

# HABITAT DETECTIVE

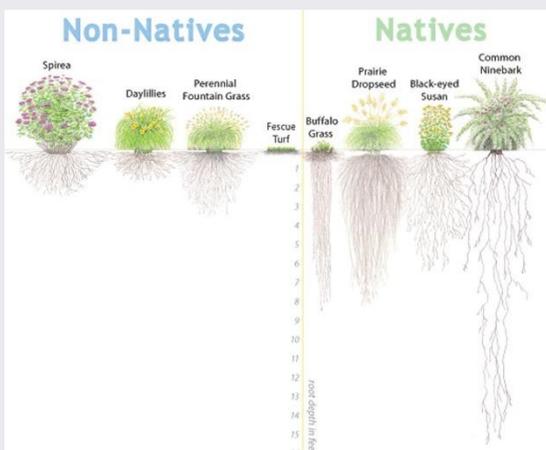
**Materials:** Journal, pencil, magnifying glass, smart phone for apps (*optional*)

**Background:** There are many different types of plants in West Virginia. Simply look in your community and you will see trees, grasses, vines, bushes, and flowers. Some of these plants are native to West Virginia which means that have been growing in the area for thousands of years. Due to the many types of weather we see in West Virginia, native plants are adapted to survive in hot and cold weather, in wet or dry times, and also grow well in West Virginia soils. Native grasses and wildflowers are usually very tall and have very deep roots so they can find water during dry times. The tall plants make great habitat for native animals in West Virginia like birds, bees, and butterflies. Other plants, like the short grass on a golf course or a lawn, are non-native which means they come from somewhere else in the world that is not West Virginia. Most of these grasses are from Europe originally and were grown in America when Europeans colonized the region. These short grasses also have shorter roots which means they cannot survive very well when it is hot and dry in West Virginia. Think about how much water needs to be added to lawns and golf courses in the summer to keep the grass alive. Native and non-native plants also provide different habitats to the animals that live in West Virginia.

**Directions:** In order to determine if a habitat is healthy, scientists will count the number of different types, or species, of plants and animals that they can find in the area, sometimes called a Bioblitz.

## WHY IS THIS IMPORTANT?

Wildflowers make up an important part of the ecosystem. Tall flowers that are native to West Virginia create many spaces for birds and mammals to make nests for their young and to hide from predators. The pollen and nectar from the flowers is a food source for birds, bees, and butterflies. These pollinators need healthy habitat to rest and lay their eggs. The deep roots of native flowers break up the soil so insects and worms can find places to live. These roots also absorb extra rainwater from storms. This helps to stop flooding and can slow down runoff water from traveling over the ground. Less runoff means less dirt, chemicals and litter getting into streams, keeping out pollution and creating healthy, clean water for rivers.



Your job will be to find two habitats in your community (make sure you get permission to visit each). One habitat should be mostly native plants and the other mostly nonnative plants. Remember that native plants are tall grasses or wildflowers, trees, or bushes and that nonnative plants are short grasses like lawns or sports fields. At each habitat you will keep a list of all the different plants and animals that you find in your journal.



For each habitat look for animals large and small. There may be mammals like squirrels, mice, rabbits, deer, or chipmunks; reptiles like snakes, lizards and turtles; amphibians like frogs, toads, or salamanders; birds like songbirds, hawks, crows, or doves. Do not forget to look for bugs like worms, bees, butterflies, flies, crickets, beetles, or ants. Count all the plants you see and look for animals around the plants, under rocks or logs, in trees, or animals

that visit the flowers. **Remember to be safe and roll logs or rocks towards you so snakes do not feel cornered if they are hiding and be careful around stinging insects.**

Visit the two habitats over several days or periodically over the summer and keep careful track of all the animals and plants that you see. You can use simple names to keep track but if you are interested in knowing which species that you find, you can look for guides in bookstores, libraries, or online. Another tool you could use is the iNaturalist app for smart phones which uses pictures to give name suggestions about which plants and animals you have seen.



After you have completed your lists, compare the number of plants and animals that you have seen. Make a conclusion about which habitat provides more homes for plants and animals. Think about whether you would want to see more native plants or non-native plants in West Virginia based on these lists. What can you do in your community to get more of these plants growing to make better habitat? Come up with a plan and see if you can take steps to towards completing the plan.



**To get your summer fun box, send in a picture of your lists at <https://www.cacaponinstitute.org/teach/stream-scholars-summer-camp/>**