

# Using Seek with Students



iNaturalist, a citizen science project and online social network application that encourages the mapping and sharing of biodiversity across the globe. The goal of iNaturalist is to have everyone from kids to biologists contribute to exploring and documenting the natural world in their own neighborhoods and communities.

While this is a great resource for people, it can be a little confusing to use for younger researchers! This is why the team at iNaturalist came up with Seek, which is specifically designed for children and family use.

Grade Level	K-2nd Grade
Activity Length	As needed, can be an ongoing project
Materials	Seek App, by iNaturalist, downloaded on a phone or a tablet. Adult supervision.

## SEEd Standards

**K2.1-Obtain, evaluate, and communicate** information to describe patterns of what living things (plants and animals, including humans) need to survive.

**K.2.2- Obtain, evaluate, and communicate** information about patterns in the relationships between the needs of different living things (plants and animals, including humans) and the places they live.

**K.2.3- Obtain, evaluate, and communicate** information about how living things (plants and animals, including humans) affect their surroundings to survive.

**1.2.2- Construct an explanation** by observing patterns of external features of living things that survive in different locations.

**1.2.4- Construct an explanation** of the patterns in the behaviors of parents and offspring which help offspring to survive.

**2.2.1- Obtain, evaluate, and communicate** information about patterns of living things (plants and animals, including humans) in different habitats.



# How to Use this Activity



For this activity, you need to download and use the Seek app. It has a more kid-friendly interface than the iNaturalist application. It also keeps all observations private, does not require an online account, and students can gain achievements by exploring their backyards, neighborhoods, and the world outside their window.

## **For Teachers:**

Use Seek and take your students on an outdoor adventure, encouraging them to explore nature in their school grounds and/or surrounding neighborhoods! Follow the instructions for Setting up Seek, and the activities on the following pages. You can also watch the Seek video at

## **Online Teaching:**

Send the instructions (and/or video link) for Setting up Seek, and how to use seek and how to navigate the application. Have students fill out the Field Notes worksheet and the Create a Living Thing worksheet. (You may want to print out hard copies of these and send them to students' homes.)

Make sure that the students understand that they will need adult permission and/or direct adult supervision to download the app and to explore outdoors.

During an online meeting with your students, ask them to explain what it was like to observe nature in their neighborhood.

## **Activity Alternative:**

If your students do not have access to a smart phone or tablet, you can still encourage your students to explore the natural world, to draw pictures of wild plants and animals, and using things that they observe about the plant or animal to make inferences about how that plant or animal survives.



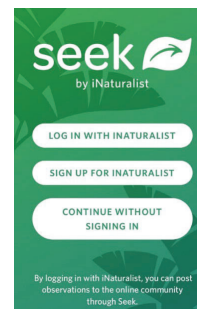
# Setting Up Seek



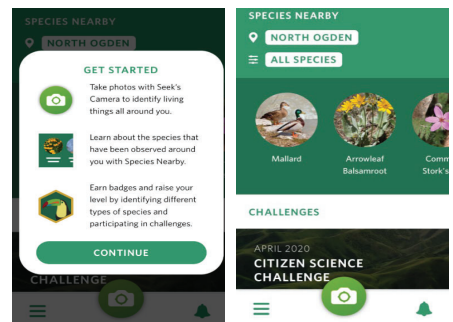
1. Go to the App Store on your phone or tablet and download the "Seek by iNaturalist" app. It will look like a little leaf with a green background.



2. After the Seek app is installed, you will encounter a login screen. You will have the opportunity to sign up/log in to iNaturalist. This will require entering an email and password.



3. If you do not want to log in/sign up for iNaturalist, select "Continue Without Signing In." If you continue without signing in, you will have to allow your device to enable location finding. Your screen will look like this, except with your location highlighted.



4. Now it is time to go for a walk! You can also observe nature right outside your window.

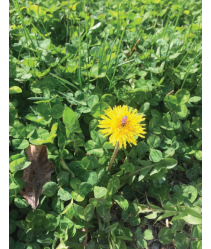


# Using the Seek App

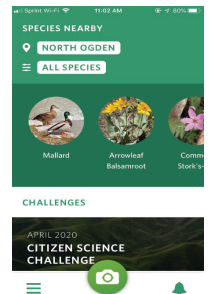
Video Link: <https://vimeo.com/531378487>



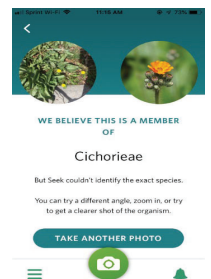
1. Open the Seek app. The student will need to take the phone/tablet on a walk, into the backyard, or use it to observe the living things outside the window. They will be looking for animals/plants/insects/etc. that are not domesticated, meaning that they are wild and able to live without human help (this includes weeds).



2. Touch the camera button on the bottom middle of the screen to make observations while you're out and about. They can also take photos using the device camera and upload the photo to Seek at a later time.



3. Choose the photo (or upload from your camera roll) and select “Identify Photo.” Seek will try to auto identify your species for you. For example, Seek identified the picture of a dandelion I took as a “cichorieae.” This is the scientific term for the group dandelions belong to!



4. Either select the photo of the specific species you're looking at or choose “tap to load species nearby” and select the photo of your species. You will receive more information about the species you took a photo of.

**Note:** taking a clear photo of the species will help get more specific and accurate identifications. If you do not believe the Seek identification guess is current, upload a new photo or try taking it again.

**Note:** If you have not logged in to seek, you will not be able to save your observation or be able to share it/access the achievement badges. You will still be able to explore information about your specific species.

# Outdoor Seek Activity



Time: 20 minutes

1. Use the Seek Field Notes worksheet on the following pages. Either print off this worksheet or copy it by hand on a piece of paper. You will want to briefly discuss the questions on the Field Notes.
2. Make sure each student or student group has a device with Seek loaded on it. It will be helpful if you give a quick demonstration of how Seek is used while still in the classroom. Show students how to scroll down on the plant observation page in order to find the Range Map, the Seasonality, and other information about a plant.
3. Discuss with students the difference between wild and domesticated plants and animals. Tell them that they will be looking for wild plants and animals.
4. Take students outside and designate a search area. Students will be looking for plants and animals within the area. You may want to have the students sit and watch and listen for awhile before they choose what plant or animal to observe.
5. Have students make and document their observations using the field note worksheet. Younger students will need adult help.



# Seek Field Notes

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Draw a wild plant or animal species that you observe:



Using Seek, take a photograph of your plant or animal and choose "Identify Photo". Once your species is identified, scroll down on the page to answer the following questions.

Which season do people see your species in?  
Winter Spring Summer Fall

Look at the map on Seek. Does your species live mostly in cities, in areas without many people, or both?

Cities No Cities Both

Name 3 things your living thing needs to live (sunlight, water, grass, etc.). Can you find these things in the cities, outside of cities, or in both?

- 1.
- 2.
- 3.

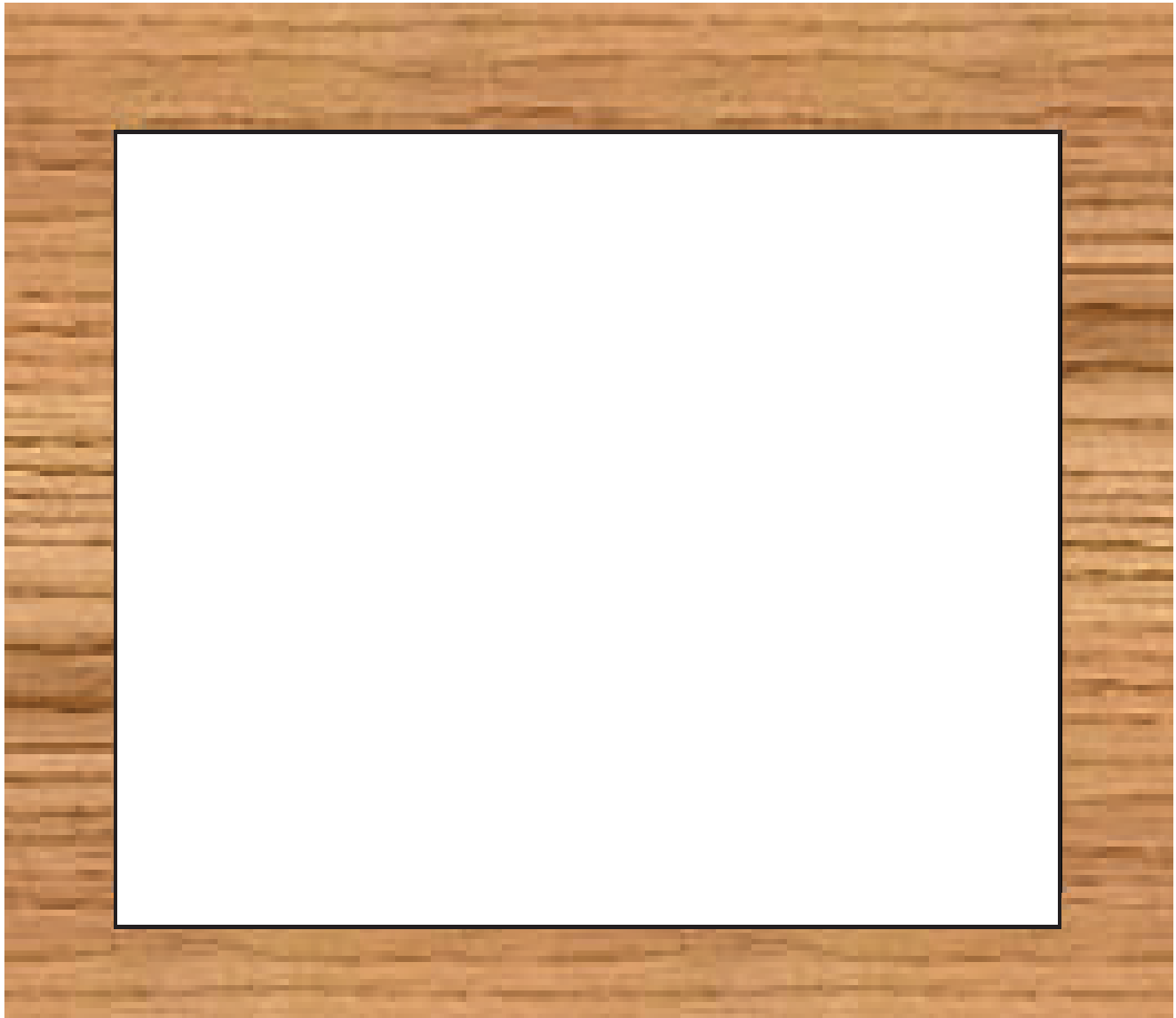
Can you think of two other creatures or plants that need the same things to live?

- 1.
- 2.

What other living things might need to your species to help them survive? For example if you observed a tree, you can say that a bird might need it to live in or to find food.



**Draw the things around your plant, or animal. Why do you think these things exist near your plant or animal?**



Why did you take a picture of (or choose) this plant or animal? What do you like about it?

# Indoor Seek Activity



Time: 20 minutes

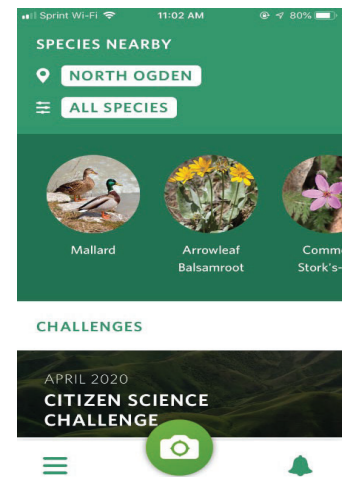
If you and your students cannot go outside, you can still use Seek to explore your nearby neighborhoods! This activity would work best for small groups with adult facilitators.

1. Open the Seek App. Instead of going outside to take a picture of animals and plants, you can select a picture from the nearby species list.

2. Read about your species with your student. Explore where it lives (does it live nearby only, is this animal around the country, does it only live in cities), what it eats, and what time of year it is seen. Has your student ever seen one?

3. Use the Seek Field Notes (see above). Either print off them off or copy it by hand on a piece of paper. Older students may be able to fill in their own forms, and an adult can fill in the form for small groups of younger children. They should be encouraged to do their own drawings.

4. For the "Draw things around your plant or animal" part of the worksheet (second page) return to the "Species Nearby" page of the app. Students can draw one or more other species from this page. They can talk about how they can imagine the species work or exist together in the habitat (maybe one uses the other for shelter or food, or maybe they just grow together, etc.).





# Crafting a Local Living Thing



Now that they have explored your neighborhood, it's time for students to create their own animal, plant, or insect to live in nearby. For this activity, the student is a biologist who has discovered a new species! While the student is building a model of their living thing, ask them to think about what parts of the animal or plant will help it survive.

Time: 20-30 minutes

Materials: Any craft supplies and/or miscellaneous items from home or the classroom. Students can also use items you find outside in nature (rocks, sticks, leaves). Push the student to use their imagination and encourage creative use of available materials when they are creating their creature.

STEP ONE: On a piece of scrap paper, ask the student to draw a new living thing that they think could live in their neighborhood. Ask the student: what kinds of food could your organism find in the neighborhood? What kinds of creatures would try to eat your organism? How big do you think your creature should be?

STEP TWO: Using whatever materials you provide or they have gathered, have the student build their organism! Again, encourage the student to use the materials as creatively as they can.

STEP THREE: While the student is building their creature, ask them questions about it! (Ex. What parts does your living thing help it live in the neighborhood (can it blend in to its surroundings, does it have a lot of eyes to help it see better, is it very fast? Where would it live in the neighborhood, does it need people to live?)

STEP FOUR: Take a picture of your student's organism and tell us about it on social media! Tag us in your pictures on Facebook (@Natural History Museum of Utah), Instagram (@NHMU), or Twitter (@NHMU).

