



EVERY DAY IS EARTH DAY!

YOUTH AND FAMILY ACTIVITIES

April 24, 2020

We can each care for our natural communities in our own way. We might turn off the lights in a room we are not using, shut off the water while we brush our teeth, or even pick up litter on a walk through our neighborhood. There are so many ways we can positively impact the natural world! This week, we are going to learn some tools and techniques to contribute to our understanding of local species, as well as get creative by reusing materials for a new purpose.

WHAT'S WILD IN MY NEIGHBORHOOD?

Explore observations of nature in your area using the iNaturalist platform from the California Academy of Sciences and the National Geographic Society.

What you need: Computer and internet access

Time: This activity can take as much or as little time as you would like.

1. iNaturalist is a platform, both a website and an app, that allows people to share their observations of nature, get help identifying their observations, and explore observations submitted by others. Visit <https://www.inaturalist.org/observations> to begin exploring sightings.
2. Using the search bar at the top of the page, search for a species of interest, or look at sightings in a particular location, such as your neighborhood, zip code, or city. These observations are species occurrence data. They are records that a particular species occurred in that location at that time.
3. Check out an observation by selecting a pin and clicking on the observation or double-clicking an observation from the list on the right-hand side of the map.
4. As you explore observations in your area, consider the following:
 - Have you seen any of these species?
 - What types of observations are most common in this area (e.g. birds, insects, trees, flowers)?
 - Are there places where observations are more common? Based on what you know of the area, why might that be?
 - Are there places where observations are less common? Based on what you know of the area, why might that be?
 - What do you notice about photos in the observations? Think about what makes a good photo. This will be helpful if you choose to upload your own observations in the next activity.



GETTING STARTED WITH INATURALIST

Be a community scientist! Document nature in your neighborhood and contribute your observations to iNaturalist.

What you need: Device with app capabilities or a digital camera and a computer

Time: 30 minutes

1. Create an iNaturalist account, either in the app or at <https://www.inaturalist.org/> and select “Sign Up” in the upper right hand corner. *Please note, individuals must be at least 13 to have an iNaturalist account, or have permission from their parent or legal guardian. Consider making a family or group account to upload observations you make together.*
2. Prepare to document your observations. You can either use a device with the app or take photos and upload them to iNaturalist on your computer. If planning to use the app, download the iNaturalist app from your app store.
3. Review how to upload an observation to iNaturalist. [This short video](#) from iNaturalist provides a quick guide to the process.
4. Go on a walk in your neighborhood or in your backyard with your device or camera.
5. As you walk, keep an eye out for wild organisms, rather than anything that is under human care or cultivated, such as garden plants or pets.
6. When you find an organism, take a clear photo, or series of photos, for your observation. **Note:** It can be easier to take a picture from your camera and upload the photo to the app later. This allows you to edit and crop your photos prior to uploading.
7. After completing your walk and observations, review your photos and prepare to upload them to iNaturalist. It can help to crop photos to help cut out background and make it easier for others to see the focal species in the photo.
8. After your photos are ready, upload them to the iNaturalist platform using the app by tapping the “+” icon in the lower right corner. On a computer, go to <https://www.inaturalist.org/>, login to your account, and select “Upload” in the upper right hand corner.
9. After adding your photo (or multiple photos), iNaturalist will suggest possible species based on organisms that are visually similar and seen in your area. You can select one of these, or put in your own suggestion, even something broad such as “bird”.
10. If taking photos on your property, you may wish to set the location visibility to “obscured” which will make the public coordinates a random point within a 0.2 x 0.2 degree area. The true coordinates will only be visible to you and trusted project curators.
11. After you complete your observation and share it, your observation will be uploaded to iNaturalist and the iNaturalist community can help confirm or refine your identification.
12. Check back to see what happens with your observation. If enough people agree on an identification, your observation can become “research grade” and will be shared with global biodiversity databases to be used by scientists around the world.

MINIBIOBLITZ

Explore the amazing species diversity in a small area and contribute to community knowledge by uploading your observations to the iNaturalist app.

What you need: Ruler or measuring tape, something to designate your sampling area (aka string, poster board, pipe cleaners, sticks, etc.), paper or nature journal, pencil, device with app capabilities, iNaturalist app

Time: 45 minutes

1. Find an area outdoors with noticeable species diversity. Look closely, a grassy patch may not look interesting but can be teeming with life!
2. Before beginning the activity, take a moment to look around and sketch out the major elements of your observation spot. This may include a stand of trees, a building, or even a pond.
3. Make a 1 foot by 1 foot square, also known as a quadrat, by measuring out the square and designating boundaries using any available items. Suggested items are listed above in **"What you need:"**. A larger area may be sampled if you have room and interest.
4. Take some time to identify the number of species within that single square.
 - Start by identifying the number of different plant species in your identification space. **Note:** You do not have to be able to identify species in order to know how many different species are in an area. For plants, look for differences in leaf shape, plant structure, fruiting bodies, etc.
 - Next look for any other living things in your space. Carefully look under rocks and sticks. Please make sure that you return any items back to where you found them.
5. After counting the number of different species in the space choose a few species to document and upload to iNaturalist. Follow instructions from the previous activity, "Getting started with iNaturalist".
6. Take a moment to sketch something that you observed in your quadrat on a piece of paper or in your nature journal.



Example of a quadrat
[IMG_0579](#) by [Dean Wm. Taylor](#) is licensed under [CC BY 2.0](#).

Consider this!

Observe at least three quadrats in the same general area. It might be the same park, neighborhood, or yard. Choose three species and calculate the percentage of quadrats in which you observed each species. Please remember that we are only looking for species presence or absence, not the number of a single species. So, you only need indicate if the species was in that quadrat with a yes or no. Please see the sample table for collecting data below.

Species Presence in Identified Quadrat

	Species 1	Species 2	Species 3
Quadrat 1	Yes	Yes	Yes
Quadrat 2	No	Yes	No
Quadrat 3	Yes	Yes	No
Total Quadrats with species present	2	3	1

The percentage can be calculated through a simple equation: (# of quadrats containing the species/# of quadrats observed) x 100 = % of quadrats a species appears in.

For example, for Species 1, the number of quadrats in which the species was present was 2, the # of quadrats observed was 3. The equation would be (2/3) x 100=66.67%. Do this for each species. If interested, build a bar graph to represent your data!

RECYCLED MATERIALS CREATIONS

Do you have extra cereal boxes in the recycle bin? How about old bottles? Are there any egg cartons lying around? This is a chance to get creative. Imagine, design, and construct using recycled materials in your home.

What you need: Recycled materials, found items (may include nature items), general art supplies

Time: 30 minutes – 1 hour

1. Think about an animal that is important to you. It might be a pet or an animal that you like to visit at Woodland Park Zoo.
2. Make a sketch of your animal and think about the various shapes that make up their body. Is their body round and squat like a soup can or long and skinny like a glass soda bottle? Does your animal have long skinny legs like sticks or short squat legs like soda bottle lids?
3. Gather recycled and found materials from in and around your home and build your animal.
4. Be creative! Do not expect it to be perfect, but instead focus on how you can manipulate and change your materials into something brand new!