

Earth Day 2020

This year we are celebrating the 50th anniversary of Earth Day! Earth Day reminds us that we all need to do our part to have a positive impact on our environment. Check out the following information and activities to celebrate Earth Day everyday! (Recommended for 4th grade and up).

1. We know that all living things need water to survive, but we don't always think about how our actions impact our watersheds and waterways.

-Watch [NOAA's video about marine debris called "Trash Talk"](#). Where does **marine debris** come from? How does marine debris impact wildlife? How can we prevent marine debris?

-What water sources do you have near where you live? Do you have a pond, stream, creek, river, or lake nearby? Look at a map to locate your local water systems. Have you ever noticed litter in or near the water? Every spring, volunteers work together in a **Shoreline Sweep** to clean up coastlines from trash and debris. Locally, the [Buffalo Niagara Waterkeeper](#) organizes an event each year and provides materials for safe clean-up, like gloves and trash bags for anyone who registers. However, there are many other opportunities to participate in these types of events, no matter where you live.

-Even something as simple as picking up litter around your yard or neighborhood will have a positive impact, because ultimately pollution often ends up in waterways. In the activity [Rapid Trash Assessment](#), you can conduct your own survey of an outdoor environment where you live, examine a method for assessing litter, identify how humans impact the environment, and design solutions for preventing marine debris. Like a scientist, you can collect data on a [worksheet](#) too! What are some solutions to decreasing waste that are **sustainable**? Being sustainable means being able to meet the needs of the present without compromising the abilities of future generations to meet their own needs. Be sure to check out the Conservation and Sustainability methods- about Refuse, Reduce, Reuse and

Recycle! And consider the issue of [plastic pollution](#) and ways that you can make a difference!

- Have you ever heard of a **rain barrel**? Rain barrels collect, store, and recycle rainwater from a roof that would otherwise be lost to runoff. A simple project like setting up a rain barrel can collect more than 50 gallons of water! Recycling this rainwater saves money on water bills by using rainwater in place of tap water, which can be used for: watering plants and gardens, cleaning tools, washing the car, and other outdoor chores. More information on the [benefits of rain barrels](#) as well as [resources about how to make your own rain barrel](#) are helpful for inspiration!

Take action! How can you help keep your water resources clean? Come up with a plan for how you can help, write out the details of your plan, and then put that plan to action!

2. We all love trees for the beauty that they add to our yards, neighborhoods, and communities. But do you know that [trees benefit us](#) in many other ways? Trees help clean our air, positively affect our health, provide us with oxygen, help clean our drinking water, provide shade and environmental cooling, absorb carbon dioxide and can help reduce the effects of climate change, benefit wildlife, and so much more!
 - To help better appreciate the variety of trees in our communities, try to locate at least 5 different species where you live. Are they deciduous or evergreen? Can you identify any or all of them? If you are able to collect a leaf from each tree, use the [Arbor Day Foundation's What Tree is That? online identification guide](#) to learn more about each type of tree.
 - Learn some science words related to trees:
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3. **Dendrology**- the scientific study of trees and shrubs
4. **Silvics** is the term used for the characteristics that define the life history, growth, behavior and ecology of a tree species.

5. **Silviculture** is the application of **silvics** to the management of trees in order to enhance the reproduction, survival or growth of a specific tree species.
 6. Do you need to brush up on some **tree biology terms**? There's a [quizlet](#) to help!
 7. **Be a scientist!** Use your knowledge of trees to write a report about why they are important. Or head outside to observe trees and leaves and make a **scientific sketch**. A scientific sketch will include drawings and diagrams with labels, as well as questions and explanations. You don't have to be an artist to create a successful scientific sketch! You simply have to take time, observe closely, and record what you see.
- Did you know that the oak tree is the national tree of the US? What is your [state tree](#), and how is it a representative of the ecosystem where you live?
 - Since we know that trees are important for our environment and can help reduce the effects of climate change, planting trees is an important action we can all do! If you decide to [plant a tree](#) around your home, make sure you understand the **silvics** of the tree before planting, to be sure you are planting the right tree in the right place and what environmental conditions are best for the species of tree you wish to plant! There are lots of [resources](#) that will help you find trees that are native to your area.
 - How can we amplify the benefits of planting trees in our backyards? Check out how the YouTube community and [#TeamTrees](#) donated more than 20 million dollars to plant 20 million trees around the world!

Take action! What can you do at home to help trees? Come up with a plan for how you can help, write out the details of your plan, and then put that plan to action!

3. Planting a vegetable garden is a great hands-on opportunity to feel connected to nature and to recognize the nutritional benefits of growing our own food.

- There are also other backyard gardens to consider, including what types of wildflowers, shrubs, and grasses to grow. It is important to learn about the benefits of **native plants**, which are those plants that occur naturally in the region in which they evolved. Native plants will support a great diversity of wildlife species that are important for the ecosystem. Check out what native plants will attract [birds](#) and [invertebrate pollinators](#) (like butterflies and bees) to your backyard, based on where you live!
- What is a natural way to deal with any natural, organic waste that we produce (especially any fruit or vegetable scraps)? **Compost**, of course! You can do your own [Compost Scientific Investigation](#) to learn about decomposition, what types of items decompose, and test variables that affect the rate of decomposition. Set up your own compost bin or check out how cool it is to [vermicompost](#) (the process of garden composting using worms!).
- How much trash do you think you produce in a day? The average amount per person is about 5 pounds, which really adds up! Pay attention to how much trash that you produce in a given day, what types of items you are throwing away, what you are able to recycle or reuse. Are there any ways to reduce your trash output? Why is it important to consider alternatives to using lots of disposable items? Learn how some people are trying to produce the least amount of trash possible in the [zero-waste movement](#).

Take action! How can you create less waste at home? Come up with a plan for how you can help, write out the details of your plan, and then put that plan to action!