

Middle School Activity: Make Your Own Field Guide

There is a great diversity of animals and plants all around us. Take a closer look at what you might find outside and how those species connected and what makes them unique.

(NGSS Disciplinary Core Ideas LS2.C: Ecosystem Dynamics, Functioning, and Resilience; LS2.D LS4.D: Biodiversity and Humans)

Pre-Activity Questions

- How do naturalists document new or existing species?
- Why would scientists want to know what kinds of species are in an area?
- What patterns can be found when looking at the different levels of the taxonomic hierarchy?

Activity

- A field guide is an important tool to help a person identify a specific species. It usually has a picture and description of the species.
- In the Bay Area, we are surrounded by human development, but there are a lot of species that share the landscape with us. Urban wildlife is a relatively understudied topic, but the Oakland Zoo is partnering with the [Urban Wildlife Information Network](#) (UWIN) to learn more about what animals we're sharing our neighborhoods with by using camera traps.
- Camera traps look like a box with a camera inside and a motion sensor. Every time an animal walks past the box, it takes a photo. They are an essential tool for scientists to document biodiversity of an area because many animals will not be present if a human is around.
 - Check out this [VIDEO](#) about Oakland Zoo and Kominando using camera traps to study jaguars in the wild.
- You can document biodiversity in your area without fancy equipment like a camera trap by creating your own field guide and using the iNaturalist mobile app.

Create your Own Field Guide

Materials

- Pencil or pen
- Colored pencils or markers (optional)
- Paper

Steps

1. Use the template below or a blank piece of paper to take notes on four or more species you observe from your window, patio/balcony, backyard, or at a local park.
2. Look up the information needed for your field guide using reliable sources.
 - a. Need help identifying something? Use iNaturalist, a great app for identifying plant and animal species. It's as simple as taking a photo.
3. Assemble your field guide. Be sure to include:
 - a. A cover with a title
 - b. A table of contents
 - c. A page explaining the purpose of your field guide
 - How is it going to help someone identify the 4+ species you have selected?
 - d. One page that discusses the characteristics of the family or families your species belong.
 - e. A brief explanation stating why careful observation is important.
 - f. One page dedicated to each species. This should include:
 - Scientific name (binomial nomenclature)
 - Hierarchy from Domain to species.
 - A hand drawn picture of your species.
 - A thorough description of your species.
 - As you write it, ask yourself, "Could someone use this description to identify the species?"
 - Interesting information and facts about the species.
 - g. You may also want to include the following for each species: where it lives, what it eats, and what other species live in the same area.
4. [Share your creation with us!](#)

Reliable Sources

It may be tempting to use wikipedia, but it often has mis-information. Try...

- [Oakland Zoo](#)
- [Audubon](#) (birds)
- [Cornell Lab of Ornithology](#) (birds)
 - [Bird Identification](#)
- [The National Wildlife Federation](#)
- [Calscape](#) or [Calflora](#) (California native plants)
- [California Fish and Wildlife](#)

Post-Activity Questions and Activities

- How is human development going to impact these species in the future?
- What can you do to help wildlife?
- What does **Sui generis** mean in the context of animal species?

Common Name:	Scientific Name:
Description of species	Domain: Kingdom: Phylum: Class: Order: Family: Genus: Species:
Identifying characteristics/markings/etc.	
Draw your species	
Fun fact(s)	