

## What Lives Here? BioBlitz Approaches for Exploring with Youth

Help youth in out-of-school time settings deepen their connections to the natural world. Whether social-distancing in a park, walking in a neighborhood, or looking out a window, guide participants to observe the variety of species living in a place—called *biodiversity*. Your group might find nature you’ve not noticed before! This content is suitable for outdoor programs, those with limited natural areas to explore, or virtual programs. Tag your photos with **#NatGeoBioblitz** and inspire others to explore outdoors. This activity guide is made possible with the generous support of the Charles Stewart Mott Foundation.

### Activity: Adopt-a-Spot

15-30 minutes, all ages

**Objective:** Closely observe a small natural space for a short period of time, recording in words and pictures what you see, hear, feel, and smell. Combine the group results for a tally of biodiversity.

**Where:** A park, on a neighborhood walk, a backyard, or through a window if unable to go outside

**Tools:** Adopt-a-Spot handout or blank paper, pencil (colored pencils or markers optional), and clipboard or book for leaning

**Be safe:** Talk about the importance of just watching, and not touching, any animals. (Older kids may be able to handle this; see extension below). Walk through spots to check for any objects or plants that are unsafe, such as poison ivy, oak, or sumac.

### Directions:

#### Step 1: Imagine what you might find

Ask your group what living things might live or grow in this place. Tally the group’s ideas to see which species are most expected. Do they expect to see birds, trees, or flowering plants? Mammals, insects, or spiders? Explain that together they will take a very close look at an area and find out more about its biodiversity.

## Step 2: Adopt-a-Spot!

Hand out copies of the Adopt-A-Spot handout or blank paper, a clipboard or something else to lean on, and a pencil. Have each participant “adopt-a-spot,” selecting a spot about the size of a hula-hoop. Spots might be by a tree, shrub, a fallen log, or leaves. They can include grass, weeds, or even a puddle of rain water. Have everyone name their spot and label on the handout.

## Step 3: Observe while standing

Have everyone first stand. With eyes open, look up, down, and all around. Allow everyone to sketch or write notes about what they see. Still standing, guide everyone to take a deep breath and close eyes for one to two minutes. *What do you hear? Smell?* Give time to add to their notes or sketches.

## Step 4: Sit and explore

Now have everyone *sit* or *kneel*. Get close! Look under fallen leaves, or gently lift rocks. Continue drawing or describing what you see, including any plants or animals. Ask: *Is anything moving? What are the shapes of leaves and other objects?* Even signs of life count, like animal tracks, a snail shell, or a feather. On the back of the page, older youth can tally the living things observed from the spot, being specific or non-specific (for example, bird #1, bird #2; or cardinal, blue jay if known). The goal is to observe closely. No need to know the names of all plants, birds, or insects!

## Step 5: Share observations and wonderings

Follow up and share observations. *What did you notice? What did you experience with your senses? Did you see any plants, animals, or other organisms?* Let everyone tell about their experience. Note: You as leader don’t have to be an expert. This time outdoors is about discovery. Youth will ask you good questions: *What is this? Why is this here?* Use this as an opportunity for inquiry. Capture their curiosity by making a list of their questions. You can also use field guides and technology to do group or independent research.

## Step 6: Visualize the results

If possible, make a chart or graph with the group’s results. Especially for remote learners, this can help them to feel like a community of explorers. If all of the findings are combined, it lessens emphasis on competition to find the greatest number of living things.

Explain that observing and recording the variety of living things together is key to a BioBlitz. Generally, the greater the biodiversity, the healthier the ecosystem. Celebrate the variety of birds, insects, plants, and other living things they observe together as a group.

## Step 7: Continue wondering...

Asking questions keeps us curious. Explorers and scientists often finish research, experiments, or an expedition with new questions. Ask: *What are you wondering about now?* For example, *What visits my spot when humans aren’t nearby, at other times of day or night? What is this bright yellow stuff growing under this rock? Why are there so many different kinds of insects?*



# BIOBLITZ

Adopt a Spot: Five-minute observation

...smell and feel?

Describe your spot with words or drawings.

What do you see and hear...

*On the back of this page or in a journal, make a list of all the organisms you observe!*

## Extension: BioBlitz!

To discover more of the life in these spots, dig a little deeper and take even more time to observe. The more we look, the more we can see! Here are ideas for taking BioBlitz observing further:

- **Gather or create tools:** to help observe things more closely, use
  - plastic containers for holding insects for brief observation
  - paper plates for holding and sorting through leaf litter
  - pillowcases to make nets
  - a sheet and flashlight for attracting insects at night
  - a magnifying lens, or take a photo with a phone and enlarge to look at details
  - colored pencils or markers help with showing the diversity of colors within biodiversity illustrations
  - create a spotting scope or binoculars with paper towel rolls (for young children)
  - Explore more ideas on the “BioBlitz Tips and DIY Field Tools” PDF.
- **Explore a wider area or take more time.** Expand the area of exploration. Gently lift rocks, logs, anything sitting on the ground, and then replace them when done. Look closely at tree trunks and the sides of a building. Get close to plants and flowers and watch for insects or spiders moving on branches, stems, and flowers. Look up for birds and around for mammals. If there’s water nearby, even a puddle, scoop water into a container and look closely. Be gentle with any invertebrates (insects, spiders, snails, etc.) you might collect temporarily, and release after you take a look. Keep an observation list or use one of these: [BioBlitz Observation Guide](#), [Species Identification Cards](#), or [Data Chart](#).
- **Use Technology/Apps:** Mobile apps like iNaturalist and Seek enhance BioBlitz experiences. Using the camera, these apps use artificial intelligence (AI) to identify organisms:
  - **Seek** is good for younger users, who can identify plants and animals, earn badges, and try monthly challenges. Learn more here: [www.inaturalist.org/pages/seek\\_app](http://www.inaturalist.org/pages/seek_app).
  - **iNaturalist** works for older students and adults. In iNaturalist, a community of naturalists helps to verify sightings, and your observations can contribute to global biodiversity research. Get started here: [www.inaturalist.org/pages/getting+started](http://www.inaturalist.org/pages/getting+started).
- **Find community experts:** Invite biologists, ecologists, amateur naturalists, or master naturalists from universities, science centers, or environmental organizations to talk with students virtually or visit a BioBlitz site outside.
- **Enhance the habitat:** Enhance a site to create more habitat for wildlife. Add rocks, mulch, native plants, or introduce other objects that may provide habitat. Make a bird feeder!

## More resources:

- [Tips for managing students during a bioblitz](#)
- National Geographic’s BioBlitz afterschool guide, videos, activities, data sheets and more: [natgeoed.org/bioblitz](http://natgeoed.org/bioblitz)