



Fur, Feathers, and Ferns

Complete Requirement 1 and three others.

1. While hiking or walking for one mile, identify six signs that any mammals, birds, insects, reptiles, or plants are living near the place where you choose to hike or walk.
2. Visit one of the following: zoo, wildlife refuge, nature center, aviary, game preserve, local conservation area, wildlife rescue group, or fish hatchery. Describe what you learned during your visit.
3. Name one animal that has become extinct in the last 100 years and one animal that is currently endangered. Explain what caused their declines.
4. Observe wildlife from a distance. Describe what you saw.
5. Use a magnifying glass to examine plants more closely. Describe what you saw through the magnifying glass that you could not see without it.
6. Learn about composting and how vegetable waste can be turned into fertilizer for plants.
7. Plant a vegetable or herb garden.

Week of September 28:

◆ Activity: Neighborhood Hike (Requirement 1)

- With a parent or buddy family, go on a 1-mile hike through your neighborhood, a park, or another suitable location. While hiking, focus on observing and identifying six signs of birds, animals, insects, reptiles, and plants.

Week of October 5:

◆ Activity: Observe and Examine (Requirements 4 & 5)

- Head outside, and bring binoculars if you have them. Be on the lookout for animals such as squirrels, birds, or spiders that can be observed in most settings. What behaviors do you see? Why do you suppose that watching animals from a distance might be preferable to getting closer? Are there things that are easier to observe at a distance? Why?
- Examine interesting objects with a magnifying glass. Be careful: if you're using your magnifying glass in the sunlight, it can make what you're looking at uncomfortably hot. What can you see with the lens that would not otherwise be visible? Can you find a hairy leaf? Can you find the pores on leaves that plants use to breathe? Can you see variations in the colors of autumn leaves?

Week of October 12:

We'll be taking a virtual field trip to the Cedar Grove composting facility. If you are unable to join us, please head on your own field trip at <https://cedar-grove.com/about-us/tours>.

◆ Activity: Composting in a Cup (Requirement 6)

This is a good experiment to help Bears understand how compost is created. They will make compost on a very small and manageable scale by using cups and precollected organic items such as leaves, grass clippings, etc. See instructions on following page.

Week of October 19:

◆ Activity: Visit a Wildlife Rescue Center (Requirement 2)

We'll be taking a virtual field trip to the Wildlife Center of Virginia to learn about wildlife rescue and rehabilitation, in particular for wild birds. If you are unable to join us, you can select from a variety of "live" (archived) virtual tours at <https://www.wildlifecenter.org/archived-virtual-tours>.

Composting in a Cup

Materials:

- 16-ounce cup with holes in the bottom
- Pair of gloves
- Large bowl
- Organic compostable items (leaves, grass clippings, vegetable scraps, fruit scraps, coffee grounds, etc.)
- 1/4 cup soil or dirt
- 1–2 teaspoons of water
- Piece of plastic wrap
- Rubber band
- Large plastic spoon

Instructions: Before beginning this activity, you will need to collect the organic items to compost. There are many different materials you can use. As a general rule, anything that comes from a plant or tree is good to include. Some things you DO NOT want are meats, dairy products, and seafood—those can attract pests, and nobody likes the smell of month-old salmon! Once your items are together, place them in the large bowl, add the 1–2 teaspoons of water and the 1/4 cup of soil, and mix. Next, wearing the gloves and using the plastic spoon, place two scoops from the bowl into the 16-ounce cup. Now lay the piece of plastic wrap over the top of the cup and fasten it to the rim with the rubber band. Make sure the wrap is tight and the rubber band is secure. Compost piles need sun, shade, water, and movement. So put your cup in a window that gets a good amount of sunlight or outside in an area that is exposed to the sun during the day. Every so often, add 1 teaspoon of water to your cup and give the contents a little shake. The water and movement helps with the composting process. The sun warms the cup of organic material, which promotes increased microbial activity. (This is just a fancy way to say that the bacteria and fungi LOVE to live in a warm environment!) The shade keeps the compost from becoming too warm, which could lead to a loss of essential moisture. Your compost cup is now complete, and the composting process is underway. It's time to let nature do its thing! You can also experiment using composting containers of different shapes, sizes, and colors. For example, a black or dark-colored container will absorb more heat from the sun than one that is clear or light-colored. The Science Behind It Compost forms naturally nearly everywhere! Leaves drop from trees. Grass clippings are left after you mow the lawn. Plants and animals die. Over time, these organic materials break down or decompose. The rich, dark brown, crumbly, soil-like material that results is called compost. Tiny living things do much of the work of breaking down organic materials to make compost. These little workers are called microorganisms and include such things as bacteria and fungi. Worms, pill bugs, and other creatures living in the soil help the microorganisms transform the materials into compost. The organic materials provide many of the nutrients that plants need for growth and activity. Eventually, these nutrients are returned to the soil, to be used again by trees, grass, and other plants. This is nature's way of composting and recycling! The compost that you make at your home or school can be used as mulch or mixed into the soil. Compost is one of nature's best mulches and soil amendments. It helps you to save money by reducing your fertilizer, landscaping, and water bills, and by cutting down on trash pickups or disposal.

Resources:

List of recently extinct mammals –

https://en.wikipedia.org/wiki/List_of_recently_extinct_mammals

Endangered Animals – <https://www.worldwildlife.org/species/directory?page=2>

Composting for Kids Playlist –

<https://www.youtube.com/playlist?list=PLaSegn4AdJAwSecBReHgCyM4ckX8p44NP>

This document draws heavily on a Fur, Feathers, and Ferns guide put together by the Chief Seattle Council. I've edited a few bits here and there, added an adventure, and changed some suggested dates. Many thanks to the council for providing this guide!