh: What are the best/worst parts about your job?

Laurel: The best part is being outside and getting my hands dirty. It gives me an opportunity to really connect with the lake and the land in the watershed, as well as the people around the lake. I collect water quality samples, analyze them, and get to study the results, from start to finish.

The worst part is that I will occasionally have to work with people who don't see the lake as a valuable and vulnerable resource. It is frustrating to hear about people treating the lake badly, and I wish there was more I could do to stop it.

Megh: What advice can you give readers who may be interested in a career as a WRS?



Laurel: If you are interested in this profession, it is a good idea to study hard in your science classes. A good WRS must communicate well, so become a strong writer. Pay attention, ask questions, and be involved. Communicate your interest to your teachers so they can assist you in gaining the experiences you need to become a great WRS.



What's Your Watershed?

Maine has ten major watersheds. They are the Saint Croix, Saint John, Penobscot, Kennebec, Androscoggin, Presumpscot, Saco, Piscataqua, and the North and South Coastal Plains.

What watershed is your school in? What watershed do you live in? Are they the same?

Learn more about watersheds on page 8



Strong Elementary School

Woodstock Elementary School

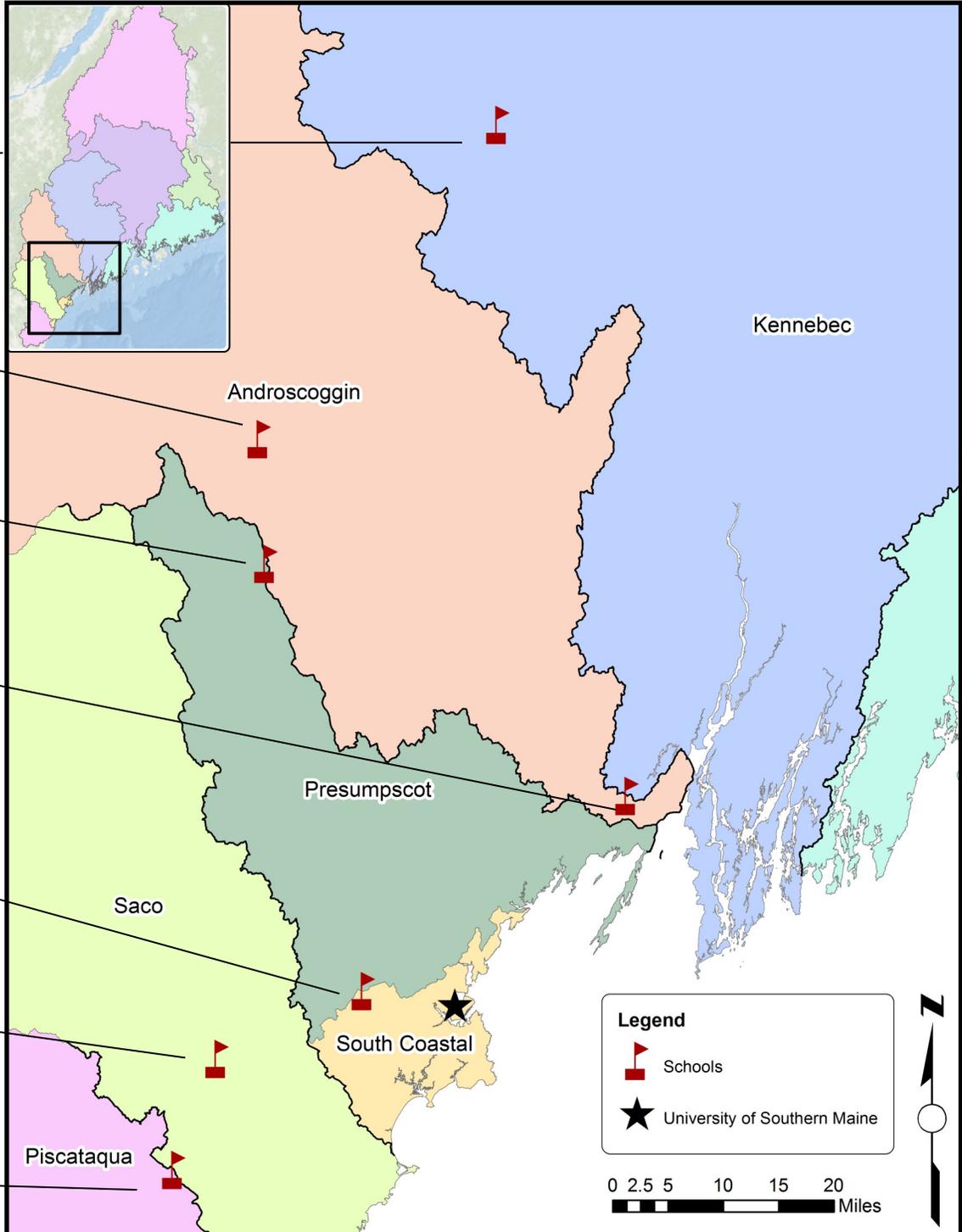
Hebron Elementary School

Mount Ararat Middle School

Gorham Middle School

Waterboro Elementary School

Sanford Junior High School





Classroom Presentations

Whatever classroom presentation you visit, you will learn ways you can make a difference for clean water!

Incredible Journey
Portland Water District

Polluters on trial! Play the parts of jury, bailiff, and the accused!

Build a Buffer
Friends of the Cobbossee Watershed

Macroinvertebrates: Water Quality Indicators
Gulf of Maine Research Institute

Agriculture is All About Water!
Maine Agriculture in the Classroom



You Be the Judge
Maine Department of Environmental Protection

Into the Deep
Southworth Planetarium

Wetland Metaphors
Maine Department of Inland Fisheries & Wildlife



Worms to the Rescue!
Maine Department of Environmental Protection



Clean Water for Clams!
Kennebec Estuary Land Trust

Got Seaweed?
U Maine Cooperative Extension & Maine EPSCOR



And more!

A little water fun!

What's in the middle of a jellyfish?
A jellybutton

Where do mermaids go to see movies?
The dive-in

Why did the dolphin cross the beach?
To get to the other tide

Why do ducks watch the news?
To get the feather forecast.

If you drop a white hat into the Red Sea, what does it become?
Wet.

Why didn't the lobster share his toys?
He was too shellfish.

What part of a fish weighs the most?
The scales.

What do you call a fish with no eye?
A fsh.

Why do seagulls fly over the sea?

Because if they flew over the bay they would be bagels!

How does the ocean say hello to the sand?
It waves.

Where can you find an ocean without water?
On a map.





Dripial Pursuit - Test Your Knowledge



The questions below, *along with others not listed here*, will be included in the **Dripial Pursuit Quiz Show** at the Children's Water Festival!

Make sure to study these questions to prepare for the Quiz Show!

1. What bay is the largest tidal habitat in Maine?
2. If you are a limnologist, what do you study?
3. Sandy beaches comprise what percentage of Maine's coastline?
4. Mussels, clams, scallops, and oysters require the flow of water and mud to capture their food. They are called what type of feeder?
5. Name an anadromous fish that lives in Maine waters.
6. How many miles of coastline are in Maine?
7. What percentage of Maine's area is designated as wetlands?
8. When settlers first came to Maine they realized it was a perfect place for boatbuilding. Name one reason why.
9. What is the biggest dam in Maine?
10. How many lakes are there in Maine?
11. How many miles of rivers and streams are in Maine?
12. On average, how many inches of precipitation fall on Maine in a year?
13. What human activity is the biggest user of water in the world?
14. About how much water should a person consume per day to maintain health?
15. Half of the U.S. population lives within how many miles of coastal waters, including the Great Lakes?
16. How many gallons of water does it take, from start to finish, to make a hamburger, fries, and a soft drink?
17. What percentage of the world's water is found in glaciers?
18. Where is the rainiest place in the world?
19. What fraction of a living tree is water?
20. The boundary between the unsaturated and saturated zones in soil or rock is called the _____?
21. What are three of the four longest rivers in Maine?
22. Name one water-related God or Goddess from a myth.
23. How many trillion gallons of water falls on the Earth every day?
24. Phosphorus pollution is a major concern for Maine lakes. Name two sources of phosphorus.
25. How many billion gallons of ground and surface water does the United States use each day?
26. What percentage of an adult human's body is water?
27. This river's watershed contains Maine's second largest lake which holds the record for the largest landlocked salmon caught in the state. This river's watershed is just over 610 square miles and is also referred to as the Casco Bay Watershed. What is the name of this river?
28. What place on earth has the greatest tidal range? (the difference between high and low tides).
29. What country has the longest coastline?
30. Where is the longest coral reef?
31. What is the name of the deepest lake in the world?
32. Approximately how much has the sea level risen on the Maine coast in the last 100 years?
33. What are smaller streams, which flow into a larger stream called?
34. Name two of the four states that are the largest users of water.
35. A river current flowing opposite of the main current is called what?
36. The beginning of a river is known as what?
37. About what percent of Maine's population gets its drinking water from groundwater?
38. What percentage of Maine's electrical energy is produced from hydroelectric power?
39. Name one of the four cloud groups.
40. What is the name for a fertile area where salt water and freshwater mix?
41. What was the first city to chlorinate its drinking water?
42. What is the estimated percentage of people globally without access to a safe water supply and modern sanitation facilities, 5%, 10%, 21%, or 33% ?
43. Name one thing that can cause long term apparent sea level rise.

For answers see page 11





How to Fold Your Water Festival Journal



Follow these instructions by making "mountain" folds (-----) and "valley" folds (- - - - -). Mountain folds make the edges of the paper fold downwards like this: \wedge . Valley folds make the edges of the paper fold upwards like this: \vee .

Steps 1 & 2

Remove the center page from this newsletter. Place the paper face down and valley fold in half widthwise, open and valley fold in half lengthwise (valley folds).

Steps 3 & 4

Open and turn over so the paper is face up. Now make two more valley folds. Because the paper is now face up the first two folds will look like mountain folds.

Step 5

Open and fold in half widthwise again. This fold is the same fold but because the paper is facing up, it is a mountain fold.

Step 5b

Your paper should look like this (with the writing on the outside):

Step 6

Now make a cut along the fold half way up (follow the scissor signs):

Step 7

Open your paper and fold in half long ways, like this:

Step 8

Now hold the left and right ends and push them towards each other, causing the middle to pop open into a diamond shape.

Step 9

Keep pushing to flatten the diamond until your paper looks like a plus sign, like this:

Step 10

Make a mountain fold along the fold line between the front and back of the booklet, closing all the pages together and finishing the booklet!

Don't forget to bring your Journal to the Festival!



HEY STUDENTS !

WELCOME TO THE WATER FESTIVAL!

This is your journal to record all the great things you learn about water today! As you hear presentations and talk to exhibitors, listen carefully for what you think is the most important or most interesting fact you learn during each session.

The information you write down in this journal will help you with activities when you return to school and help you remember your time here at the Water Festival!

Don't know what to write? Here's a hint: What is one thing that **YOU** can do to conserve water or keep it clean? Write more than one thing if you can!



_____'s Water Journal



Water Festival

Children's

Maine

2018 Southern



Classroom Activity #1

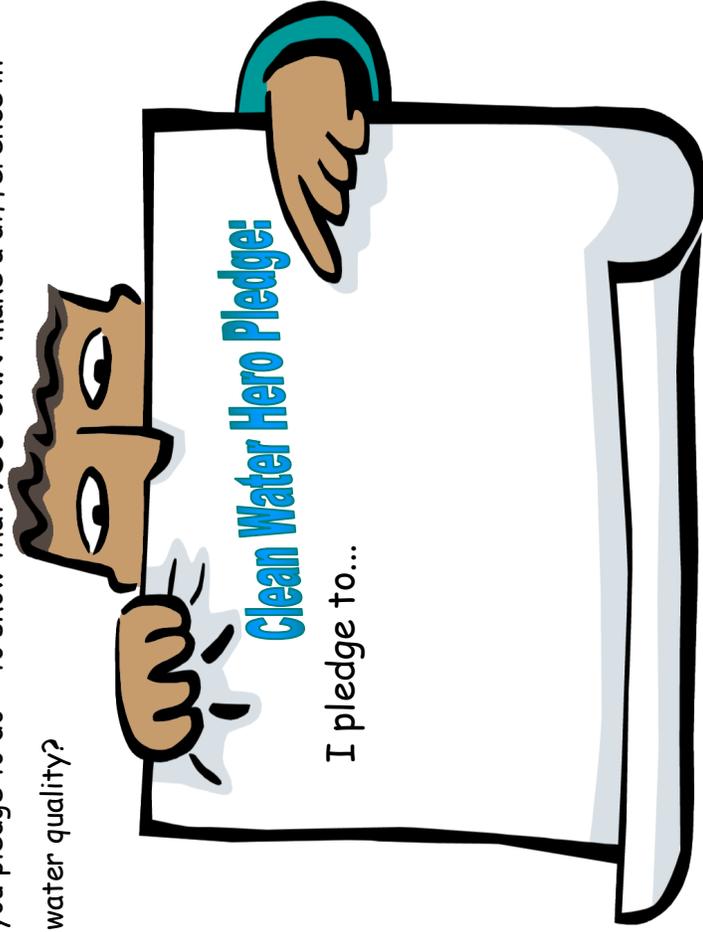
Title or Organization: _____

Speaker's Name: _____

What did you learn?



After all the things you learned here today, what is the #1 thing you pledge to do— to show that **YOU CAN** make a difference in water quality?



Classroom Activity #2

Title or Organization: _____

Speaker's Name: _____

What did you learn?



Booth #1

Title or Organization: _____

What did you learn from this booth?



Booth #2

Title or Organization: _____

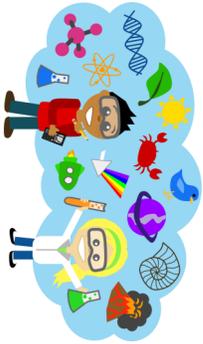
What did you learn from this booth?



Booth #3

Title or Organization: _____

What did you learn from this booth?



Going Green at the USM Campus



To protect our water, I can:

- ✓ Take a short shower instead of a bath.
- ✓ Clean up after my pet.
- ✓ Walk or ride a bike whenever I can.
- ✓ Plant trees and bushes in riparian areas.
- ✓ Stop or reduce use of chemicals on my lawn.

Environmentally friendly projects come in many shapes and sizes. The University of Southern Maine has an example of a big one.

The Wishcamper Center on the east side of the campus is a nearly carbon-neutral facility, though at first glance, you might not see the parts that make the building so “green.”



Here are some of the features that make the Wishcamper Center so special:

- The Casco Bay Estuary Partnership funded a 'green roof' on the second floor which is covered in vegetation that absorbs and filters water, helping to reduce the building's stormwater impact.
- The walkways around the building use “porous pavement” that allows rainwater to be filtered before entering the City's stormdrain system.
- The building is heated and cooled using geothermal energy from wells drilled 1,500 ft. into the earth.
- Rainwater is collected from the roof and recycled.
- All materials are low emission and contain a high percentage of recycled material and where possible brought in from local sources.
- The majority of the wood products are from Forest Stewardship Council certified forests, which use environmentally responsible forest management techniques.
- The pavement around the building has been restored to living, permeable landscape.
- The fourth floor roof is covered in highly reflective, energy star rated roofing membrane designed to conserve energy use.

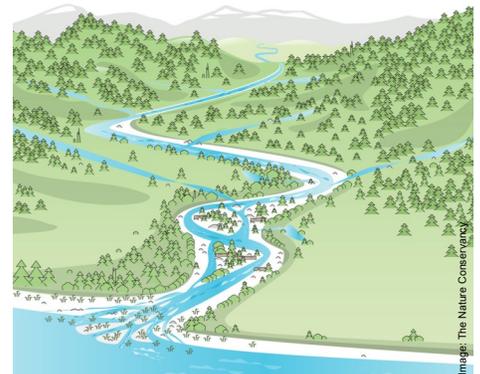
As you travel around the University of Southern Maine for the Water Festival, make sure you look for the Wishcamper Center. See if you can spot other “green” features on campus.

Watersheds

The word means a parting, a shedding of waters, but a watershed is also a gathering place. It is a place where the landscape and people's lives are connected by falling rain and flowing water.

Hilltops and ridges that act as the watershed boundaries. Watersheds are shaped by hills, valleys, and plains and tempered by forests, fields, lakes, and marshes that serve as habitats for creatures who live there.

Most of us know a watershed through its streams and rivers that connect forests with fields, farms with cities, mountains with sea. Each of us changes the watershed day by day, bit by bit, as we go about our daily lives.



A watershed is an area of land that water flows across and through, eventually making its way to a common emptying point.



Congratulations to Artwork Contest Winners!

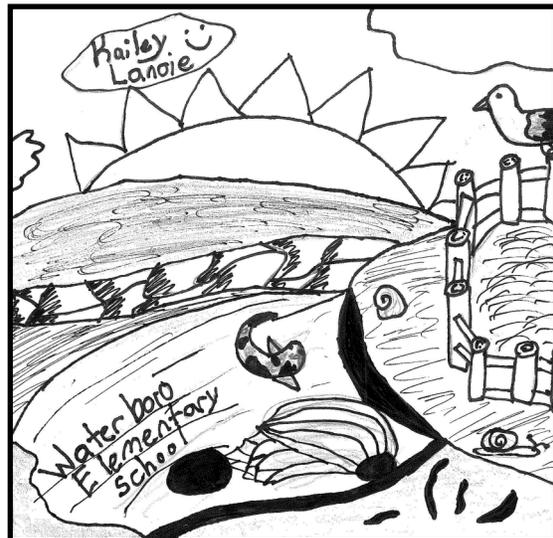
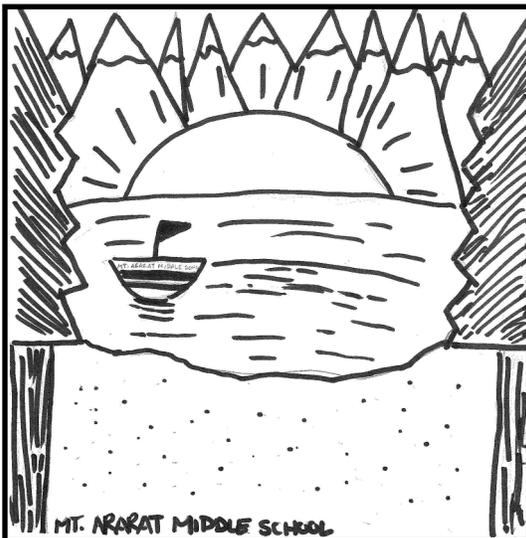
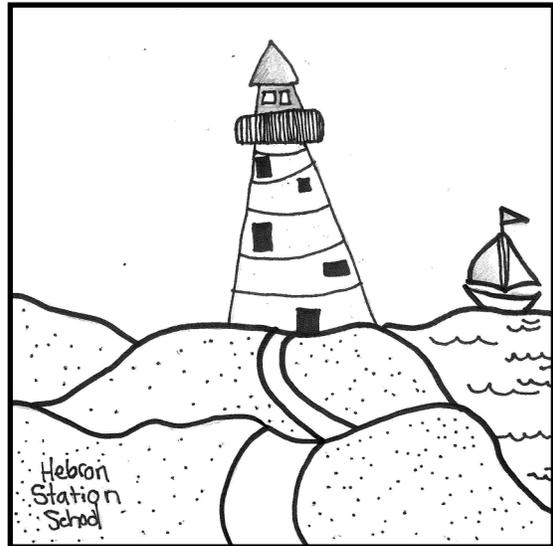
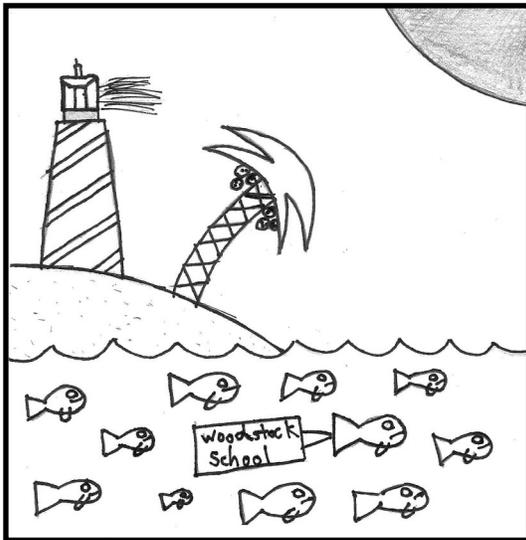
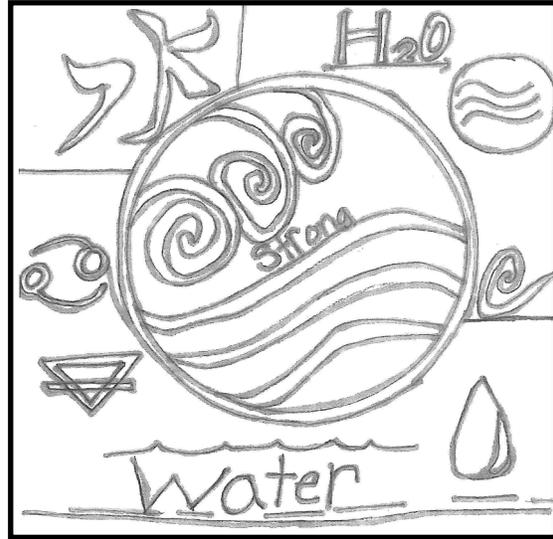
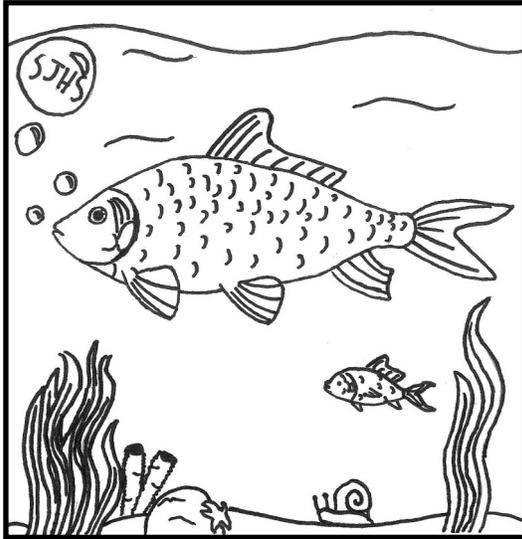




Exhibit Hall

Many organizations will set up learning stations at the Water Festival Exhibit Hall. You'll have to move quickly to see them all!

Bugs in the Water

Houlton Band of Maliseet Indians



Little Creatures, BIG DEAL

Wells National Estuarine Research Reserve



Coastal Birds

Maine Audubon

It's Found Underground

Maine Department of Environmental Protection

Stream Simulation Table

Maine Forest Service

Bacteria Testing In Drinking Water

Maine Water Utilities Association



Intro to Sailing

Sail Maine



The Blue Planet

Maine Water Company

Fly Tying

Trout Unlimited

What's Up with Water?

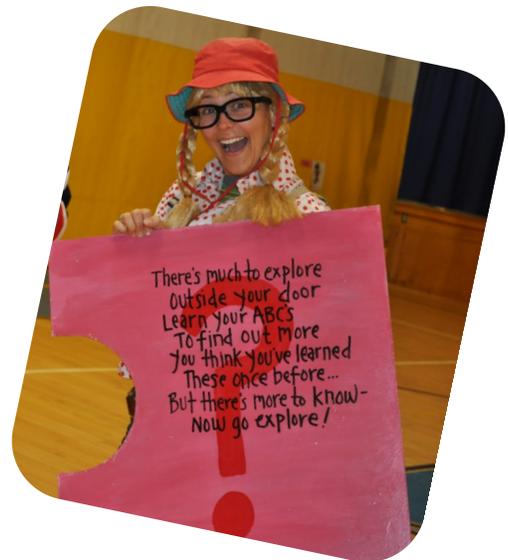
Woodard and Curran



And more!

Entertainment

Ecology Takes the Stage! is a fun, interactive way to introduce science concepts in a six act play. You will learn about the *ABCs of Ecology*, adaptations, the nutrient and water cycle, sustainability and much more.



This program includes zany costumes, entertaining songs, student and audience participation, science concepts students can understand and apply, and lots of laughs for everyone!

Special thanks to our supporters...



...and the planning committee:

Carina Brown, Sarah Plummer:
Portland Water District

Rob Sanford: **University of Southern Maine**

Linda Woodard, **Maine Audubon**

Cami Wilbert: **Friends of the Cobbossee Watershed**

Becky Kolak: **Kennebec Estuary Land Trust**

Victoria Boundy: **Casco Bay Estuary Partnership**

Lynne Richard, Deb Charest:
Lake Auburn Watershed Protection Commission

Stacy Thompson: **City of Saco Water Resource Recovery Division**

Savannah Judge: **Portland Science Center/Gulf of Maine Research Institute**

Marianne Senechal, Beth Chase, Stuart Rose, Denise Blanchette: **Maine Department of Environmental Protection**

Jane Eberle: **South Portland School Department/South Portland-Cape Elizabeth Chamber of Commerce**

Sophia Scott: **Maine CDC Drinking Water Program**

