



Friends of NCTC Program Activity
c. 2022 Friends of National Conservation Training Center

Every Day Is Earth Day! (ages 5 and older)

Background (natural history)

In 1970, US Senator Gaylord Nelson proposed to hold a national, environmental “teach-in” on April 22 to honor the Earth. In the past 50 years, it has become an international event. Many communities hold Earth Week activities, too. But we can honor and care for the Earth every day of the year! Even though it is now the month of May, these activities can help you honor and care for our planet! After all, we live here--every day is Earth Day!

What You Will Need for This Project

Plant A Seed

Seeds, topsoil, a pot for planting (available at stores like Home Depot or Wal-Mart)

[Good choices for flower seeds are Marigolds, Zinnias, Sunflowers, Brown-eyed Susan, Gaillardia (Blanket Flower), Purple Coneflower, or any type of Aster.]

Yogurt container or milk jug (optional)

Tackle The Trash

Gloves and Trash bags

Trash tongs (optional)

Reflective Vest (optional)

Natural Chemistry

1 cup of Common Blue Violet flowers

1 cup of Water

Strainer

3 clear containers

An acidic liquid and a basic liquid (clear liquids work best)

Other liquids (optional)

What to Do **Plant a Seed**

How simple it is to plant a seed and grow a plant in your yard! Plants add color to your yard and are important for pollinators.

You can find small planting kits at stores like Home Depot or Wal-Mart or purchase a packet of seeds, some topsoil, and a pot for planting. You can also recycle a yogurt container or milk jug and use it as a pot. (Putting holes in the bottom will help the soil drain.)

Choose seeds that are easy to grow and will add some color to your backyard. You can also choose a vegetable seed and grow something to eat later in the summer. Good choices for flower seeds are Marigolds, Zinnias, Sunflowers, Brown-eyed Susan, Gaillardia (Blanket Flower), Purple Coneflower, or any type of Aster.

To plant: put soil in the container, up to about 1” from the top. Make a hole in the soil, up to your first knuckle. You will have room for 2 to 4 holes, depending on the diameter of your pot. Place a seed in each hole and cover it lightly with soil. Water the seeds and put them in a warm, lighted place. When the top of the soil becomes dry, water them again. When you see the plant begin to emerge, put the pot in full sun and keep up your watering. When plants are 4-5” tall, you can plant them outside. Dig a hole in the soil, place each plant in a separate hole, and cover the roots. Water them when you first plant them and keep them watered if it doesn’t rain. The plants may not produce flowers until later in the summer, but you can watch and wait!

Benefits of flowers:

They Attract Bees! The bees use the nectar as food and an energy source to get to and from their home. On the other hand, they use the pollen they pick up from flowers to feed larva (baby bees).

They also attract other beneficial insects such as ladybugs, parasitic wasps, hover flies, and other beneficial insects. These insects won't hurt you and they do protect your plants from aphids and other harmful pests.

Marigolds contain the pungent odor, antioxidant content, and volatile oil used to naturally repel mosquitoes, pests, and other insects. And this is the reason why marigolds flowers are commonly planted in vegetable gardens. Sunflowers will produce the seeds that birds love later in the fall. Purple Coneflowers do too!

Tackle the Trash!

Trash! It can be stinky and ugly and who wants it in their yard or look at it on their road! Luckily, it's easy to tackle trash and make your community shine! Many states and communities have special programs to tackle trash for Earth Day, but why wait for one month in the year—Every Day Is Earth Day. You can help keep the Earth litter-free!

You will need good gloves and a trash bag. You might also use long trash tongs if you have them. If you are going to be near a street or a road, a reflective vest can be helpful to keep you safe. Choose a place where you can pick up trash--it might be a nearby park, your neighborhood, your school, or a shopping center. (Just watch out for cars and make sure an adult knows what you are doing or goes with you as you tackle the trash.) You can even challenge your friends to a Trash Tackling Contest to see who can collect the most trash! Once you have cleaned up as much trash as you have time for or your trash collection bag is full, be sure to dispose of it the right way. Maybe you can put it out for garbage collection or take it to your dump/landfill.

It's always good to separate recyclable items from real trash. Your community may recycle items like glass, aluminum, plastics, cardboard, and tin cans. You can check with your local waste collection provider for what can be recycled.

Tackle the Trash, Part Two!

What did you pick up when you Tackled the Trash? It can be both fun and informative to see exactly what is littering your community. Once you have collected trash and litter, go through it and separate the items. You can record the number of pieces of the different types of trash you collected on this chart.

Types	Glass	Paper/Cardboard	Plastic	Aluminum/Tin	Other
Number of Items					
Is It Recyclable?					

Natural Chemistry (Adult Supervision Recommended)

Usually when we think of the word chemistry, we think of artificial settings like laboratories and science experiments. Chemistry, however, is a process that happens all around us- and even within us. Examples can be found in our home: cooking involves many chemical reactions or outdoors: venomous animals use specific chemicals that interact with their prey. Chemistry can come in many forms. One way we use to determine the acidity level of chemicals is the power of hydrogen, otherwise known as pH. Using pH, we can determine if something is acidic, like lemons, or basic, like milk. We are going to do an experiment today using a plant we can find in our backyard to determine pH of various liquids.



What You Will Need

1 cup of Common Blue Violet flowers

1 cup of Water

Strainer

3 clear containers

An acidic liquid and a basic liquid (clear liquids work best)

Other liquids (optional)

What to Do

Look around your yard or nearby park for these flowers (common blue violets) and collect a cup full. Boil a cup of water, add the flowers, and let them steep (soak) until the liquid cools. This can even be overnight. The liquid should be a dark blue color. Then, use a strainer to strain out the liquid into a clear container. Put some of the liquid (not all of it!) into the other two containers. This means you should have three clear containers of the liquid.

Add white vinegar, an acid, to one container. Watch as the liquids mix. What color is it now? Did the color turn pink, green, or stay blue?

Add baking soda that is dissolved in water (a base) to the other container. Did the color change the same way as before? What color did it turn?

You can use the scientific method to test other liquids! Make sure your test containers have been fully rinsed out, then put some new violet water into them. Try adding other kitchen liquids (clear liquids will work best!) Make a hypothesis (a guess) of whether it will be acidic (and turn pink) or basic (and turn green). Record your hypotheses and see if you were correct.

Go Exploring!

The best way to celebrate Earth Day every day is to get out and explore! There might be a US Fish and Wildlife Refuge near you. In West Virginia, you can visit Canaan Valley National Wildlife Refuge near Davis WV or Ohio River Islands National Wildlife Refuge near Parkersburg WV. There are many others close to the Eastern Shore of Maryland. If you live in another state, you can find a refuge near you at <https://fws.gov/visit-us/refuges?type=%5B%22National%20Wildlife%20Refuge%22%5D>. And of course, there are also state and national parks, local parks, and even your own backyard! It doesn't really matter where you go—just get outside and enjoy nature!

Helpful Hints for Adults (books to read, other websites, links)

Natural Chemistry:

A Wildflower identification guide will help you identify violets, which are very common. They are edible, but if you have sprayed your yard with fertilizer or a pesticide, DO NOT eat them.

<https://wvexplorer.com/2022/02/19/edible-plants-west-virginia-bill-beatty/> has an interesting background article.

- Examples of Acidic Liquids: Lemon juice, vinegar, clear soda, and energy drinks
- Examples of Basic Liquids: milk, green tea, and salt water, window cleaner, dish detergent

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WV Make It Shine program

<https://dep.wv.gov/environmental-advocate/reap/wvmis/Pages/default.aspx>

Some of the national wildlife refuges and national parks charge visitors a nominal entrance fee (generally \$3-5 daily). If you are a regular visitor, you can save by buying a Federal Duck Stamp (<https://fws.gov/service/buy-duck-stamp-or-e-stamp>) or America the Beautiful-National Parks and Federal Recreational Lands Passes. (<https://fws.gov/service/federal-recreational-lands-passes>)