

iNaturalist Activity Kindergarten-2nd Grade

Theme: Observing the natural world in your neighborhood.

Activity Time: 20-30 minutes for Seek Activity

20-30 minutes for Crafting a Local Living Thing

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This activity is intended for children in Kindergarten-2nd Grade. Please refer back to the Natural History Museum of Utah's website for activities for older elementary school students and middle schoolers.

What is Seek?



Seek is an app created by iNaturalist, a citizen science project and online social network 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.

For this activity, we recommend that you download and use the Seek app. It has a more kid-friendly interface, keeps all observations private, does not require an online account, and kids can gain achievements by exploring their backyards, neighborhoods, and the world outside their window.

Adults, use these instructions to guide your student through an exploration of the natural world nearby or inside your house. After guiding your students through the Seek app once or twice, they should have the necessary skills to navigate the app on their own and begin their own independent investigations.

For Teachers:

Use Seek to encourage your students to explore their neighborhoods and the natural world around them! Send the following instructions for how to use seek and how to navigate the app and have students fill out the [Field Notes Work Sheet](#) on pages 13-14 and follow the instructions to [create a living thing](#). During an online meeting with your students, ask them to explain what it was like to observe nature in their neighborhood.

If your students do not have access to a smart phone or tablet, you can still encourage your students to explore the natural world using the principles of Seek!

1. Print off or Copy the [Field Notes Worksheet. \(pages 13-14\)](#)
2. Ask your students to go outside into their backyards, onto their front porch, on a walk with their parents, or to look out of their windows and make an observation of one living thing.
3. Encourage students and their adults to fill out the worksheet. Students who fill out the worksheet can use the internet to finish the worksheet. They can also use this worksheet as an opportunity to make an ***inference, or an answer based on evidence and reasoning***. So, for example, if your student observes a dandelion, they can best guess that they will most often see this living thing in the spring time, since plants have a harder time surviving in the winter.

Create a virtual gallery of your classroom's collections of living things!

1. Go to the page 15 "[Crafting a Living Thing.](#)"
2. Encourage students to create a living thing that could live in their neighborhood (this include insects, mammals, birds, weeds, flowers, trees, etc.) using any material they have access to. This can include traditional crafting materials, items from a junk drawer, or sticks, stones, and leaves from the outdoors!
3. Ask your students to send you a picture of the living thing they created along with its name and how it lives in their neighborhood (how does it eat, move, hide from other living things, etc.).
4. Post these photos so your students can see each other's creations! You can create a free Flickr account, an Instagram, a Google Drive, or any other method that will allow your students to browse each other's work.
5. What common elements did students add to their living thing?

Utah Science with Engineering Education (SEEd Standards) for Seed Activities Kindergarten-2nd Grade

Science and Engineering Practices: *Asking questions or defining problems;*

Crosscutting Concepts: *Patterns; Structure and Function; Stability and Change*

Disciplinary Core Ideas: *Earth Systems; Earth and Human Activity; Ecosystems; Biological Evolution*

K.2: Living Things and Their Surroundings

Standard K.2.1 Obtain, evaluate, and communicate information to describe patterns of what living things (plants and animals, including humans) need to survive. Emphasize the similarities and differences between the survival needs of all living things. Examples could include that plants depend on air, water, minerals, and light to survive, or animals depend on plants or other animals to survive. (LS1.C)

Standard 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. Emphasize that living things need water, air, and resources and that they live in places that have the things they need. Examples could include investigating plants grown in various locations and comparing the results or comparing animals with the places they live. (LS2.B, ESS3.A)

Standard K.2.3 Obtain, evaluate, and communicate information about how living things (plants and animals, including humans) affect their surroundings to survive. Examples could include squirrels digging in the ground to hide their food, plant roots breaking concrete, or humans building shelters. (ESS2.E)

Standard K.2.4 Design and communicate a solution to address the effects that living things (plants and animals, including humans) experience while trying to survive in their surroundings. Define the problem by asking questions and gathering information, convey designs through sketches, drawings, or physical models, and compare designs. Emphasize students working from a plant, animal, or human perspective. Examples could include a plant growing to get more sunlight, a beaver building a dam, or humans caring for the Earth by reusing and recycling natural resources (ESS3.C, ETS1.A, ETS1.B, ETS1.C)

Strand 1.2.: The Needs of Living Things and Their Offspring

Standard 1.2.2 Construct an explanation by observing patterns of external features of living things that survive in different locations. Emphasize how plants and nonhuman animals, found in specific surroundings, share similar physical characteristics. Examples could include that plants living in dry areas are more likely to have thick outer coatings that hold in water, animals living in cold locations have longer and thicker fur, or most desert animals are awake at night. (LS1.A, LS1.D)

Strand 2.2.: Living Things and Their Habitats

Standard 2.2.1 Obtain, evaluate, and communicate information about patterns of living things (plants and animals, including humans) in different habitats. Emphasize the diversity of living things in land and water habitats. Examples of patterns in habitats could include descriptions of temperature or precipitation and the types of plants and animals found in land habitats. (LS2.C, LS4.C, LS4.D)

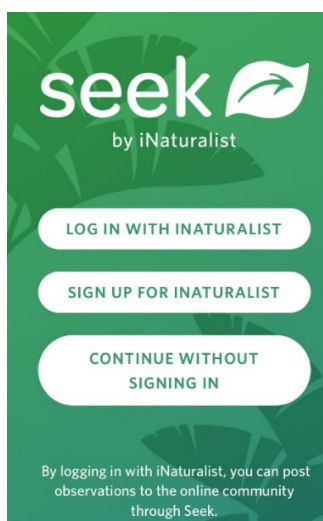
Standard 2.2.2 Plan and carry out an investigation of the structure and function of plant and animal parts in different habitats. Emphasize how different plants and animals have different structures to survive in their habitat. Examples could include the shallow roots of a cactus in the desert or the seasonal changes in the fur coat of a wolf. (LS1.A, LS4.A, LS4.D)

Setting Up Seek

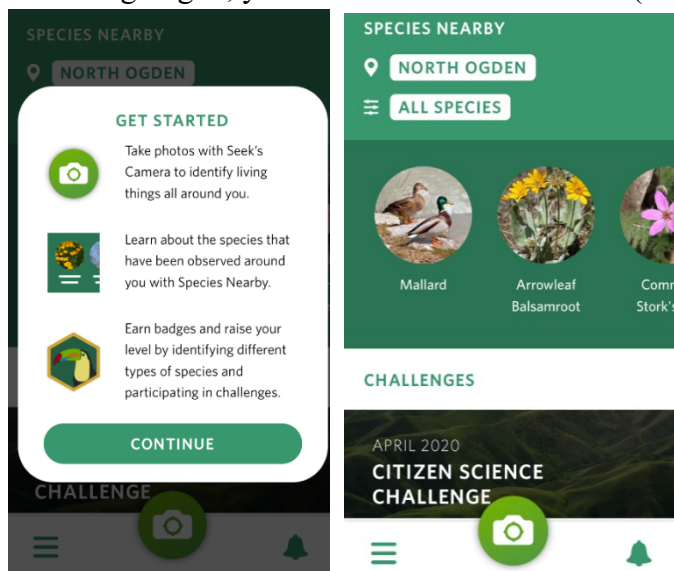
1. Go to the App Store on your phone or tablet and download the “Seek App.” It will look like a little leaf with a green background:



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, your screen will look like this (Select Continue):

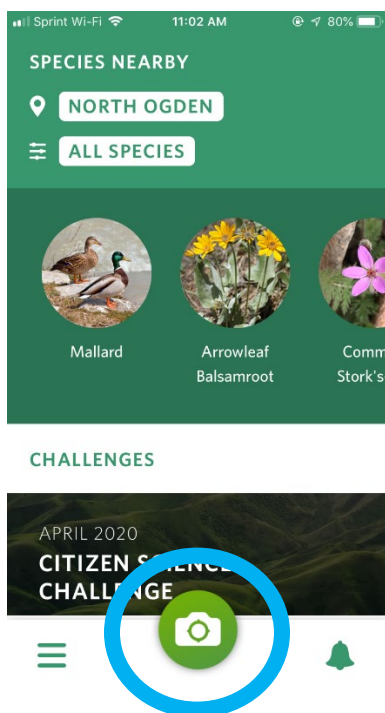


Using Seek (Going Outside)

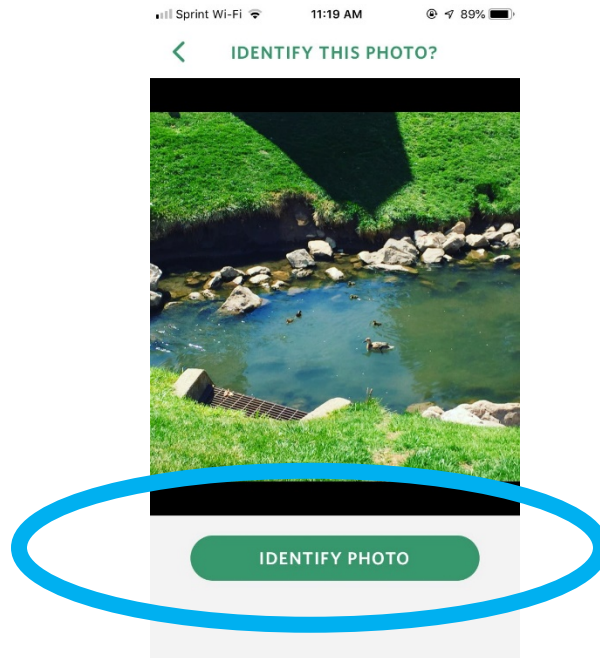
1. Open the Seek app. The student will need to take the phone/tablet on a walk, into the backyard, or use it to observe the living things outside your window. You will be looking for animals/plants/insects/etc. that are not domesticated, meaning that they are wild and able to live without human help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



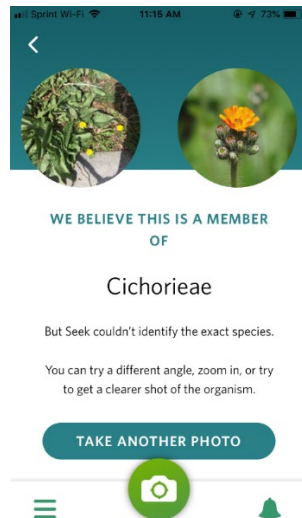
2. Touch the camera button on the bottom middle of the screen to make observations while you're out and about. You can also take photos using your normal camera and upload your observation to Seek after the walk/when you get inside after playing outside.



3. Choose your photo (or upload from your camera roll) to Seek by selecting “Identify Photo.” Seek will try to auto identify your species for you:

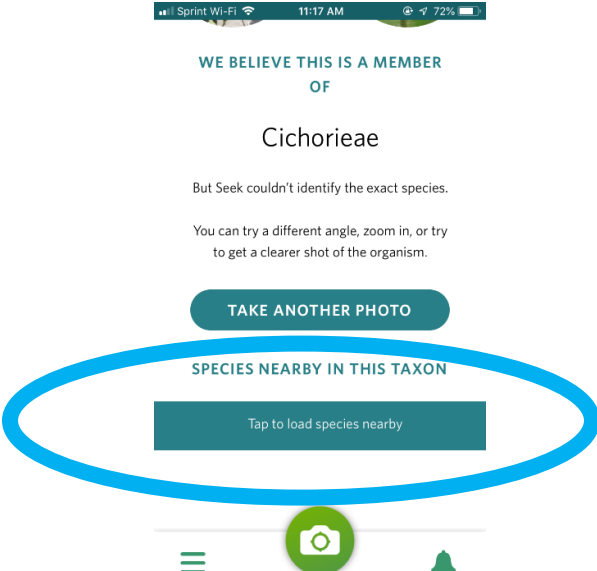


4. Seek will offer you an identification for the living thing you updated. For example, Seek identified the picture of a dandelion I took as a “cichorieae.” This is the scientific term for the group dandelions belong to!

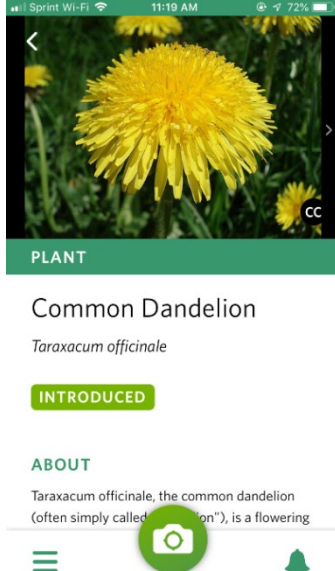


- a. **Note: taking a clear photo of the species will help get more specific and accurate identifications. If you do not believe the Seek identification guess is current, upload a new photo or try taking it again.**

- b. **Note: If you have not logged in to seek, you will not be able to save your observation/be able to share it/access the achievement badges. You will still be able to explore information about your specific species.**
5. 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.

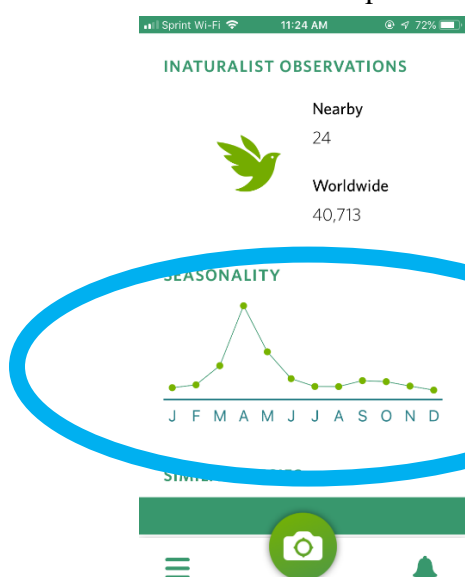


Activity



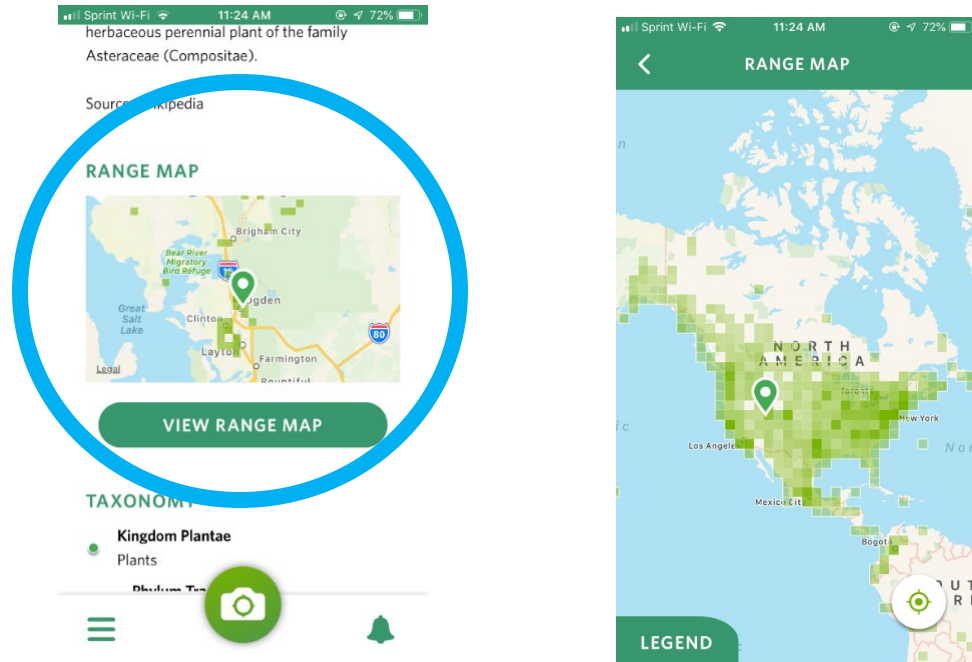
After Using Seek

1. [Use the worksheet on pages 13-14](#). Either print off this worksheet or copy it by hand on a piece of paper.
2. First, ask your student to draw their observation in as much detail as possible.
3. Next, help your student to walk through the questions about their observation! The answers to these questions are found using the features on the Seek app.

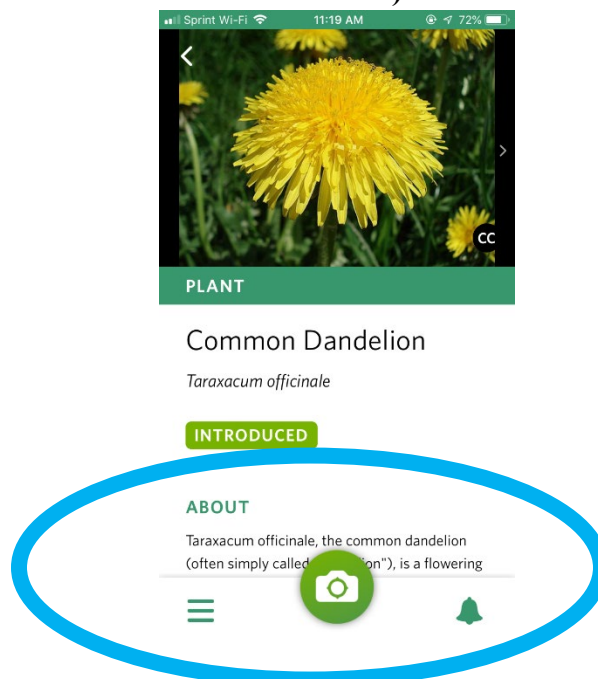


- a. Which season do people see your species most often: winter, spring, summer, or fall? (see the **Seasonality Chart: Scroll down on your observation to the bottom of the page and you this chart documenting when people see the species most often**).

- b. Using the range map, where else does your organisms live? (Use the **Range Map: Dark green=a lot of, lighter green=fewer, tan=none**). Why do you think these animals live in the areas that they do (**that's where their food is, they need to live around people, they need to live far away from people, etc.**)



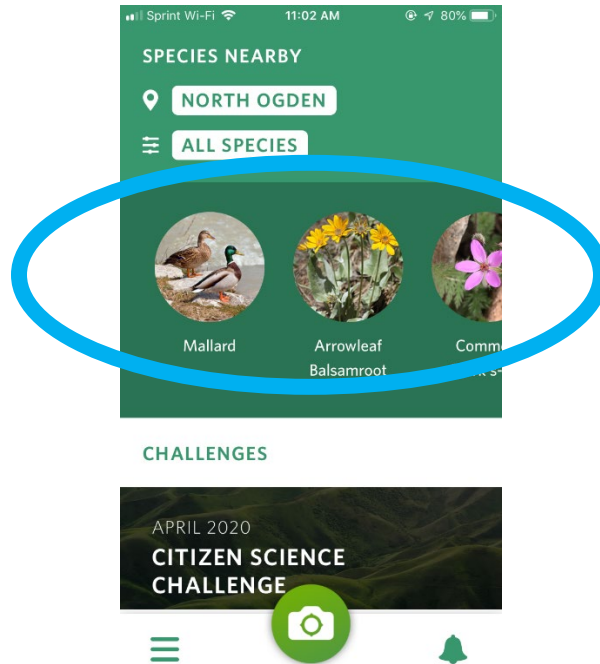
- c. Based on what season people see your species, what are some things that your species needs to live? (**Scroll down to read the “about” section or ask your student to brainstorm on their own.**)



- d. What other living things can you think of that need the same things to live? **(e.g. if you took images of a dandelion, other flowers, weeds, and plants will likely need the same things to live)**
 - e. What living things use your observation for food or shelter?
4. Finish drawing and filling out the worksheet.

Using Seek (Staying Inside)

1. **If you and your family cannot go outside, you can still use Seek to explore your neighborhood!**
2. Open the Seek App. Instead of going outside to take a picture of animals, you can select one animal from the nearby species list.

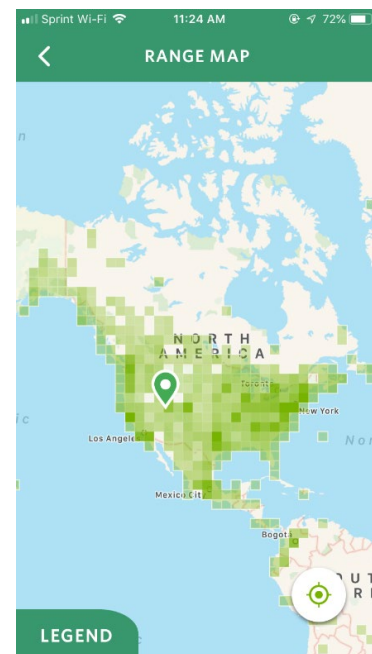
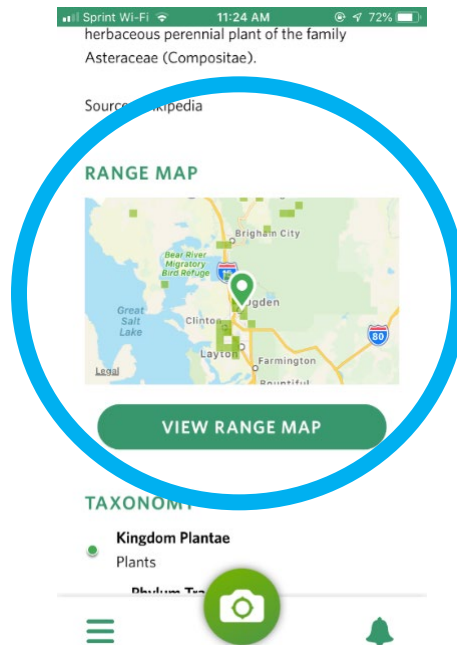


3. Read about your species with your student. Explore where it lives (does it live nearby only, is this animal around the country, does it only live in cities), what it eats, when it is seen around your neighborhood. You can explore all of these features listed in the “using Seek outside” part of these instructions.
4. [Use the worksheet on pages 13-14](#). Either print off this worksheet or copy it by hand on a piece of paper.
5. First, ask your student to draw the Nearby Creature in as much detail as possible.
6. Next, help your student to walk through the questions about their observation! The answers to these questions are found using the features on the Seek app.

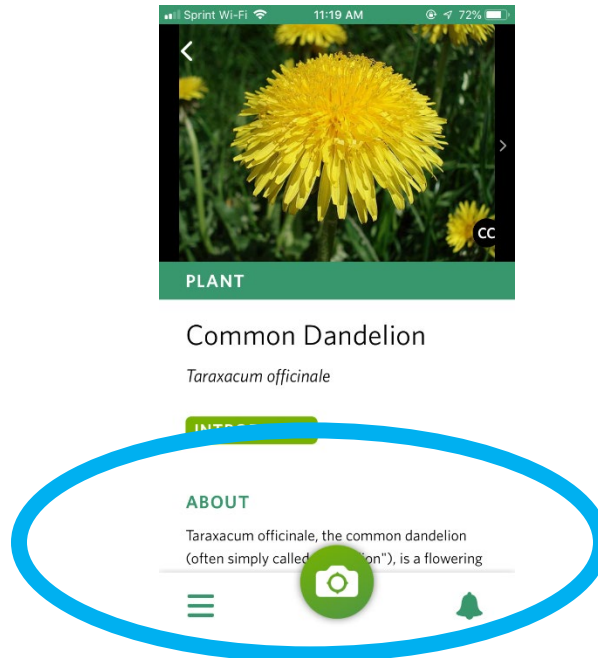


a. Which season do people see your species most often: winter, spring, summer, or fall? (see the Seasonality Chart: Scroll down on your observation to the bottom of the page and you this chart documenting when people see the species most often).

b. Using the range map, where else does your organisms live? (Use the Range Map: Dark green=a lot of, lighter green=fewer, tan=none). Why do you think these animals live in the areas that they do (that's where their food is, they need to live around people, they need to live far away from people, etc.)



c. Based on what season people see your species, what are some things that your species needs to live? (Scroll down to read the “about” section or ask your student to brainstorm on their own.)



- d. What other living things can you think of that need the same things to live? (**e.g. if you took images of a dandelion, other flowers, weeds, and plants will likely need the same things to live**)
 - e. What living things use your observation for food or shelter?
7. Finish drawing and filling out the worksheet.

Seek Field Notes

Draw your observation!

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 a lot of people, or both?

Cities No Cities Both

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

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

What living things use your observation for food or shelter?

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

Why did you want to take a picture of this organism? What do you like about it?

Crafting a Local Living Thing

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

Time: 20-30 minutes

Materials: Any craft supplies/items from your junk drawer you no longer want/miscellaneous items from your house. You can also use items you find outside in nature (rocks, sticks, leaves). There are no limits on the materials you can use! Push your 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 your student to draw a new living thing that they think could live in their neighborhood. Ask your 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 they think their creature should be?

STEP TWO: Using whatever materials you have gathered from around the house, have your student build their organism! Again, encourage your students to use the materials as creatively as they can.

STEP THREE: While your students are 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).