
Perpetual Environmental Education Calendar For Extension Educators

Why an Environmental Education Perpetual Calendar?

Many events throughout the year can serve as a springboard for environmental education. This calendar identifies key historical dates and special annual observances that you can use as a tool to help you integrate EE into your programs all year long.

Here's What You'll Find in the Calendar

Included in this perpetual calendar is a listing of special days relating to the environment in Ohio and across the nation. The calendar has a monthly theme featuring information about one particular aspect of the environment, educational activities, and contacts for resource materials, personnel, and curriculum. Some dates came from *Chase's Calendar of Events* while others identify significant environmental and conservation related dates specific to Ohio. Ideas from the calendar are ready for your use, starting today.

How Can I Personalize the Calendar for My County?

It's easy. First, you can keep the calendar in the current date list format, or you can create a grid format calendar for the current year and include all of your choices of dates. At the beginning of the calendar you can insert information on organizations in your area that can provide environmental education programs and information for your clientele. Then for each month you can add your own graphics, and special events (such as recycling days or contests). You can copy the pages and use them as handouts or distribute the whole calendar as an outreach vehicle or as part of a fund-raiser for your county or organization. You can also have local organizations or schools sponsor a page and insert their logo or event.

Calendar adapted from: *Earth Day 2000: Environmental Education—Calendar for Stark County Teachers*. Canton, OH: Stark Soil and Water Conservation District.

January

Ohio's Glaciers, They Helped Shape Our State

Imagine your favorite Ohio landmark covered with layers of snow and ice while mammoth, mastodon, giant beaver, and wild horses roamed the landscape. This was the scene during the Ice Age (a.k.a. the Pleistocene Epoch). Two thirds of Ohio was covered with a thick layer of ice. As they melted, glaciers shaped the landscape to how we see it today.

As the glaciers receded they left behind natural resources such as rich agricultural soils, extensive deposits of sand and gravel that are used in industry, as well as an abundance of water, which is used for commercial, industrial, and personal use. The Pleistocene Epoch began about two million years ago with a large ice sheet in Canada that traveled into the United States under its massive weight. This movement occurred many times. Each period of glaciation was followed by an interval of warmer climate known as an interglaciation.

The ice of the Illinoian ice sheet advanced far into Ohio. High regions were removed and valleys filled. This left much of Ohio flat. A layer of till was left

over nearly everything, and many valleys filled with outwash. This glacial landscape influences our modern culture and economy. The ice sheets left behind glacial drift consisting of boulders, rock fragments, and dirt that was gouged and scraped from the landscapes that the ice moved across.

Cold Hard Facts

Glacier—An enormous mass of moving ice.

Till—Deposits of mixed clay, sand, and pebbles left from the underside of a glacier.

Moraine—A ridge of till plowed up in front of or alongside a glacier.

Outwash—Sand that's been carried by rivers formed from melting glaciers.

Buried Valleys—Former riverbeds filled in with outwash. These serve as good sources of groundwater for Ohioans today.

For student activities on Ohio's glacial past visit www.cedarbog.org

(Adapted from Tamie Kocher, Science Teacher, St. Thomas Aquinas High School, edited by Dr. Ian Whillans, The Ohio State University)

Additional Resources

Section 6: Resources

- I. Environmental Education Activities
- X. Geology

January Dates

1. *National Environmental Policy Act* was enacted, (1970)—**Make a New Year’s resolution related to the environment.**
Ohio Department of Natural Resources (ODNR) Division of Watercraft began operation, (1960)—**Take one of the many boating education programs offered through the division.**
2. _____
3. _____
4. *Trivia Day*—**Focus on environmental trivia such as glacier facts.**
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11. *Aldo Leopold Day*, (born on this day in 1887, died in 1948)—Honors the author of the *Sand County Almanac* and creator of the “conservation land ethic.” **Begin reading his book today! Do an activity from the Leopold Education Project.**
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February

All About Birds—National Bird Feeding Month

Bird Feeding Tips

Offer a variety of feeders to attract a variety of birds.

- Hanging feeders for finches and chickadees.
- Platform feeders for cardinals and blue jays.
- Suet feeders for woodpeckers and nuthatches.

Keep Feeders Clean and Keep Wildlife Healthy.

- Shake or brush leftover seed away before refilling feeders.
- Disinfect every few weeks with a 10 % bleach solution (1 part bleach to 9 parts water).
- If you see a sick bird at your feeder, halt feeding for a few weeks.
- Provide crushed egg shells for calcium for nesting birds.

Provide a welcoming habitat for a variety of birds.

- Plant shrubs for shelter and cover.
- Plant native, natural food sources such as purple cone flowers, dogwood or viburnum.
- Offer fresh water year-round.
- Provide a dust bath made of sand and crushed grit.

Get Active

Bird watching is one of the fastest growing recreational pursuits in the country. Visit the National Audubon website for more information: <http://audubon.org/bird/>.

Follow these steps to provide a welcoming home for wildlife!

1. Assess your yard or garden space.

The first thing you need to do is identify the habitat elements that already exist in your yard or garden space. You may already be providing some habitat for wildlife!

2. Provide the four basic elements.

All species have four basic requirements for survival. These are food, water, cover, and places to raise young.

3. Practice resource conservation in your own backyard.

Conserving resources will not only help the wildlife in your own yard but will help improve your community's environment.

4. Certify your backyard.

Visit the website for the National Wildlife Federation for details:

<http://www.nwf.org/habitats/backyard/basics.cfm>

Contact the Ohio Department of Natural Resources, Division of Wildlife for information on establishing a Wild School Site. They will provide an activity book that includes directions for building a bird-house as well as other project ideas. Call 1-800-Wildlife or log on to <http://www.dnr.state.oh.us/>

Backyard conservation can be as simple as planting a butterfly garden or growing native plants. For native plant ideas log on to:

1. Plant Conservation Alliance: www.nps.gov/plants
2. The Lady Bird Johnson Wildflower Center: www.wildflower.org
3. Wild Ones—Natural Landscapers: www.for-wild.org

If people want to assist migratory birds this spring, they should do something to preserve, protect, or create wetlands, grasslands or forests. These provide the habitat birds need for feeding and breeding.

(Sources: Steve Richards, Extension Associate, The Ohio State University and Barb Lesco, Park Naturalist, Quail Hollow State Park)

Additional Resources

Section 6: Resources

- III. Birds

February Dates

Home for Birds Week—Annually the third week in homes for wild birds.
February is a week to clean out, fix up and put up

1. _____
2. *Ground Hog Day*—Old belief that if the sun shines on this day and the groundhog sees his shadow when he emerges, there will be 6 more weeks of winter. **In Ohio, see if our “woodchuck” sees its shadow, or see if you can see your shadow.**
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12. *Lost Penny Day*—Set aside to put pennies back into circulation. **Take those pennies and give them to your favorite conservation organization.**
Charles Darwin Day, (b: 1809-d: 1882)—Author and naturalist born at Shrewsbury, England. Best known for his book, “On the Origin of Species.” **Read a book about animal adaptations.**
13. *Ohio Department of Natural Resources started a Youth Conservation Corps, (1973)*—This and other corps programs formed the Office of Civilian Conservation in 1977, known as the Division of Civilian Conservation. **Organize or participate in service projects for youth and adults in your community.**
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19. _____
20. *Ansel Adams birth anniversary, (1902-1984)*—American photographer, known for photographs of Yosemite National Park. **Go to your favorite park and photograph its special features.**
21. _____
22. _____
23. _____
24. _____
25. _____
26. *Grand Canyon National Park established, (1919)*—**Listen to “The Grand Canyon Suite” by Ferden Grote and envision the Grand Canyon or another beautiful setting.**
27. _____
28. *Ohio became a pioneer in river preservation* when it enacted the nation’s first scenic rivers law, (1968)—The National Wild and Scenic Rivers Act was enacted 8 months later on October 3, 1968. While Ohio’s law was enacted in 1968, it wasn’t until April 23, 1969 that the Little Miami River earned the distinction of becoming Ohio’s first designated state scenic river. **Plan for a summer canoe trip on one of Ohio’s scenic rivers.**

March

Time to Plan Ahead for Your Lawn and Garden

Become a Master Gardener—The OSU Extension Master Gardener Program is a premier statewide network for volunteer education and leadership development. The Master Gardener training course consists of a minimum of 50 hours of instruction. An equivalent number (50) of horticulturally significant volunteer hours are required to become a certified Master Gardener. To find out more about becoming a Master Gardener, contact the OSU Extension office in your county or visit <http://www.hcs.ohio-state.edu/mg/mgcounties2.html>.

Spring is a good time to explore Ohio's forests for wildflowers and plant your own. The right mix of native plants can create a haven for butterflies, birds, and other wildlife. What can you do to help prevent non-natives from impacting forests and wetlands? Plant native plants in your yard and eradicate invasive non-natives. Find out more!

Fighting Invasive Non-Native Plants in Ohio, lists the following non-native plants to avoid:

1. Japanese Honeysuckle
2. Japanese Knotweed
3. Autumn Olive
4. Buckthorns
5. Reed Canary Grass

6. Purple Loosestrife
7. Garlic Mustard
8. Common Reed
9. Multiflora Rose
10. Bush Honeysuckle

For an informational brochure regarding invasive and non-native plant species, visit the website of the ODNR, Division of Natural Areas and Preserves: <http://www.dnr.state.oh.us/odnr/dnap/non-native/InvasiveSpecies.html>.

Additional Resources

The Native Plants of Ohio, OSU Extension Bulletin 865. Contact your county OSU Extension office to order.

Fighting Invasive Non-Native Plants in Ohio.

Available from the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, 614-265-6453 (on-line at the website listed above). Additional factsheet information on many topics related to gardening may be found through the OSU Extension OhioLine Database: <http://ohioline.ag.ohio-state.edu/>.

Additional Resources

Section 6: Resources

- I. Environmental Education Activities

March Dates

Ohio 4-H Week —is the second full week in March, Sunday to Saturday.

National Agriculture Week —is the week that includes the first day of spring. Established to honor America’s food and fiber providers and to educate the public about the U.S. agriculture

system. For information visit the website of the Agriculture Council of America, www.agday.org, which includes visiting a “4-H Virtual Farm.”

National Agriculture Day— annually, is the first day of spring.

March Dates

1. *Yellowstone National Park* established, (1872)— **Research this park and plan a trip there or to another National Park Service site, including those in Ohio. Check out <http://recreation.gov>.**
2. *Theodore Geisel aka Dr. Seuss birth anniversary*, (1904-1991)—Children’s author whose books included many messages related to environmental consciousness. **Read to a child today.**
3. *National Forestry Service* began, (1891)—By act of congress, the president was given powers to establish forest reserves from the public domain. **Plan a hike in Wayne National Forest and/or a forest/wood lot in your community.**
4. _____
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10. _____
11. *Johnny Appleseed Day*, John Chapman death anniversary, (March 11, 1845)—John Chapman better known as Johnny Appleseed, planter of orchards and friend of animals. **Bake an apple pie and take it to a friend or someone in need.**
12. _____
13. _____
14. _____
15. *Waterloo (now called Zaleski)* became Ohio’s first State Forest, (1916)—**Take a hike in one of Ohio’s 19 state forests.**
George Perkins Marsh birth anniversary, (1801-1882)—Diplomat and author of *Man and Nature* which was a modern discussion of ecological problems. Marsh warned of the growing problems of water pollution and deforestation. **Read his biography.**
The *ODNR Division of Soil and Water Conservation* was created, (1982) — Several program areas including the Division of Soil and Water Districts and the Division of Lands and Soils were merged to create the Division of Soil and Water Conservation. **Contact your local soil and water conservation district to find out about their education programs including interactive models, educator workshops, programs for youth and many more.**
16. _____
17. _____
18. _____
19. _____
20. *Spring begins*— **Draw a picture of spring flowers or make a rainstick (see *Project WET*).**
21. _____
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23. _____
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27. *The Geological Survey of Ohio* was authorized, (1837)—This authorization formed the historical roots for the ODNR Division of Geological Survey. **Read *Every Body Needs a Rock* by Bryd Baylor.**
28. _____
29. _____
30. *First National Forest Reserve* created, (1891)—President Harrison authorized the creation of the Yellowstone Timberland Reserves, in Wyoming, which is now the Shoshone and Teton National Forests. **Plant a tree in your community.**
31. _____

April

Earth Day (April 22), First Celebrated in 1970.

Today, Earth Day still promotes awareness of environmental issues such as population expansion, water and air quality, distribution of people and resources, and energy use. It is a way to encourage people to take action in their community. The Earth Day Network is an international organization located in Seattle, Washington that coordinates Earth Day events worldwide. The Earth Day Education program provides free environmental curricular materials for grades K-12. For a list of events and goals around the world, or to list your event for Earth Day, visit <http://www.earthday.net/>.

Looking for an Earth Day project? Do you have some trash? Don't throw it away, use it another way! Spark learners' imagination with a fun project. Have them bring in throwaway and recyclable items such as cans, bottles, paper tubes, styrene, cartons, newspapers, etc. Challenge them to recycle these items into something new, useful, interesting, or decorative.

Make Recycled Paper

This is a fun way to learn how paper is recycled.

You will need:

- Newsprint
- A piece of screen about 6" square
- A flat pan a little larger than the screen
- Paper towels or newspaper for blotting
- A mixing bowl

- An egg beater or blender
- A rolling pin

Instructions:

1. Tear the newsprint into one-inch squares. Add water to wet the newspaper (about 2 cups). Beat the paper and water with the beater to make pulp.
2. Place the screen in the bottom of the pan and pour the pulp over it. Move the screen around until it is evenly covered with a thin layer of pulp. Carefully lift the screen out, hold it level and let it drain.
3. Place the screen pulp side up on the newspaper. Lay more newspaper or paper towels on top and squeeze out more water using the rolling pin.
4. Carefully remove the top layer of newspaper. Continue blotting with fresh paper towels or newspaper until the blotter is almost dry. Gently peel the recycled paper off the screen. Let it dry thoroughly. Use for stationary, a picture or other paper projects.

(Source: Jennifer Benson, Science Director, McKinley Museum)

Additional Resources

Section 6: Resources

- I. Environmental Education Activities

April Dates

National Poetry Month—1996 the American Academy of Poets inaugurated April as National Poetry Month. Go to the library and read poems about nature. Sit outside and write your own poem. Visit <http://www.poets.org>.

Keep America Beautiful Month—To educate Americans about their personal responsibility for litter prevention, proper waste disposal, and environmental improvement through various community projects. Information can be obtained from Keep America Beautiful, Inc.: <http://www.kab.org/>.

National Week of the Ocean, second Sunday to second Saturday of April—This week focuses on humanity's interdependence with the ocean. Each of us are asked to protect and use the ocean wisely. Make a list of all the ways you benefit from our global oceans.

National Volunteer Week, fourth Sunday to fourth Saturday of April—Honors those who reach out to others through volunteer community service and calls attention to the need for more community services. Sponsored by the Points of Light Founda-

tion, www.pointsoflight.org. Volunteer to clean-up a vacant lot, park, nature trail or stream.

National Wildlife Week, the third week of April, has been celebrated since 1938—The National Wildlife Federation educates, inspires and enlightens the public about wildlife conservation issues and encourages them to become environmental stewards. National Wildlife Week is an effort to preserve wildlife and their habitats by targeting students, families and adults through fun and informative hands-on activities. Go outside and observe wildlife, actual animals or signs of their existence. For other wildlife-related ideas, go to www.nwf.org.

Soil and Water Stewardship Week, last Sunday in April through the first Sunday of May—Seeks to call public attention to the importance of soil, water and related natural resources in maintaining America's quality of life. For a free packet of information, contact your county soil and water conservation district office or www.nacdnet.org.

Arbor Day, celebrated in Ohio the last Friday in April—The National Arbor Day Foundation, www.arborday.org, has a free education program packet that can be used with youth or adults.

1. **The ODNR Division of Lands and Soil** operated from 1952-1982—Use a county soil survey to determine what kinds of soils you can find in your county.
2. **John Burrough** birth anniversary, (1837-1921)—American naturalist and author. Go to a park and take a hike with a naturalist.
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12. **Alonzo W. (Chick) Marion** birth anniversary, (1904)— First director of the Ohio Department of Natural Resources. Go to A.W. Marion State Park (Pickaway County), or a park near you, to have a picnic or go fishing.
13. _____
14. _____

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15. _____
16. _____
17. *First law protecting fish passed*, (1857)—It made “it illegal to prevent the natural transit of fish in navigable streams and lakes.” **Do the “Fashion a Fish” activity from *Aquatic Project WILD*.**
18. _____
19. _____
20. _____
21. *John Muir birth anniversary*, (1838-1914)—Famous American author, naturalist, and conservationist. Renowned for his lone excursions in California’s Sierra Nevada, and among Alaska’s glaciers. **Read one of the works by John Muir.**
22. *Earth Day*—First observed in 1970 with the message, “New Energy for a New Era.” **Participate in an Earth Day celebration.** Most Earth Day events are planned for the weekend before or after April 22.
23. _____
24. *Put-in-Bay Fish Hatchery*, (1906)—ODNR Division of Wildlife acquired its first fish hatchery. **Go Fishing.**
25. _____
26. *Frederick Law Olmsted birth anniversary*, (1822-1903)—He served as the first head of the commission in charge of preserving Yosemite Valley. Acknowledged father of landscape architecture, he designed many parks and residential communities including New York’s Central Park. **Draw a picture of what you would like to see in a park.**
John James Audubon birth anniversary, (1785-1851)— American artist and naturalist, best known for his “Birds of America.” **Go outside and count how many different birds you can see in your neighborhood. What kind of bird did you see the most?**
27. *Soil Conservation Act*, (1935)—Congress passed and Roosevelt signed into law this act that created the Soil Conservation Service (SCS). **Go to the Natural Resources Conservation Service (formerly SCS) web page, <http://www.nrcs.usda.gov/>, to find out what you can do for conservation in your backyard.**
28. _____
29. _____

May

American Wetlands Month

A wetland is an area of land that is saturated or covered by water at least part of the year. Wetlands have soil that is very moist with little or no oxygen where certain types of plants like to live. Some wetland plants include cattails, swamp milkweed, water lilies and blue flag iris. Wildlife includes turtles, muskrats, wood ducks, and frogs. Bogs, fens, prairie potholes, and swamps are just a few of the many different types of wetlands in Ohio.

Get Wild About Wetlands

Wetlands need protected and restored because they control flooding and loss of soil; clean water by filtering and absorbing pollutants like fertilizers and pesticides; provide food, water, and shelter for approximately 35% of endangered or threatened animals and plants; and provide breeding and resting areas for wildlife.

Wetlands serve as stopping points for birds as they migrate, especially during spring, because many insects live there. The best place to see migratory birds in springtime in Ohio is in wetland and forestland habitat in the northern part of the state along Lake Erie.

You Can Make a Difference

Identify and protect wetlands on your property. There's money available through the Conservation Reserve Program (CRP) to assist you. (Contact the soil and water conservation district in your county).

Participate in National Wetlands Month. For more information on what you can do, go to: <http://www.iwla.org/SOS/awm/awmkit.html>

Use Audubon's resource materials to understand more about wetlands. To order wetland factsheets contact Audubon Ohio at 614/224-3303, or the materials can be downloaded from the Ohio Environmental Education Fund website: <http://www.epa.state.oh.us/other/oeef/oeemain.html>

Explore nearby wetlands through field trips or organize a wetlands education day to learn more about wetlands in your area.

(Source: Anne Baird, OSU Extension)

Additional Resources

Section 6: Resources

- I. Environmental Education Activities
 - Wow! The Wonders of Wetlands*
 - NatureScope: Wading into Wetlands*

May Dates

National Bike to Work Day—annually the third Friday in May. Bike to Work events are conducted by small and large businesses, city governments, bicycle clubs and environmental groups. Sponsored by the American League of Bicyclists: <http://bikeleague.org>.

International Migratory Bird Month and International Migratory Bird Day—are the second Saturday of May. Information including ways to celebrate can be found at <http://birds.fws.gov/imbd/basics.html>.

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11. *Mentor Marsh*—was Ohio’s first state nature preserve, articles of dedication were signed in 1971. This state nature preserve is **privately** owned by the Cleveland Museum of Natural History but dedicated as a state nature preserve under the ODNR Division of Natural Areas and Preserves. It remains privately owned. **Use the “Wetland Metaphors” activity from *Aquatic Project WILD* to discuss the benefits of wetlands. Use “Life in the Fast Lane” from Project WET to explore temporary wetlands.**

12. *Worst dust storm in nation’s history*, (1934)—This storm swept eastward from the Great Plains to the Atlantic Ocean. **Watch a documentary on the Dust Bowl.**

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21. *Fowler Woods*—was the first state nature preserve **purchased** by ODNR Division of Natural Areas and Preserves, articles of dedication were signed in 1973. **Do the activity “Adopt a Tree” from *Project Learning Tree*.**

22. _____
23. _____
24. _____
25. _____
26. _____

27. *Rachel Carson birth anniversary*, (1907-1964)—American scientist and author of *Silent Spring* (1962), a book that provoked widespread controversy over the use of pesticides. **Use environmentally friendly cleaning products to do some spring cleaning (examples: vinegar and water to wash windows; baking soda and vinegar to clean out a drain).**

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28. *Barry Commoner birth anniversary, (1917)*—American biologist, ecologist and educator. His studies of radiation extended his concern to chemical and biological damage for the biosphere from radiation. His books include *Science and Survival* and *The Closing Circle*. **Search the Internet for writings by/about him.**
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29. _____
30. _____
31. _____
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Our Wonderful Watersheds

A watershed is the land that water flows across or under on its way to a stream, river, or lake. The land *sheds* precipitation into one of these bodies of water when it rains or when snow melts. Everyone and everything are part of a watershed community. Every piece of land is part of a watershed; there are watersheds all across the United States (and the world!). Do you know your watershed address?

Protecting Our Watersheds

Citizen groups are forming across Ohio to protect the state's watersheds. To find out more about watershed groups in your area, check out the Ohio Watershed Network website: <http://ohiowatersheds.osu.edu>.

Removal of streamside vegetation and other alterations to streamside habitat are fast becoming the number one cause of water quality problems in Ohio rivers. You can keep your watershed healthy by planting a "buffer strip" of vegetation around streams, rivers, and ponds. A buffer strip is either made of tall grasses (e.g., around a pond) or trees and other vegetation.

Resources

Isaak Walton League— Since 1969, the Save Our Streams (SOS) Program of the Izaak Walton League of America (IWLA) has been a leader in citizen education in water quality monitoring, watershed restoration, and the importance of wetland protection. Visit their site at <http://www.iwla.org/siteindx.htm>

Adopt-A-Watershed—A K-12 school-community learning experience. *Adopt-A-Watershed* uses a

local watershed as a living laboratory in which students engage in hands-on activities, making science applicable and relevant to their lives. Visit www.Adopt-A-Watershed.org.

Give Water A Hand—MAKE A SPLASH!—Do you know of a youth group or class that wants to take action to improve local water quality? With *Give Water A Hand*, young people team up with educators, natural resource experts and committed community members to study water issues and take ACTION! Call 1-800-WATER2 or go to <http://www.uwex.edu/erc/gwah/>.

For a life history of aquatic organisms visit the Aquatic Life History Notes site at <http://www.dnr.state.oh.us/wildlife/resources/aquanotes.html>.

Ohio Stream Management Guide—Ohio Department of Natural Resources has a series of fact sheets on streams available at 614-265-6605 or on the Web at http://www.dnr.state.oh.us/odnr/water/pubs/fs_st/streamfs.html

A Guide to Ohio Streams. (2000). Randall E. Sanders (Ed.). Available through ODNR Division of Wildlife, Fish Management and Research, 1840 Belcher Drive, Columbus, OH 43224-1300.

Additional Resources

Section 6: Resources

- I. Environmental Education Activities
- Enviroscope "Watershed" Model: available from county soil and water conservation district offices

June Dates

June is Dairy Month—Discover what dairy farmers are doing to protect watersheds!

National Zoo and Aquarium Month—American Zoo and Aquarium Association: www.aza.org/. For curriculum ideas go to <http://www.education-world.com>. For list of zoos, go to <http://www.computingcorner.com>.

National Fishing and Boating Week—first full week of June from Friday to the next Sunday. Annual celebration providing opportunities for youth to experience recreational fishing and boating, learn about the environment, and practice conservation ethics. Fish for free (i.e., without a license) during the first full weekend in June. Then buy a fishing license and go fishing with family or friends. If successful, find a good fish recipe and eat well! Visit <http://www.nationalfishingandboatingweek.org/>

1. *Ohio Natural Areas Act, (1970)*—The enactment of this legislation authorized the Ohio Department of Natural Resources to administer a system of state nature preserves which eventually led to the creation of the ODNR Division of Natural Areas and Preserves in 1975. **Take a field trip to one of Ohio’s 121 natural areas and preserves. Which is the closest to your home? Do “Space For Species” from *Windows on the Wild*.**

2. _____

3. _____

4. *Gaylord Nelson’s birth anniversary, (1916)*—former U.S. Senator from Wisconsin, environmental leader, best known as founder of Earth Day. Became Counselor of the Wilderness Society in January 1981. **Make Earth Day Everyday! What have you done today for the environment?**

5. *United Nations: World Environment Day*—Anniversary of the opening of the UN Conference on the Human Environment held in Stockholm in 1972, lead to the establishment of the UN Environment Program, based in Nairobi United Nations, Department of Public Information, New York, NY 10017. **Checkout <http://www.unep.org/>.**

The Ohio Soil Conservation District Enabling Act signed, (1941)—The Act created the Ohio Soil Conservation Committee and established procedures for the formation of local soil conservation districts. **Visit your county soil and water conservation district office to find out about conservation services available to you. Do the activity “Perc Through the Pores” from *Food, Land, and People*.**

The Ohio State Forestry Bureau established, (1885)—Legislation approved to establish the Bureau as part of OSU. It was charged with the responsibility of “thoroughly inquiring into the character and extent of the forests of the state; to investigate the causes of which are in operation to produce their waste or decay; to suggest what legislation is necessary for the development of a rational system of forestry....and to establish a forestry station on the grounds of Ohio State University.” This Bureau later became the ODNR Division of Forestry. **Use a tree key to identify trees near your home.**

6. _____

7. _____

8. _____

9. _____

10. _____

11. *Jacques-Cousteau birth anniversary, (1910-1997)*—French undersea explorer, writer and filmmaker. **Make a diorama of an underwater scene.**

12. _____

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 17. _____
 18. _____
 19. _____
 20. _____
 21. **Summer begins. Celebrate with a picnic at a park. Do the activity “Ants on a Twig” from *Project WILD*.**
 22. _____
 23. _____
 24. _____
 25. _____
 26. _____
 27. _____

July

Creating an Outdoor Classroom

Go outside and learn!

Even though school is not in session, summer is a great time to plan how to effectively use the outdoor school site for teaching and learning.

Nature studies may be as simple as a step into the schoolyard or outdoor setting. Many professionals are suggesting you skip the rainforest curriculum and focus instead on the wonderful educational activities that await you right in your own backyard. Developing an outdoor education classroom might not be as difficult as you think. Once you organize a committee to begin the process, there are resource agencies to assist you such as the Ohio Department of Natural Resources, OSU Extension, your county soil and water conservation district office, local parks, garden clubs and others.

The Ohio Department of Natural Resources, for instance, has two outdoor classroom programs. The WILD School Site program, an extension of Project WILD, is an award-winning conservation curriculum supplement that is designed to encourage students and teachers to use their school or other outdoor locale as part of a multi-disciplinary environmental education program. The Project WILD program includes simple projects that range from making a bird feeder, building a rock pile or planting a flower bed, to more elaborate projects like the creation of ponds, wetlands or a weather station. Educators who want to learn more about how to create an outdoor classroom may want to attend a workshop sponsored by the ODNR Division of Wildlife. For further information, call 1-800-WILDLIFE or go to www.dnr.state.oh.us.

The second program, Habitats for Learning, encourages teachers to go outside and use their school grounds for teaching and learning. This program has been designed to ensure long-term use of the site by following a step-by-step process involving many elements that are outlined in the program materials. The philosophical cornerstone for the project is simple: Use of the existing site should precede enhancement and long-term development.

No influx of resources will motivate teachers to teach outdoors if they are not so inclined. The underlying premise implies a three-phase approach:

- Use—Teachers and learners use, or continue to use, the existing site to meet educational objectives.
- Enhance—Based upon actual use of the habitats for learning, teachers, learners and others make site improvements as needs arise (e.g., attend to poison ivy, mulch a muddy area, hang a bird feeder).
- Develop—while using the “enhanced” existing site, a broad-based committee designs and implements a long-range plan that matches site development with the curriculum.

The Habitats for Learning materials consist of a planning guide, motivational video and a directory of existing land labs (outdoor classroom sites) in Ohio. For more information contact Diane Cantrell, State Specialist for Environmental Education, OSU School of Natural Resources, 210 Kottman Hall, 2021 Coffey Road, Columbus, OH 43210-1085 or cantrell.2@osu.edu.

Resources:

To find out more about creating wildlife habitat with youth, look into the Ohio 4-H Wildlife Habitat Evaluation Program. Visit <http://www.whep.org>

Backyard Conservation: Bringing Conservation from the Countryside to Your Backyard is sponsored by USDA-NRCS, NACD, and Wildlife Habitat Council. The publication is available from local soil and water conservation district offices. Additional information can be found at <http://www.nhq.nrcs.usda.gov/CCS/Backyard.html>.

Schoolyard Habitats and *Backyard Wildlife Habitats* are two programs sponsored by the National Wildlife Federation. For information, go to <http://www.nwf.org/education/>

July Dates

National Parks and Recreation Month—According to the U.S. Census Bureau, there are some 78 million acres of national parks and recreation areas and another 13 million acres of state facilities.

Each year, these areas draw a combined total of over 1 billion visitors. That’s about four visits for every person in the country.

1. *First U.S. postage stamp was issued, (1847)*—**Find someone who collects stamps and explore how nature is portrayed on stamps.**

2. _____

3. _____

4. *Construction of the Ohio and Lake Erie Canal started in Newark, (1825)*— The construction was under the direction of the Ohio Canal Commission formed in 1822. This agency is the historical root for the ODNR Division of Water. **Do “How Were Early Canal Routes Determined?” and “How Did the Canals Affect Ohio?” from *Great Lakes Shipping* (Earth Systems: Education Activities for Great Lakes Schools).**

5. _____

6. _____

7. *Father/Daughter Take a Walk Together Day*—A special time for fathers and daughters of all ages to spend time together. **Enjoy this time together in a park or other natural setting.**

8. _____

9. _____

10. _____

11. *United Nations: World Population Day*—In June 1989, the Governing Council of the United Nations recommended that July 11 be observed by the international community as World Population Day. The day seeks to focus public attention on the urgency and importance of population issues. **More details can be found at the UN World Population website: <http://www.unfpa.org/>.**

12. *Henry David Thoreau birth anniversary, (1817-1862)*—American author and philosopher. In well known book, *Walden*, he wrote “I frequently tramped eight or ten miles through the deepest snow to keep an appointment with a beech tree, or a yellow birch, or an old acquaintance among the pines.” **Start a nature journal. Sit in an outdoor setting and/or write about what you think and feel.**

13. _____

14. *The Ohio Litter Control Act* was signed into law, (1980)—This led to the creation of the ODNR Office of Litter Control, now the Division of Recycling and Litter Prevention. **Participate in or help to start a curbside or drop off recycling program in your community. Do an activity from *Windows on Waste* or *Investigating Solid Waste Issues*.**

15. _____

16. _____

17. _____

18. _____

19. _____

20. *Lunar Landing Day, (1969)*—Celebrating the day when humans first set foot on the Earth’s moon. **Look at the moon through binoculars or a telescope.**

21. _____

22. _____

23. *The Coal Strip Mine Land Reclamation Act, (1949)*—This legislation created a new regulatory agency, the Division of Reclamation in the Ohio Department of Agriculture, to be responsible for administering this law. This Act formed the historical roots for the ODNR Division of Mineral

Resources Management. Try **“Chocolate Chip Cookie Mining.”** Using toothpicks or paper clips, see how many chocolate chips you can mine from a cookie. Try mining 3 different brands of cookies. Be sure to **“reclaim your land.”**

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- 25. _____
- 26. _____
- 27. _____
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- 31. _____

Volunteer to Monitor Your Environment!

Save Our Streams (SOS)—A program of the Isaac Walton League of America (IWLA), has been a leader in citizen education in water quality monitoring, watershed restoration, and the importance of wetland protection (<http://www.iwla.org/siteindx.htm>). In Ohio you can also become involved in water quality monitoring through the Ohio Department of Natural Resources Scenic River Program (614-265-6453, <http://www.dnr.state.oh.us/odnr/dnap/monitor/sqm.html>) or through your county soil and water conservation district.

Citizen Lake Awareness and Monitoring (CLAM)— is a statewide citizen lake and watershed monitoring program that collects water quality data throughout Ohio. For more information visit www.olms.org or call 330-672-5475.

Global Learning and Observations to Benefit the Environment (GLOBE)—is a hands-on science and education program uniting students, teachers, and scientists from around the world as they study and conduct research about the Earth's environment. GLOBE students take environmental measurements at or near their school. They have reported data from 4 million measurements in the areas of Atmosphere/Climate, Hydrology, Soils, Land Cover/Biology. Age-appropriate environmen-

tal science educational materials have been developed by scientists and educators as a resource for GLOBE teachers. Visit the GLOBE program at <http://www.globe.gov/>. (Click on Globe Partners, U.S. Franchises to find the Ohio GLOBE contact nearest you.)

Global Rivers Environmental Education Network (GREEN)—can help you make lasting improvements to your watershed by offering an online monitoring database and community action tool. This program is designed for monitoring groups and interested browsers alike. For more information go to www.green.org.

U.S. Geological Survey (USGS)—has monitoring programs for amphibians, butterflies, and birds. For more information go to <http://www.mp1-pwrc.usgs.gov>.

Journey North—monitors migrations, predominately for monarch butterflies. For more information, go to <http://www.learner.org/jnorth/>

Great Backyard Bird Count—is an annual event sponsored by Cornell University. For more information, go to http://birdsource.cornell.edu/gbbc/toc_page.html.

Additional Resources

- Streamulator (a streamtable): available from county soil and water conservation district offices.

August Dates

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11. *Ohio Department of Natural Resources (ODNR)* was created, (1949)—It consisted of seven Divisions, six from previously existing units (Geological Survey, Wildlife, Forestry, Parks, Water and Beach Erosion), and one new unit, Land and Soil. **Go to ODNR’s website at <http://www.dnr.state.oh.us> and learn about the diverse functions of this state agency.** *Gifford Pinchot’s birth anniversary*,(1865-1946)—Leading advocate of conservation at the turn of the twentieth century. Raised forestry and natural resource conservation to a nationwide movement. Became head of the Division of Forestry in 1898 and was named Chief Forester of the redefined U.S. Forest Service. **Take a walk in your neighborhood and count how many different trees you can see.**

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September

Erie—Our Great Lake

There are five lakes in the United States Great Lakes' system, one of which is Lake Erie. An easy way to remember the five lakes' names is to use the word, HOMES. Each letter stands for a different lake: H for Huron, O for Ontario, M for Michigan, E for Erie, and S for Superior.

Aquatic invaders (stowaways from other countries) are having major effects on Lake Erie. One of these is the zebra mussel that can quickly colonize any nontoxic area with a hard surface, including vessels, pipes, and other mussels living in the lake. Zebra mussels have been found in all of the Great Lakes as well as major rivers and several Ohio inland lakes. As zebra mussels spread, biologists are concerned that populations of native mussels will decline. They can filter one or more liters of water each day, which has made the lake water clearer, but clearer does not necessarily mean safe, clean water. This may make toxic substances available to new organisms in the food chain because Zebra mussels rapidly concentrate pollutants through filtration, then deposit these in their waste—making it possible for these pollutants to be passed up the food chain.

The Sea Grant program, offered through The Ohio State University, offers for-credit educational programs dealing with Lake Erie (614-292-8949). Sea Grant has many publications for sale with educational activities geared to all grade levels. The website with their publications can be found at www.sg.ohio-state.edu.

Lake Facts

- Lake Erie is the 11th largest freshwater lake by surface area in the world.
- Lake Erie is the smallest in volume and warmest of the five Great Lakes.
- Lake Erie is 241 miles long with an average depth of 62 feet.
- Lake Erie was the first of the Great Lakes to be formed. Scientist estimate that the lake existed in some form as early as 15,000 years ago.
- Daily, over 11 million people get their drinking water from Lake Erie.
- During a glacial retreat, melt-water filled the basin scoured by the glacier on its previous advance and created Lake Erie.
- The outlet for Lake Erie is Niagara Falls.
- Over 100 species of fish live in Lake Erie and 25 million fish are caught in it each year.
- Over 300 species of birds have been found along Lake Erie islands.
- Lake Erie wetlands provide habitat for migratory birds and are also home to the Bald Eagle.

(Source: Sue Hogan, Stark County Soil and Water Conservation District)

Additional Resources

Section 6: Resources

- I. Environmental Education Activities
—*Earth Systems—Education Activities for Great Lakes Schools*

September Dates

In September the Monarch Butterflies start to migrate from as far north as Pt. Pelee, Canada, south to the forests high in the mountains of Mexico. The monarch's migration is driven by seasonal changes. Day length and temperature changes influence the movement of the Monarch. Log on to <http://www.monarchwatch.org/> for more information.

National Honey Month—makes it the perfect time to discover the many different tastes of nature's sweetener. Log on to <http://www.nhb.org/>.

Organic Harvest Month—growing in popularity, organic foods are being prepared by people from gourmet chefs to soccer moms. Visit the Organic Trade Association website to learn of some ways to

explore and appreciate organic foods: http://ota.com/buying_organic.htm.

National Public Lands Day—the last Saturday in September. A day to improve and enhance resources in national parks and forests, reservoirs and other public lands. The program is coordinated by The National Environmental Education and Training Foundation: <http://www.neetf.org/>.

National Farm Safety and Health Week—third full week of September (Sunday through Saturday). Agriculture is considered to be the second most dangerous industry in the United States. Promote farm safety and health within your community. For more information, visit the National Safety Council website: <http://www.nsc.org/farmsafe.htm>.

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17. *Citizenship Day*—President Harry Truman signed a bill establishing September 17 as Citizen - ship Day, the date on which the U.S. Constitution was signed in 1787. The intent of the bill was to give recognition to those who had become American Citizens during the preceding year. The celebrations include pageantry and speeches to impress Americans with the privileges and responsibilities of U.S. citizenship. Citizenship Day focuses on the rights and responsibilities of U.S. citizens both native-born and naturalized. **Volunteer in your community.**

18. _____
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22. Autumn begins. **Take a 64-count box of crayons or booklet of paint colors from a paint store and see how many different fall colors you can match.**

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Protect Our Groundwater!

Groundwater is located beneath the earth's surface. It fills the spaces in underground rock, sand, or gravel, just like a sponge. Roughly 40% of Ohio's population uses groundwater for drinking and it makes up 95% of the fresh water supply in the U.S. Groundwater is in constant slow motion—it moves slowly, about two feet per year.

What is an aquifer?

An aquifer is an underground body of soil or rock in which groundwater can easily be stored and through which it can move. Gravity is the force that moves groundwater, which generally means it moves downward.

How does groundwater flow?

Unconsolidated aquifers are made up of loose, coarse sediments such as sand and gravel. In this type of aquifer, groundwater flows between the sediment particles. In general, groundwater flows from high areas to lower areas and generally mimics the direction of flow of surface water bodies such as streams and rivers. In bedrock aquifers, groundwater can move between the sediment particles (in cases like sandstone) or it can move along fractures within the rock (in limestone).

The Water Table and Zones of Saturation

The water table marks the highest level of the groundwater beneath the ground surface. The area between the ground surface and the water table is called the unsaturated zone, or zone of aeration. Any water in this area, called soil moisture, is the water used by plant roots. The entire area below the water table is the zone of saturation. This zone marks the area where all interconnected spaces in soil and rock are completely filled in (saturated) with water.

Ground and Surface Water Are Interconnected!

Surface water is water in lakes, streams, rivers, and oceans—water that is found on the earth's surface. Groundwater and surface water are often interconnected. Groundwater can move through the ground and into a lake or river. Or, water in a lake can seep down into the ground and become groundwater.

Groundwater Activities

Fill a plastic jar one-quarter full with play sand. Add a layer of stone, then more sand. Put some red food coloring in the center, and then fill the rest of the jar with water. Now take a clear straw and fill with the red food color. This demonstration models pollutants entering an unconfined aquifer and being drawn up through a well.

Miami Conservancy District's *Groundwater Trail*, is a comprehensive resource about groundwater and how groundwater gets from the ground to your faucet. Log on to: <http://www.miamiconservancy.org>.

The Adventures of Dew, Ohio EPA, Division of Drinking and Ground Water (614-644-2752). <http://www.epa.state.oh.us/ddagw/pdu/wellhead.html>.

SPLASH₂O, *A Science-based Program for Learning About Society & Water*, is available from the Ohio 4-H Program. Visit their project's website and view the Family Guide to 4-H for information on what projects are available on water science: <http://www.ag.ohio.state.edu/~fourhoh/youth/index.htm>.

To learn more about groundwater in your county obtain a copy of your county's Pollution Potential Map from the ODNR Division of Water (614-265-6740): http://www.dnr.state.oh.us/odnr/water/pubs/fs_div/fsht09map.html.

Additional Resources

- *Groundwater Flow Model*: available from county soil and water conservatin district offices.

October Dates

National Forest Products Week—third full week of the month (Sunday to Saturday). Created to promote greater awareness and appreciation for our forest resources. Make a list of all the different products you use from trees. Think about how all the different parts of a tree are used, not just the wood.

1. _____
2. _____
3. *National Wild and Scenic Rivers Act* signed, (1968)—This act declared that certain rivers of the Nation with remarkable scenic, recreational, geologic, fish and wildlife, and/or historic and cultural value would be preserved and protected for the benefit and enjoyment of present and future generations. For more information, log on to <http://www1.nature.nps.gov/wrd/wrdriver.htm>. **Do “Riparian Retreat” from Aquatic Project WILD.**
4. _____
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15. *ODNR Division of Oil and Gas* created, (1965)—Its purpose was to enforce Ohio’s Oil and Gas Law and to promulgate rules for its administration and implementation. The Division later merged with ODNR Division of Mining and Reclamation to become the Division of Mineral Resources Management. **List 10 ways you benefit from the oil and gas industry. Which three are the most important to you and why?**
16. *World Food Day*—The day has been observed across the world to heighten public awareness of the problem of world hunger, to focus attention on food security for all, and to create increased awareness, understanding and informed action on hunger. It is honored annually on the founding date of the UN Food and Agriculture Organization. **Volunteer at a food pantry.**
17. _____
18. _____
19. _____
20. _____
21. *J.N. “Ding” Darling birth anniversary, (1876-1962)*—A renowned editorial cartoonist who advocated conservation of our nation’s natural resources. Also considered to be the father of the Federal Duck Stamp Program, founder of the National Wildlife Federation, and creator of the Cooperative Fish & Wildlife Research Unit Program which laid the groundwork for the system of today’s national wildlife refuges. **Visit a refuge and/or design your own duck stamp.**
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26. _____
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29. *Wellington Wildlife Area* was the first wildlife area purchased by the state, (1918) — Visit one of 80 wildlife areas owned and managed by ODNR Division of Wildlife. **Do the activity, “Thicket Game” from *Project WILD*.**
30. _____
31. _____

Soil in Motion—Bare Truth About Soil

- Soil is not just dirt. Dirt is dust and other debris that plants can't live in, while soil has varying amounts of organic matter (living and dead organisms), minerals, and nutrients.
- Soil is formed from rocks and decaying plants and animals.
- Topsoil is the richest part of the soil and where food is grown.
- In just one teaspoon of top quality Ohio topsoil, there may be five billion bacteria, a million protozoa (unicellular organisms such as amoebas) and 200,000 algae and fungi.
- Vegetation, including trees, grasses and shrubs, is the glue that keeps topsoil in place.
- Eroded topsoil is a source of water pollution. It can cover up critical in-stream habitats for aquatic insects and cloud the lakes, rivers and streams.

To illustrate soil erosion, purchase two sloping paint pans and top soil. Place the top soil on the highest part of each paint pan. In one of the pans, plant grass seed in soil on the highest part and allow it to grow (remember to water gently when

soil is dry so the seeds will sprout and grow). Leave the other pan with just bare soil. When the grass has sprouted and grown a few inches, you are ready for the experiment. Sprinkle both pans with water, simulating a rain shower. Observe what happens to the soil in each pan. Which pan of soil erodes more quickly (with the soil shifting down to the lower part of the pan), the one with bare soil or the one with vegetation (the sprouted grass)?

For information on creating a *Seeds of Change Garden* initiated by the Smithsonian Museum, log on to <http://www.nmnh.si.edu/garden/whatis.html>. The garden is a hands-on project that helps students to interact with both nature and each other, while exploring cultural diversity.

General soils map for all Ohio counties are available from county soil and water conservation district offices.

(Source: Sue Hogan, Stark Soil and Water Conservation District)

Additional Resources

Section 6: Resources

- I. Environmental Education Activities
 - A Child's Place in the Environment (Unit2)*
 - Activities Integrating Mathematics and Science (AIMS)*
- XV. Soil Activities

November Dates

National Chemistry Week—first full week of November, Sunday through Saturday. To celebrate the contributions of chemistry to modern life and help the public understand that chemistry affects every part of our lives. Visit the American Chemical Society website and search for information on Chemistry Week: <http://www.acs.org/portal/Chemistry>

National Geography Awareness Week—this annual celebration was initiated in 1987 by the National Geographic Society <http://www.nationalgeographic.com> to promote geographic literacy. Geography Awareness Week occurs in November. Each year, there is a new theme. Information is available on <http://www.nasm.edu/ceps/gaw/gaweek.htm>. **Make a map (2-dimensional or 3-dimensional) of your neighborhood, school grounds or favorite place.**

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7. _____
8. _____
9. *Carl Sagan birth anniversary*, (1934-1996)—Astronomer, biologist, author (*Broca's Brain*, *Cosmos*). **On a clear night, relax outside and watch for shooting stars.**
10. _____
11. _____
12. _____
13. _____
14. _____
15. *America Recycles Day*—To promote recycling and recycled products. The American Recycles Day homepage can be found at <http://www.americarecyclesday.org/homepage.html>. **Go to the grocery store and shop with recycling in mind: buy in bulk, look for containers that can be recycled, take a cloth bag to carry groceries.**
16. _____
17. _____
18. *Asa Gray birth anniversary*, (1810-1888)—American botanist and natural history professor at Harvard. Gray was known as a pioneer in the field of plant geography. **How many different plants can you find in your yard?**
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20. _____
21. _____
22. _____
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29. _____
30. _____

December

Trees—Love a Tree!

Towering Tree Facts

- Hundreds of insects and animals can live off a single tree.
- Trees provide food even after they die.
- Trees along streams and rivers help to anchor the soil and keep the water cool.
- Deep pools found beneath streamside tree roots provide important habitats for game fish.
- Tree growth depends on water, temperature, and location of the plant.
- The width of the rings in a cross section of a tree indicate growth patterns. Wider rings indicate more growth due to favorable growing conditions. Narrower rings indicate less growth due to cold weather, drought, lack of sunlight or other unfavorable conditions.

Make bark rubbings of a tree. Hold a piece of recycled paper up to the trunk of a tree. Using the side of a crayon, gently rub the surface. When you are finished you will have a picture that shows the exact pattern of the bark on your tree. This is like your tree's fingerprint.

Learn more about the trees of Ohio at <http://www.hcs.ohio-state.edu/ODNR/Education/ohiotrees/treesindex.htm>

Project Learning Tree uses the forest as a “window” into the natural world to help Pre K –12 learners gain awareness and knowledge of the world around them, as well as their place in it. Visit the PLT-Ohio website for more information: <http://www.dnr.state.oh.us/forestry/education/infoplt.htm>.

(Source: Jennifer Benson, Science Director, McKinley Museum)

Additional Resources

The Native Plants of Ohio, OSU Extension Bulletin 865. <http://ohioline.osu.edu/b685>

Section 6: Resources

- I. Environmental Education Activities
 - Activities Integrating Mathematics and Science (AIMS)
 - Great Explorations in Math and Science (GEMS)
 - NatureScope
 - Project Learning Tree

December Dates

1. _____
2. ***Glacier Bay National Park* established, (1980)— Make a glacier by freezing soil and water in a loaf pan. Remove from pan and place on an inclined board. See what happens when it melts.**
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18. ***Endangered Species Act* signed, (1973)—For a list of Ohio’s endangered animals, view the website provided by ODNR Division of Wildlife at <http://www.dnr.state.oh.us/wildlife/pdf/pub316.pdf>. For a list of Ohio’s endangered plants, view the website provided by the ODNR Division of Natural Areas & Preserves, <http://www.dnr.state.oh.us/dnap/heritage/plantlst.html>. Do “Space for Species” from *Windows on the Wild: Biodiversity Basics*.**
19. _____
20. _____
21. **Winter begins— While many species of wildlife migrate south for the winter, others do not. Go outside and look for signs of wildlife.**
22. _____
23. _____
24. _____
25. _____
26. _____
27. ***Louis Bromfield birth anniversary*, (1896-1956)— Pulitzer Prize winning author for *Early Autumn* (published in 1925) and dedicated conservationist. In 1938-39 he purchased Malabar Farm in Richland County, Ohio, where he built a 32-room country home. In 1976 Malabar Farm became an Ohio State Park. Visitors can learn about Bromfield’s farming philosophies, and explore life on a farm: <http://www.malabarfarm.org/>.**
28. _____
30. _____
31. _____