

**SUMMER ADVENTURES**  
ON THE ROAD

Get Outdoors





### DID YOU KNOW?

Use these activities to learn about the natural world and connect with nature wherever you are—whether you're in a national park or your own neighborhood. You can do these activities in wild areas or in places where there are lots of streets and sidewalks. There's nature everywhere if you look closely enough.

Some of these activities help you to get to know a specific place using all your senses. Others involve exploration, playing games, and even earning digital badges. Several involve **citizen science**, which means contributing to real scientific projects. They're all designed to help you learn more about the world around you and the importance of protecting it—and have fun at the same time!

READY TO EXPLORE?



### PG 3

Identify Species

Ages 4-8

### PG 4

Observe a Microhabitat

Ages 4-8

### PG 6

Tell a Story with Data

Ages 4-8

### PG 9

Identify Species

Ages 9+

### PG 10

Adopt a Spot

Ages 9+

### PG 12

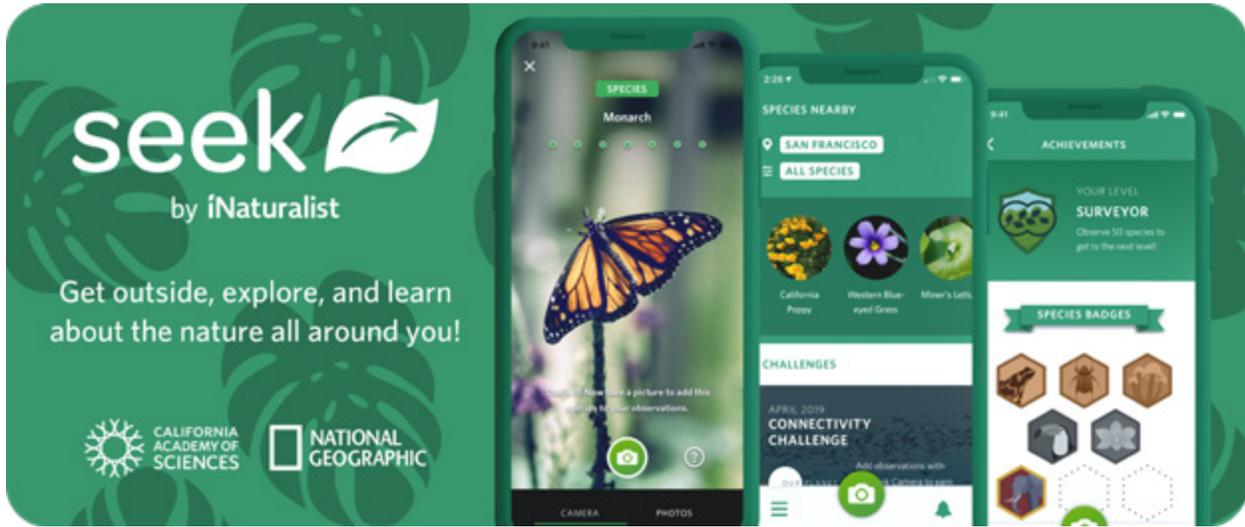
BIO Bingo

Ages 9+

Book List

# IDENTIFY SPECIES

## ACTIVITY | Ages 4-8



**Seek** is a free, child-safe app that helps people discover the natural world. The Seek app uses image-recognition technology to identify fungi, plants, and animals around you; just point the Seek camera at any organism and it will start working to identify it. Seek also helps you learn about the species you observe and challenges you to earn special badges by finding specific species. You can use Seek in Yellowstone National Park to identify organisms like bison and bald eagles, or you can use it in your own yard or local park.

### TO DO

- 1 Download the [Seek app](#), available for both iOS and Android. Seek does not collect or store any data, making this app safe and private for children.
- 2 Point the Seek camera at any organism, and Seek will try to identify it. Seek works best for things that are commonly seen and easy to photograph, such as many plants, insects, and fungi.
- 3 Use the Species Nearby feature to see what is commonly found near you. Click on any species to learn more, including whether it is native to your area, where else it is found, and when it is most commonly observed.
- 4 Complete special challenges to earn badges. Each challenge will ask you to find species from certain groups of organisms. For instance, a challenge might ask you to find 10 flowering plants or 2 butterflies + 2 spiders + 2 ferns. A new challenge is announced each month, but you can also complete past challenges. Have fun and learn as you complete them all.

More information on [using Seek](#).

## OBSERVE A MICROHABITAT

ACTIVITY | Ages 4-8

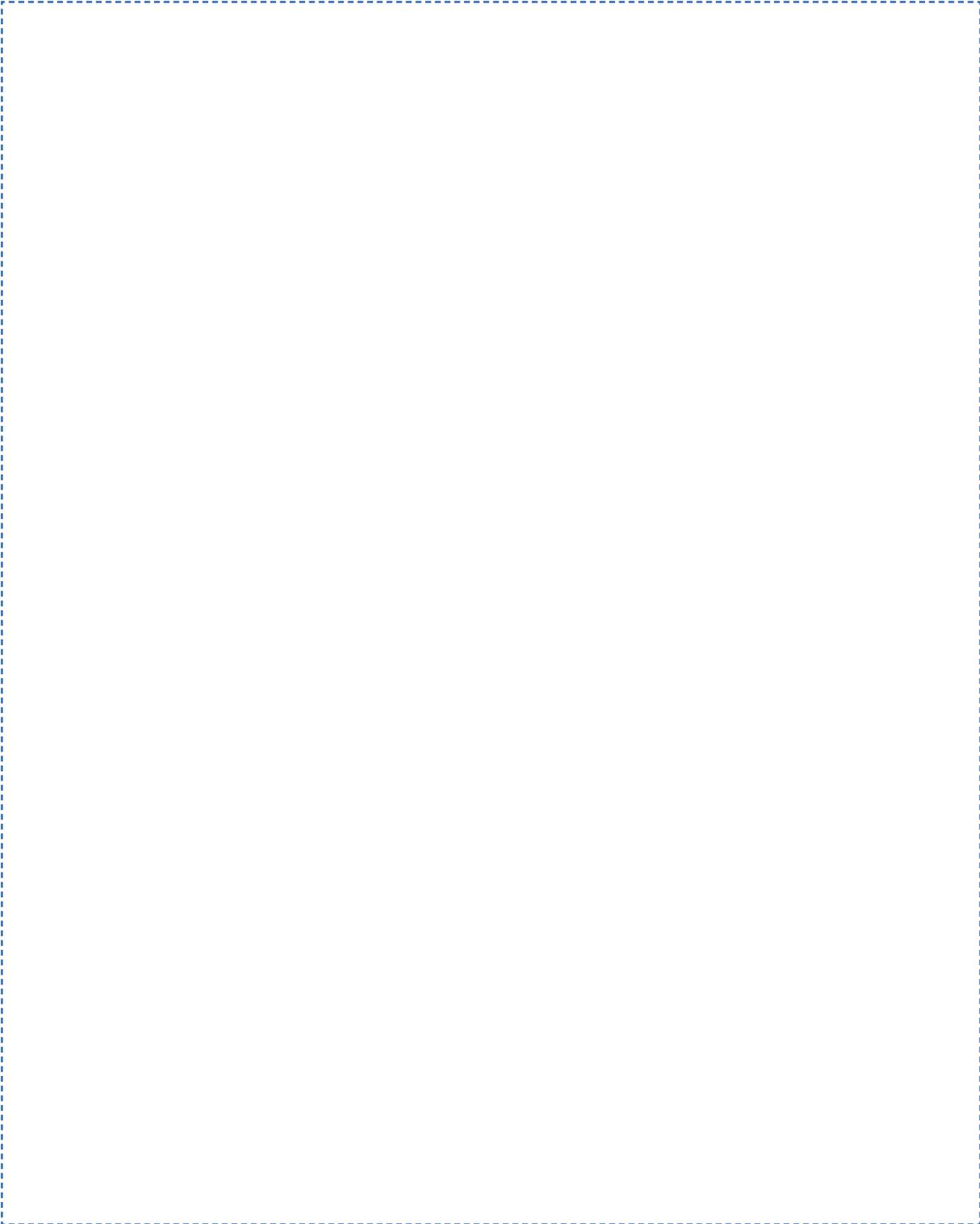


A habitat is a place where an organism makes its home and contains all it needs to survive. A microhabitat is a small area that differs somehow from the surrounding habitat. Logs and rocks can create wonderful microhabitats, home to many amazing creatures—visible if you look underneath them. You can explore microhabitats in Yellowstone or in your own neighborhood.

### TO DO

- 1 Go outside and find a large rock or log (but not too large or heavy to move).
- 2 Carefully move the log or rock. Look under it and around it.
- 3 Take time to observe what you see. Is anything wiggling or moving? Did anything run and hide? Draw a picture or write down words about what you found.
- 4 Be sure to put the log or rock back carefully where you found it. Make sure not to crush any creatures when you do this!

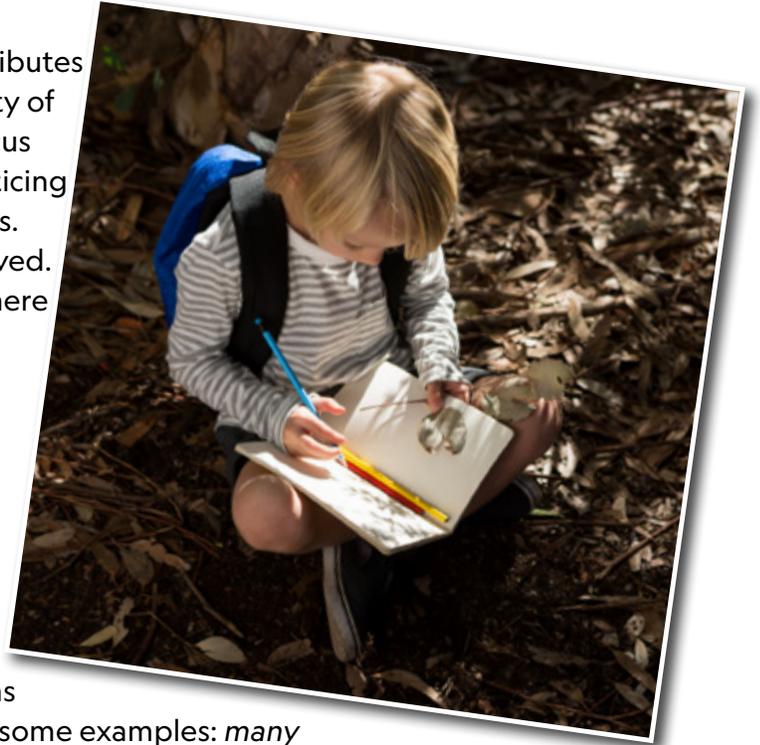
# MICROHABITAT OBSERVATIONS



# TELL A STORY WITH DATA

## ACTIVITY | Ages 4-8

Noticing and observing the natural world contributes to deeper connection with the amazing diversity of life around us. In this activity, have everyone focus their attention on making observations and noticing details of plants, animals, and other living things. Then use creativity to show what people observed. You can do this activity in Yellowstone or anywhere outside.



### TO DO

- 1 Find a place where everyone can be still and see, hear, or smell nature. Take one minute to look, listen, and smell (you might want to set a timer). Write words or draw three things about the organisms in the place you are observing. Here are some examples: *many shades of green, different shapes of leaves, squirrels moving from tree to tree, bees on flowers, ants on the ground...* Talk together about what everyone noticed.
- 2 Discuss the three things everyone noticed and ask questions about them. Here are some examples: *How many of these leaves on the ground are green? (or red? or yellow?) How many different shapes of leaves can I see? What colors are the birds that I see? Where does the squirrel spend its time? On what part of a tree? On a fence? On the ground? How long in each place? How many bees do I see on the flowers?* Questions can be about variety, frequency, behavior, interrelationships, change over time, size, volume, quantity, and more.
- 3 Collect data. Spend about five more minutes observing the environment. Have everyone use their senses to try to find answers to their questions from Step 2. Make notes or draw pictures about what they observe; these notes and pictures are data.
- 4 Think of a creative way to tell the story of data. You could make a graph or use shapes, colors, sizes, numbers, objects, or icons. Use the following templates to get creative juices flowing!
- 5 Have everyone show the beautiful stories they created with their data.

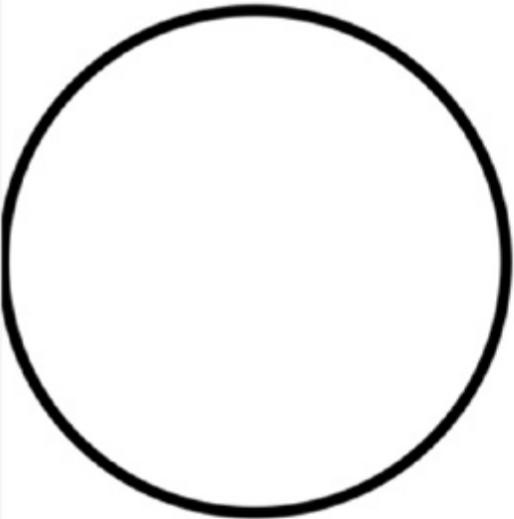
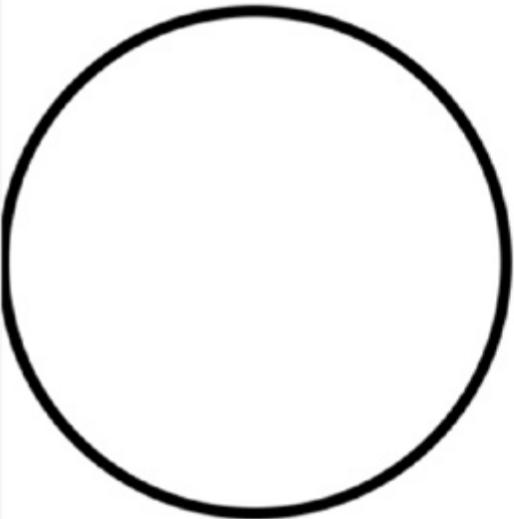
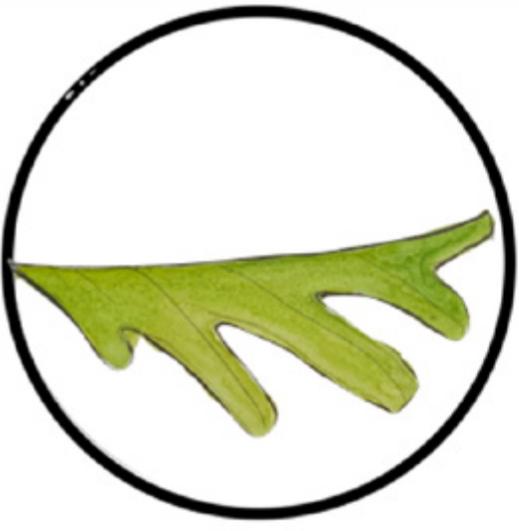
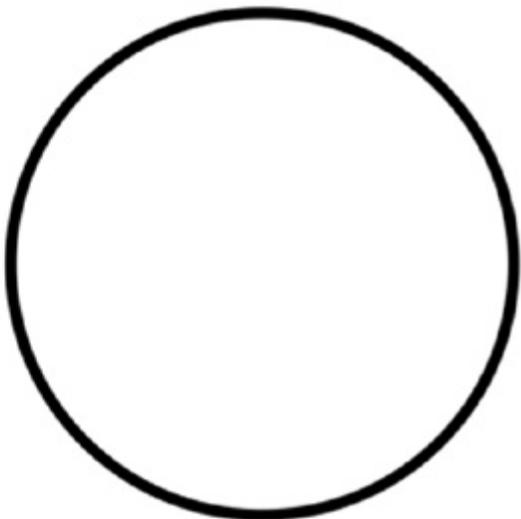
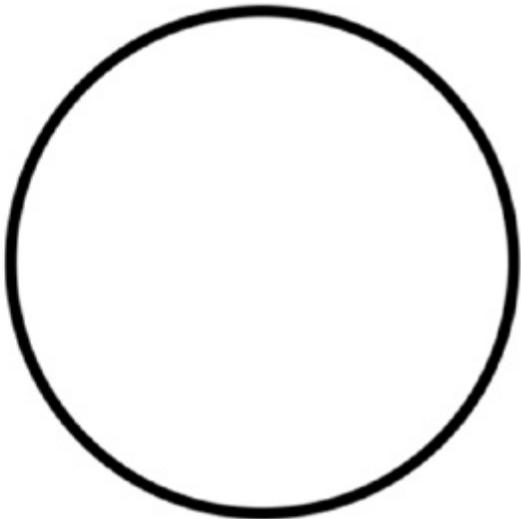
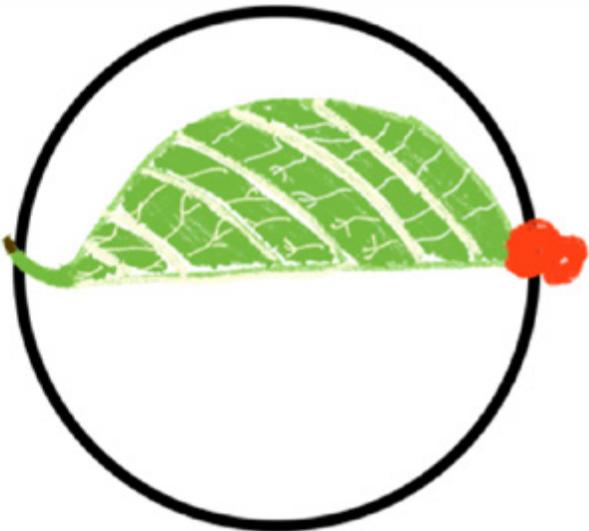
**FLOWER WALK:** Each stem represents a garden patch. Each ring represents the colors of flowers in that patch. In this example you can see the colors found were yellow and pink in one patch and pink and purple in another.

## NOTICING FLOWER COLORS



**LEAF OBSERVATIONS:** In the circles are shapes and patterns of the leaves found in an area.

## Leaf Observations



# IDENTIFY SPECIES

## ACTIVITY I Ages 9+

[iNaturalist](#) is a free platform—both a website and app—that anyone can use to record observations of organisms in nature using photographs and audio recordings, share what they've found, and contribute to a global dataset of biodiversity information used for both science and conservation. The iNaturalist image recognition suggests possible identifications of your observations, and then when you upload those observations, the iNaturalist community of over a million scientists and naturalists helps to refine and confirm the identifications. You can use iNaturalist in Yellowstone National Park to identify organisms like moose and sagebrush or you can use it in your own yard or local park.

### TO DO

- 1 Set up an account on the iNaturalist website or download the app from the [Apple App Store](#) or [Google Play](#) store and create your login there. Once you have an account, you can use it online or on your device, and multiple people can share a login. Children under 13 should work with an adult; people 13 or over can have their own iNaturalist accounts. Make sure the phone's location services are turned on for your camera and for iNaturalist.
- 2 Head outside, open up the iNaturalist app, and find an organism. While you can make observations of anything, try to look for organisms that are wild: plants or fungi that are growing without human help or non-domesticated animals, like insects or birds.
- 3 Tap the button to make a new observation, and choose "Take Photo" when the options pop up. Take your first photo! Afterward, you'll have the option of retaking it (if it's blurry, for example) or moving on. Once you have a photo you like, you'll be taken back to the observation screen. Notice that iNaturalist will have automatically populated the date and time as well as your current location. From the observation screen, you can add more photos to the observation (for example, if you'd like to take photos of the bark, leaves, and seeds of a tree).
- 4 Once you're satisfied with your photos, tap the box that says "What did you see? View suggestions." If you have a network or Wi-Fi connection, this will link you to the image recognition software on iNaturalist, which will try to suggest possible identifications based on your photograph. Look for suggestions that say "Visually Similar/Seen Nearby" as good possible choices. You can pick a suggestion from iNaturalist, or you can type in your own identification using the search bar, at any level of detail you know (e.g., "Red maple" or "Plants" are both fine to use as an ID).
- 5 Once you've added an identification, you'll be taken back to the observation screen, where you should save the observation. Once you save it, it will be uploaded to iNaturalist, where the community will work to confirm or refine the identification. Now you're ready to make your next observation! (See the iNaturalist [Getting Started Guide](#) for more tips).



## ADOPT A SPOT

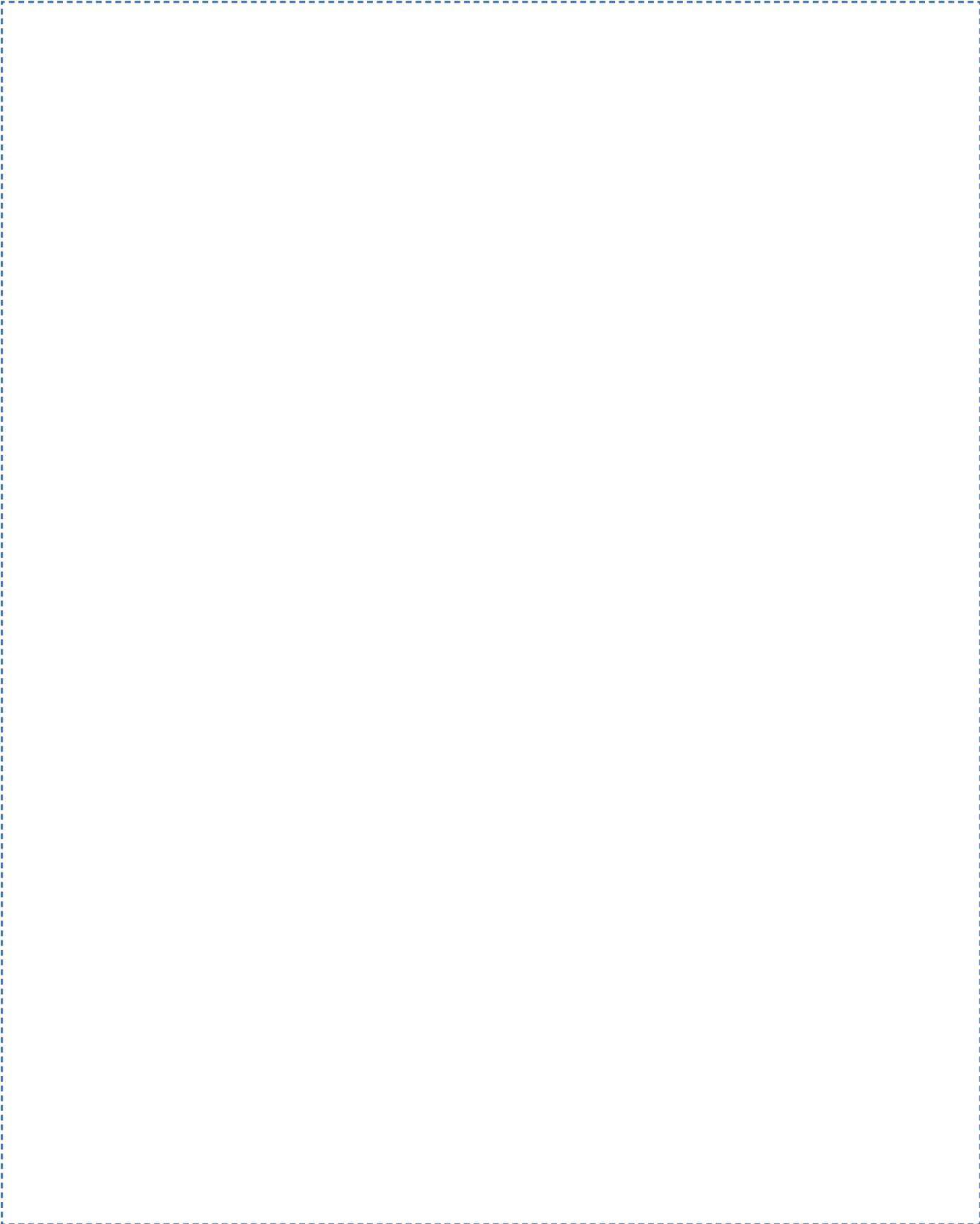
### ACTIVITY | Ages 9+

In this exploration you will find a special spot outside and study it closely. Then you'll write clues to help someone else find your spot. You can do this in Yellowstone or anywhere there's a patch of nature.

#### TO DO

- 1 Walk around with a notebook and pencil and find a small spot you like in nature. Observe your spot very carefully for several minutes. Notice the ground, any plants, any animals or signs of animals (like tracks), and what else is nearby.
- 2 Describe your spot in writing or via illustrations. Use adjectives to describe your spot. Here are some examples: sunny, grassy, covered in sand, full of flowers, a dandelion and some bare dirt... How far is it from trees? What bushes or buildings are nearby?
- 3 Connect with a family member or friend who didn't see your spot and ask them to look at your description and try to find the spot. See if your description was clear and specific enough for the person to find your spot. If not, what can you do to describe your spot in more detail?

# ADOPT A SPOT DESCRIPTION



## BIO BINGO

### ACTIVITY | Ages 9+

This adaptation of bingo is a fun way to encourage kids to focus on different places where organisms live: in trees, under rocks, in soil, on plants, and more. Exploring a place carefully often results in finding a wide variety of living things and signs of life. When we take time to look for the life around us, we are often surprised that there's more there than we realized. You can play BIO Bingo in Yellowstone or anywhere else—even through a window!

#### MATERIALS

BIO Bingo card

Something to write with – crayons and colored pencils are great!

#### TO DO

Set up boundaries in an outdoor location where players can safely explore. Reinforce the importance of respecting wildlife and habitat; for example, any rocks or logs that are lifted up should be carefully put back.

Play BIO Bingo! Look and listen for wild plants, animals, and fungi (pets and plants in gardens or pots don't count). Draw a picture or write the name of what you observe in each box. When you find and mark three down, across, or diagonally, you win!



**B**

**I**

**O**

on or under a  
rock

on a  
tree or bush

on a  
trail or sidewalk

on a  
plant

in the  
air or sky

on the  
ground

in, on, or near  
water

in or on a  
building

in or on  
soil

## FULL LINKS

### PG 3

Seek App

[https://www.inaturalist.org/pages/seek\\_app](https://www.inaturalist.org/pages/seek_app)

More on using Seek

[https://www.nationalgeographic.org/projects/bioblitz/?utm\\_source=toolkit&utm\\_medium=referral&utm\\_campaign=summer-road-trip-2021&utm\\_content=road-trip-content](https://www.nationalgeographic.org/projects/bioblitz/?utm_source=toolkit&utm_medium=referral&utm_campaign=summer-road-trip-2021&utm_content=road-trip-content)

### PG 9

iNaturalist

<https://www.inaturalist.org/home>

iNaturalist Getting Started Guide

<https://www.inaturalist.org/pages/getting+started>