

# Libraries Love Lakes

Your Guide to Libraries Love Lakes Programming

Compiled by Teresa Sauer, Created by Jen Klug, Nadia  
Hervieux, Olenka Duncan & Teresa Sauer

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# What is Libraries Love Lakes?

## Our Mission

*Libraries Love Lakes pairs school and public libraries with lake scientists to provide collaborative programming emphasizing the importance of lakes in our everyday lives.*



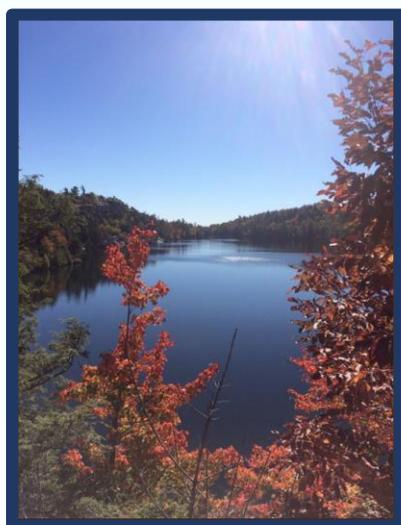
## Libraries Love Lakes Events

Anyone can organize a Libraries Love Lakes event! We encourage everyone to create an event which is catered to the patrons and resources of the host library. However, the basic format of a Libraries Love Lakes event is a display of children’s books which relate to lakes and freshwater systems and an interactive display which encourages patrons to reflect on role which lakes play in their lives. In addition, participating libraries can host storytimes, art & crafts activities, book club events, or any other event which allows patrons to interact with lakes in a meaningful way.

## Origins

The Libraries Love Lakes outreach project was started in April 2019 following a NE GLEON meeting. NE GLEON (Global Lake Ecological Observation Network) is a group of GLEON members from northeastern North America. We focus on introducing undergraduate students to GLEON and a team approach to conducting scientific research. Libraries Love Lakes was inspired by members of the NE GLEON outreach working group who wanted to “put lakes on everyone’s radar”.

In 2019, we have partnered with the NALMS (North American Lake Management Society) to bring Libraries Loves Lakes to a broader audience in preparation for the next Lakes Appreciation Month.



## How can you get involved?

If you are a lake scientist, reach out to your local librarians about collaborating to create your own Libraries Love Lakes event during the next Lakes Appreciation Month!

If you are a librarian interested in hosting a Libraries Love Lakes events, you can reach out to us directly at [librarieslovelakes@gmail.com](mailto:librarieslovelakes@gmail.com).

# Libraries Love Lakes Event Planning Checklist

*Use this checklist and resource guide as a starting point for your event!*

- Connect with a host library!
- Work with your host library to determine what type of Libraries Love Lakes event is appropriate for their patrons.
  - The basic elements of a Libraries Love Lakes event may include:
    - Display of Children’s Books relating to lakes.
    - Interactive response board asking patrons to respond to the prompt : *What is your favorite thing about lakes?*
    - Storytime Programs
    - Arts & Crafts Programs
    - Interactive education programs about lake science.
    - Book club events for older library patrons
- Choose a date(s) for you Libraries Love Lakes event.
- Create a list of titles pertaining to lakes and freshwater systems from your library’s collection.
- Promote your Libraries Love Lakes event!
  - Use our editable flyer templates to create promotional material for your host library!
- Prep for your Libraries Love Lakes event:
  - Collect materials for interactive display and any activities you may be hosting.
  - Print Libraries Love Lakes Outreach Materials for your book display
- Host your event!
- Share your Libraries Love Lakes success!!
  - Share pictures on Twitter and other social media outlets using [#LibrariesLoveLakes](#)
  - Fill out our [Libraries Love Lakes Exit Form](#) to help us improve programming resources in the future!



## Host a Storytime!

After curating the books for a book display, why not host a storytime? Librarians and collaborating lake scientists are encouraged to pick their favorite lake-related story and share it with library patrons!

This is great kick-off event that encourage patrons to engage with a Libraries Love Lakes display.



## Lead an Arts & Crafts Activity!

An arts & crafts activity is a fun and simple way to engage with young library patrons and encourage them to think about the role lakes play in their everyday lives. Crafts can be used to start a conversation with library patrons about the basics of lake wildlife and ecosystem, recreation and conservation.

Choose from our [suggested activities](#) list or create your own!



## Educational Programming

For those host libraries with children or teen groups that meet regularly, an educational program on lake systems may be appropriate. These programs can also easily integrate aspects of library resource education.

Sample lesson plans can be found [here](#).



## Host a Book Club!

Want to extend Libraries Love Lakes programming to libraries' older patrons? Librarians and lake scientists can collaborate to curate a list of Young Adult and Adult books that pertain to lakes.

Create a Libraries Love Lakes book club, or add Libraries Love Lakes titles to an existing book club! Book club meetings can also be used as opportunities for informal education on lakes!

# Share Your Libraries Love Lakes Success

Following your event, be sure to share pictures, ideas and advice to the rest of the Libraries Love Lakes participants and the broader public and scientific communities!

Share pictures, stories and event insight on Twitter Facebook, and Instagram using the hashtag: [#librarieslovelakes](https://twitter.com/librarieslovelakes)

Give us your event feedback by filling out the [Libraries Love Lakes Event Exit Form](#). This form will give us valuable insight into events so we can better prepare for Libraries Love Lakes programming!

## Contact Us

Please write [librarieslovelakes@gmail.com](mailto:librarieslovelakes@gmail.com) with any questions, concerns or suggestions, or contact the Libraries Love Lakes leadership team:



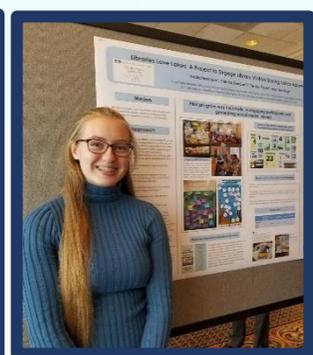
**Jen Klug, PhD**  
Professor of Biology  
Fairfield University  
[jklug@fairfield.edu](mailto:jklug@fairfield.edu)



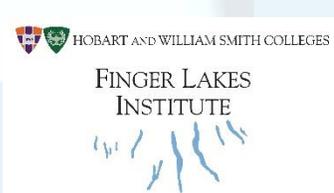
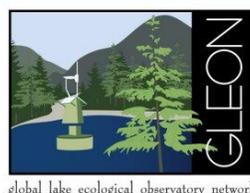
**Nadia Harvieux, M.Ed**  
Education Program  
Manager  
Seven Fingers Institute  
at Hobart & William  
Smith Colleges  
[harvieux@hws.edu](mailto:harvieux@hws.edu)



**Teresa Sauer**  
Fairfield University  
Class of 2020  
Biology Major,  
Research Assistant  
[teresa.a.sauer@gmail.com](mailto:teresa.a.sauer@gmail.com)



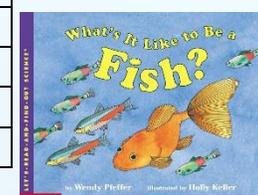
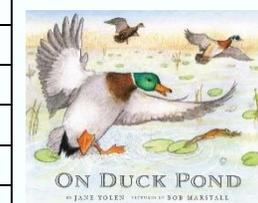
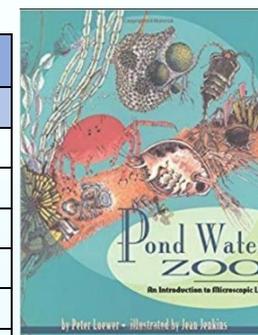
**Olenka Duncan**  
University of Vermont  
Class of 2023  
[olenka.duncan@uvm.edu](mailto:olenka.duncan@uvm.edu)



## Appendix A: Suggested Book List

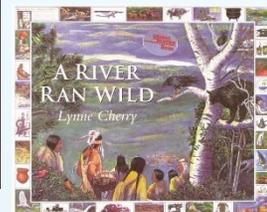
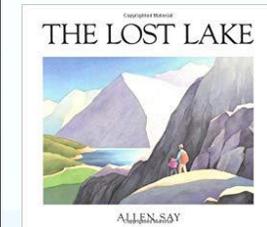
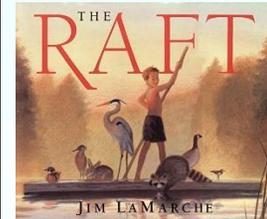
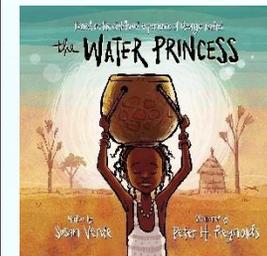
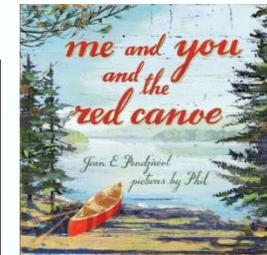
Full list of suggested books for Libraries Love Lakes events, sorted by relevant topic.

Lake Ecosystems			
Book Title	ISBN-10	Author	Age Range
Lake and Pond Food Webs in Action	1467715557	Paul Fleisher	8-11
Mr. Big: A Tale of Pond Life	9781616089672	Carol Dembicki	7-12
Over and Under the Pond	1452145423	Kate Messner	5-8
Pond Circle	1416940219	Betsy Franco	4-8
Pond Water Zoo	0689317360	Peter Loewer	8-12
Salamander Rain: A Lake & Pond Journal	1584690178	Kristin Joy Pratt-Serafini	6-10
Song of the Water Boatman	618135472	Joyce Sidman	4-8
Trout are Made of Trees	1580891381	April Pully Sayre	5-8
Wildlife			
Book Title	ISBN-10	Author	Age Range
All Eyes on the Pond	1562824759	Michael Rosen	4-8
All Night Near the Water	039922629X	Jim Arnosky	3-5
Around the Pond: Who's Been Here?	688143768	Lindsay Barrett George	4-8
Bartleby of the mighty Mississippi	0595444776	Phyllis Shalant	8-12
Fish is Fish	0394827996	Leo Lionni	3-7
In the Small, Small Pond	0805059830	Denise Fleming	3-5
On Duck Pond	1943645221	Jane Yolen	3-6
Pond Walk	1477810404	Nancy Elizabeth Wallace	4-8
Scout!	0061288829	Cathryn Falwell	4-8
The Dark, Dark Night	1561486108	Christina M. Butler	3-6
The Eagle and the River	0027622657	Charles Craighead	6-10
Turtle splash! Countdown at the pond	0061429279	Cathryn Falwell	4-8
What's it Like to be a Fish?	0062381997	Wendy Pfeffer	4-8



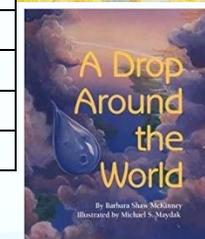
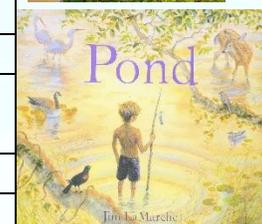
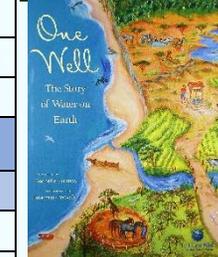
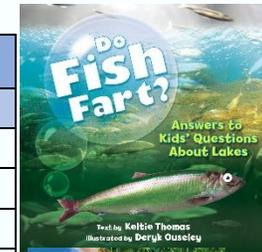
## Appendix A: Suggested Book List (continued)

Ecosystem Services			
Book Title	ISBN-10	Author	Age Range
In the Red Canoe	1459809734	Leslie Davidson	3-7
The Raft	0064438562	Jim LaMarche	4-8
The Lost Lake	0395630363	Allen Say	4-8
Rudi's Pond	0618486046	Eve Bunting	4-8
A Different Pond	1623708036	Bao Phi	4-8
One Frozen Lake	0873518667	Deborah Jo Larsen	3-7
Pond Year	1564021874	Kathryn Laskey	3-7
Three Days on a River in a Red Canoe	0688040721	Vera B Williams	4-8
Me and You and the Red Canoe	1554988470	Jean E. Pendziwol	3-7
Water Princess	0399172580	Susan Verde	4-8
The Pond	1912050706	Nicola Davies	5-8
A Day at the Lake	1938063031	Stephanie Rynders Wallingford	3-6
Beyond the Pond	0062364278	Joseph Kuefler	4-8
From Tree to Sea	1481495313	Shelley Moore Thomas	3-7
Good Morning Loon: It's Early Morning— What's Happening at the Lake?	0962842230	Elizabeth S. Varnai	3-7
Good Night Lake	1602190283	Adam Gamble	3-5
Mr. Grumpy's Outing	0805013156	John Burningham	4-8
Cultural History			
Book Title	ISBN-10	Author	Age Range
If You Spend a Day with Thoreau at Walden Pond	9780805091373	Robert Burleigh	6-10
A River Ran Wild: An Environmental History	0152163727	Lynne Cherry	6-10
The Gulls of the Edmund Fitzgerald	0531095096	Tres Seymour	4-8
Paddle to the Sea	9780395292037	Holling C. Holling	10-12



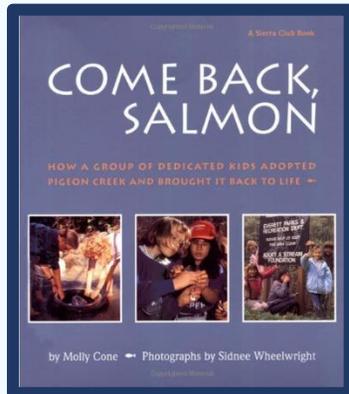
## Appendix A: Suggested Book List (continued)

<b>Conservation &amp; Restoration</b>			
<b>Book Title</b>	<b>ISBN-10</b>	<b>Author</b>	<b>Age Range</b>
<b>All the Way to the Ocean</b>	0971425418	Joel Harper	4-8
<b>Come Back Salmon</b>	0871564890	Molly Cone	8-12
<b>The Day the Great Lakes Drained Away</b>	1510712100	Charles Furguson Barker	3-7
<b>Do Fish Fart?</b>	1770857273	Keltie Thomas	8-12
<b>Not for Me Please: I Choose to Act Green</b>	1986909328	Maria Godsey	4-8
<b>Pond</b>	1481447351	Jim LaMarche	3-7
<b>The Water Cycle</b>			
<b>Book Title</b>	<b>ISBN-10</b>	<b>Author</b>	<b>Range</b>
<b>A Drop Around the World</b>	1883220726	Barbara McKinney	8-12
<b>Did a Dinosaur Drink this Water?</b>	0807588407	Robert Wells	4-8
<b>Down Comes the Rain</b>	0064451666	Franklyn M. Branley	4-8
<b>Follow the Water from the Brook to the Ocean</b>	0064451151	Arthur Dorrors	4-8
<b>Hey, Water!</b>	0823441555	Antionette Portis	3-7
<b>Magic School Bus: At the Waterworks</b>	0590403605	Joanna Cole	4-8
<b>One Well: The Story of Water on Earth</b>	1553379543	Rochelle Strauss	7-11
<b>Rain Rain Rivers</b>	0374461953	Uri Shulevitz	4-8
<b>Water is Water</b>	159643984X	Miranda Paul	3-7
<b>Where Do Puddles Go?</b>	0516460366	Fay Robinson	3-7



## Appendix A: Featured Titles

Be sure to check your library's collection for these titles! Each are excellent examples of children's books which promote and emphasize the importance of lakes and lake wildlife in our lives.



### ***Come Back, Salmon* by Molly Cone**

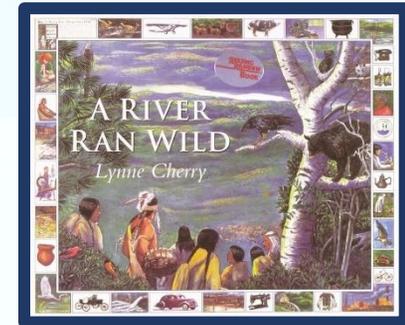
**Topic:** Conservation & Restoration

**Summary:** Published in 2001, *Come Back, Salmon* follows the real story of how a fifth-grade class in Washington led their Elementary school in the restoration of Pidgeon Creek. Although not explicitly about lakes, this story is a must for any environmental advocate and educator because of it details how a group of children identified a problem and worked together towards a meaningful solution. Alongside the story, there are panels describing relevant ecological terms and concepts, so readers are able to connect the story to ecology and conservation science.

### ***A River Ran Wild: An Environmental History* by Lynne Cherry**

**Topic:** Cultural History

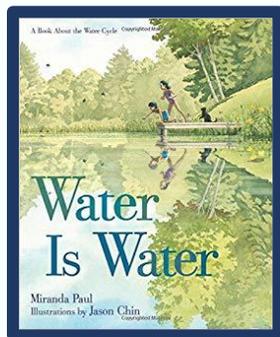
**Summary:** *A River Ran Wild* tells the true history of the Nashua River and the efforts of the Nashaway tribe to rid it of pollution from Massachusetts colonists. Lynne Cherry artfully navigates complex historical topics and introduces young readers to the divergent valuations of nature by different cultures, and how those differences must be overcome for the good of our earth.

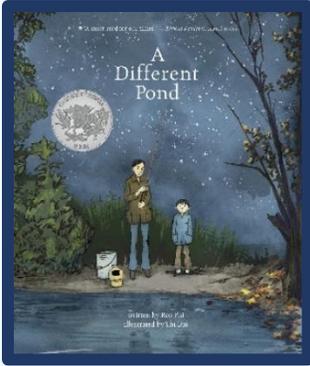


### ***Water is Water* by Miranda Paul**

**Topic:** The Water Cycle

**Summary:** This beautifully illustrated book leads readers through each stage of the water cycle using poetic imagery. Captivating and complex full-page pictures allow readers to engage with the book beyond words along. The repetitive rhythm of the story lends itself to a read-along with elementary readers. The book also contains a carefully illustrated glossary which lists the terms described throughout the story, something which can be used by dedicated readers to apply the book to a broader scientific lesson.





### ***A Different Pond* by Bao Phi**

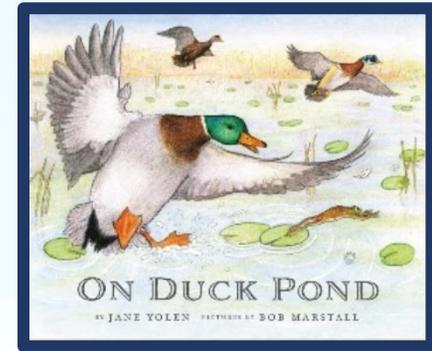
**Topic:** Ecosystem Services

**Summary:** A lake is the backdrop of this touching story about a father and son coming together through fishing. The comic-style story brings readers through the lives of a father and son who fish not just for recreation, but for survival. The father, an immigrant to America from Vietnam, bonds with his son by telling him stories from his own childhood spent fishing in ponds all the way across the world. Overall, the book tells a quiet and impactful story which allows readers to recognize the importance of lakes both as a means of food and as a source of comfort and bonding.

### ***On Duck Pond* by Jane Yolen**

**Topic:** Wildlife

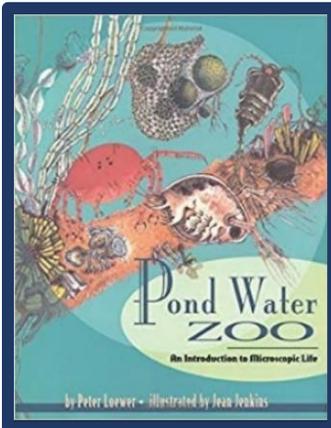
**Summary:** Young readers will be eager to go birding after reading *On Duck Pond*. Using simple text and beautifully complex illustrations, Yolen and illustrator Marstall introduce their readers to the complex bustle of life within a pond as well as the wide variety of duck and other bird species to be found traveling to and from their favorite pond. After the story there is a detailed beginner's birding guide which describes the major differences between common Northern Temperate zone duck species as well as other species likely to be spotted around the lake.



### ***Pond Water Zoo* by Peter Loewer**

**Topic:** Ecosystem

**Summary:** A rather unique children's book in its own right, *Pond Water Zoo* encourages more advanced readers to consider the microscopic world of lakes. Along with giving readers a basic overview of food webs, the book explores the oft-neglected contributions of the phytoplankton and zooplankton. Illustrations of some of the dominant species found in lakes and ponds allow readers to interact with microorganisms in a way which is similar to their interactions with more traditional stories about charismatic mammals, birds or fish. This book is a perfect compliment to an activity which allows students to examine real water samples and see the illustrated microorganisms themselves.



## Appendix B: Arts & Crafts Activities

*Interested in hosting a Libraries Love Lakes Craft Event? Get inspired with some of these simple and fun activities. (Photos by Teresa Sauer unless otherwise noted.)*



### **Craft 1:** Popsicle Stick Fish

**Materials:** Popsicle sticks, construction paper, markers/paint, glue

**Directions:** Lay three popsicle sticks parallel to each other, about 3/4<sup>ths</sup> of an inch apart. Lay three more popsicle sticks on top of the first three at a 90° angle and glue down. Create a body and tail out of construction paper and glue to the backside of the fish. Decorate with markers, paint or more construction paper!

### **Craft 2:** Paper Plate Swan

**Materials:** Paper plate, black construction paper, black marker, glue.

**Directions:** Start by cutting through the middle of a paper plate, moving from one side to the other and stopping at the textured part. Follow that textured ring up and over to cut out half of the center of the plate. Round out the end of the “neck” and attach a beak made of black paper. Cut slits into the discarded part of the paper plate to create a wing and glue on. Attach legs and decorate as needed. **Note:** Try not to use orange construction paper for the beak, since Mute Swans are an invasive species.



### **Craft 3:** Paper Plate Lilly pads

**Materials:** Paper plates, construction paper, cupcake liners, markers/paint, glue.

**Directions:** Paint/Color a paper plate green and let dry. Create flower petals using construction paper and glue to plate in layered circles. Place a cupcake liner in the center of the petals and glue down. Decorate as desired.

### **Craft 4:** Paper Plate Boats

**Materials:** Paper plate, markers/paint, construction paper, popsicle sticks, glue

**Directions:** Cut a paper plate in half. Decorate the body of the boat as desired with markers or paint. (Be sure to name your boat!) Construct a sail out of construction paper. Glue the sail to a popsicle stick. Glue the other end of the popsicle stick to the center of the paper plate.



### Craft 5: Duck Finger Puppets

**Materials:** Foam or construction paper, markers, googly eyes, glue.

**Directions:** Cut a circle out of brown foam or construction paper, about 4-6 inches in diameter. At one end of that circle, carefully cut out two finger-size holes next to each other. Cut out a smaller green circle and two triangles for the wings, as well as an orange beak and feet. Glue all components together and add eyes. **Note:** Change up the colors to represent different species!

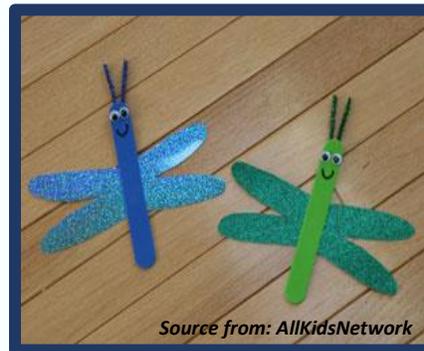


### Craft 6: Paper Bag Puppets

**Materials:** Paper bags, paint/markers, construction paper, glue

**Directions:** For Frog- Paint a paper bag green and let dry. Cut out two white circles for eyes and color in pupils. Cut out a long strip of red/pink paper and accordion fold for the tongue. Glue the eyes to the backside of the paper bag, and the tongue under the flap of the bottom of the bag (the head). For Beaver- cut out teeth, eyes, a nose, ear, legs and a tail. Attach the ears and tails to the backside of a paper bag; the eyes, nose and teeth to the bottom flap, and the arms to the folded sides.

### Other Craft Ideas: Sources noted on pictures



## Appendix C: Interactive Educational Activities

*If your host library has a dedicated group of higher-elementary level patrons and longer program times it may be possible to hold a more in-depth lesson on lake science which integrates library resource exercises with basic ecological principles. These activities would also be appropriate for interested school libraries.*

*Following are two full lesson plans appropriate for 3<sup>rd</sup>-5<sup>th</sup> graders as well as list of other resources for finding lesson plans.*

### **Activity:** Learn your Lake Critters!

**Intended Age Group:** 3<sup>rd</sup>-5<sup>th</sup> Grade

**Summary:** Students will identify lakes near them and identify some key differences between lake ecosystems and river/stream/marsh ecosystems. Students will then work together to identify animals they've seen around lakes before. Finally, students will be assigned their own lake organisms to research using available resources and then answer questions relevant to those organisms: (Prerequisite knowledge required: Food chain, native habitat)

**Goals:** At the end of this activity, students will be able to:

- Knowledge-based
  - o Identify key differences between lake ecosystems and other freshwater systems
  - o Explain the natural habitat, life cycle, and placement within the food chain of a lake-dwelling organism.
  - o Discuss the importance of keeping our freshwater systems clean.
- Skill-based
  - o Use online and library resources to search for relevant information about an assigned organism.

#### **Materials:**

- Resources with information about assigned animal ready either in physical form or online.

#### **Lesson Plan:**

- 1) Start by asking students to identify lakes/freshwater systems which they have been to. (They should all be able to say Mill River, some may say Lake Mohegan, Candlewood Lake, etc).
- 2) Ask students to identify some key differences between rivers and lakes/ marshes and lakes, etc. Discuss.
  - a. Key lake features: slow water movement, enclosed by land, deeper than rivers and marshes (usually)
- 3) Explain that since a lake ecosystem is so different from river/marsh ecosystems, they will have some different organisms living in the water, though the organisms living *around* the lake may be the same.

- 4) Assign each student with a local organism that lives in or around the lake. Have students spend time on their online/book resources answering the following questions?
  - a. What is the name of your organism?
  - b. What type of organism is it? (Mammal, Amphibian, Bird, Phytoplankton, Zooplankton, Fish, Plant)
  - c. Where does your organism live on the lake?
  - d. Where does your organism get energy? (Where is your organism on the food chain)?
  - e. Is this organism endangered?
- 5) After the student have spent 20 minutes on their research, regroup for discussion. Ask how many people had each type of organism. Go over in the order of the food chain (starting with phytoplankton, then zooplankton, etc).
- 6) Talk about endangered species, explain threats to animals in freshwater systems.
- 7) If time allows, end by reading a book on the animal in/around the lake.

### **Activity:** Keeping Freshwater Clean

**Intended Age Groups:** 3<sup>rd</sup>-5<sup>th</sup> grade

**Summary:** Students will review the importance of freshwater sources and the relative scarcity of useable freshwater in our global ecosystem. Students will then review various threats to the health of freshwater systems, and lakes especially. These threats include pollution, runoff, invasive species and climate change.

**Goals:** At the end of this activity, students will be able to:

- *Knowledge-building*
  - o Recognize the scarcity of usable freshwater in the world
  - o Recognize the importance of freshwater systems and name several ecosystem services which lakes and clean freshwater provide.
  - o Gain a deeper understanding of threats to the health and cleanliness of freshwater ecosystems and lakes.
- *Skill-building*
  - o Read a scientific report about threats to healthy freshwater ecosystems and identify key points given within the paper.
  - o Identify the source of the information presented to them.

**Materials:**

- 1 L of water and three cups for saltwater, captured freshwater, and drinkable freshwater.
- Handouts on threats to a healthy freshwater ecosystem (to be compiled from online sources/ books)

**Lesson Plan:**

- 1) Start by asking students to identify lakes/freshwater systems which they have been to.

- 2) Going off the first part, have them list the uses of freshwater, both out in lakes and in our every day lives.
  - a. Drinking
  - b. Cleaning
  - c. Swimming
  - d. Gardening
  - e. Enjoying the Lake (Recreation Potential)
- 3) Start with the freshwater activity (adapted from [Michigan Sea Grant Lesson Plans](#)). This activity is meant to encourage students to reflect on the scarcity of useable freshwater in the world.
  - a. Start with 1 L of water in a soda bottle. This represents all the water in the world.
  - b. Ask students to guess how much of this water is salt water.
    - i. Remove 97.5% (975 mL, pre-marked on the bottle)
  - c. Explain that the remaining water is all the freshwater in the world. Explain that not all of that water is useable.
    - i. Remove 15 mL to represent polar ice caps, groundwater
  - d. Remaining 10 mL represents all the freshwater that we can use.
- 4) Emphasize the importance of keeping these freshwater systems clean. Tell students the rest of the time will be spent finding out some threat to the health and cleanliness of freshwater. Split into three/four groups.
- 5) Assign each group a topic. Potential topics include Pollution, Nutrient Runoff, Climate Change, and invasive species. Each student will get a handout on their threat. They should read individually and work together to answer the following questions:
  - a. Where did the information on your hand-out come from?
  - b. What is the threat (basic definition)?
  - c. What are some specific examples/effects of your threat?
  - d. What can we do to help?
- 6) Regroup and discuss the importance of helping where we can. Talk about ways to help they identified/ other ways to be involved.

### Additional Resources for Choosing a Lesson Plan

[Great Lakes in My World-Unit 1 \(Alliance for the Great Lakes\)](#): *This curriculum packet includes 17 Great Lakes-focused activities and lesson plans for K-8 students, most of which could be easily adapted for any lake system and modified to fit any time or resource constraints.*

[Water Lesson Plans \(Penn State College of Agricultural Sciences\)](#): *This is a list of lesson plans for K-12 cultivated by Penn State University. Lesson plans cover everything from basic water chemistry to watershed function and ecosystem services.*

[Build-Your-Own-Watershed Activity \(Michigan Sea Grant\)](#): *Here the Michigan Sea Grant outlines a longer activity which allows participants to understand how land and water are connected.*