

# How Does Our Neighborhood Provide for Its Wildlife?



## Welcome to NSTA's Daily Do

Teachers and families across the country are facing a new reality of providing opportunities for students to **do** science through distance and home learning. The **Daily Do** is one of the ways NSTA is supporting teachers and families with this endeavor. Each weekday, NSTA will share a sensemaking task teachers and families can use to engage their students in authentic, relevant science learning. We encourage families to make time for family science learning (science is a social process!) and are dedicated to helping students and their families find balance between learning science and the day-to-day responsibilities they have to stay healthy and safe.

## What is Sensemaking?

Sensemaking is actively trying to figure out how the world works (science) or how to design solutions to problems (engineering). Students **do** science and engineering through the science and engineering practices. Engaging in these practices necessitates students be part of a learning community to be able to share ideas, evaluate competing ideas, give and receive critique, and reach consensus. Whether this community of learners is made up of classmates or family members, students and adults build and refine science and engineering knowledge together.

## Introduction

In today's Daily Do, *How Does Our Neighborhood Provide for its Wildlife?* students take a virtual tour of a vernal pool before conducting an investigation of their own neighborhood (or home!) to determine how the neighborhood provides resources the environment's wildlife needs to survive.



### Asking Questions and Assessing Prior Knowledge

Ask students to share what they think they know about the wildlife (animals and plants!) that are found in and around their school, home or neighborhood. After students develop a list of some of the wildlife that may or may not be present in the area ask *"Why do you think (insert plant or animal's name) lives here? Do they live here all the time or just some of the time? Why do you think that?"* Students will offer many different ideas about the wildlife present in the area. The goal here is not to distinguish between right vs. wrong but to foster a discussion about the needs of both plants and animals and the variety that students believe currently live in and around their home or neighborhood.

Elementary age students may also call on knowledge from previous learning during this discussion. These ideas may include:

- All animals need food in order to live and grow and that they obtain their food from plants or from other animals.

- Plants need water and light to live and grow, and therefore necessary for an enclosure with live plants.

Connections to ideas and learning opportunities at previous grade levels should be encouraged. Dig deeper into your students' thinking by asking follow up questions such as "*Can you tell me more about that?*" or "*How do you know that?*" It is important to also provide opportunity for students to ask questions themselves about what they want to know about the plants and animals they identify or the environment around them. Students are more likely to "own" the learning moving forward if they feel they are answering questions they posed themselves! Questions asked may also provide you guidance around what you might explicitly bring to students' attention during the investigation outlined below.

Once student ideas and thinking have been exhausted, explicitly ask the question "how do you think our local environment provides for its wildlife?" You may want to replace the word "environment" with a specific place to intend to investigate with your students, whether it's your backyard, the school grounds, or even inside your home! List the ways students answer this question as a chart that can be used later to check as confirmed or as a misconception through observations made during your environment investigation.

Once student ideas have been documented tell students, "*today we are going to answer our question by conducting an investigation of our local neighborhood. Before we conduct our investigation, we will need to make a plan for how and where to investigate our neighborhood.*"

Tell students that to help students formulate a plan they are going to watch a video featuring elementary science educator, Wendy Pavlicek investigating a habitat known as a "vernal pool" in Burlington, Massachusetts. Define a habitat as "the natural home or environment of an animal, plant, or other form of wildlife."

Direct students to pay attention to how Wendy observes the vernal pool environment and what parts of the vernal pool she pays close attention to.

The [Vernal Pool Investigation](#) YouTube video begins at 1:35. If you'd like to hear the teacher's explanation about what a vernal pool is consider starting the video from the very beginning.

At the conclusion of the video, have students independently write down two or three observations. Remind students they can write about what kind of wildlife the teacher identified in the video or the parts of the vernal pool habitat that she investigated and how she investigated them. Questions you might ask to spur student thinking may include:

- What kinds of wildlife did the teacher identify?
- What parts of the vernal pool did she explore? How did she observe these parts of the vernal pool?
- How did different parts of the vernal pool work together to support one or more of the wildlife identified?
- How did she move through the vernal pool? What tools did she bring to investigate?

Have students pair-and-share their observations before moving forward. Once the pair-share is complete start with the question, “What parts of the vernal pool did she explore?” Students should include, “water, the logs and fallen leaves (detritus), the plants and animals (wildlife) found in the habitat, places the animals might like to shelter, etc.) Use these “parts” of the habitat as labels for a chart comparing the vernal pool habitat against your own habitat to investigate. See this [compare and contrast table](#) as an example.

## **Planning and conducting your neighborhood investigation**

Using the important “parts” of a habitat identified during the vernal pool video as a guide, encourage students to think about places and spaces in and around their neighborhood they might want to investigate in order to observe their own local wildlife in action. Locations might include trees, bushes and shrubs, a garden, locations where water pools, small or large bodies of standing or running water, intermittent streams, holes or places where soil is found. All ideas are on the table as you will not know for sure what you’ll find until you investigate! Encourage students to think about what tools they might want to bring to help them investigate more closely, or to identify unknown plants and animals (Besides local field guides, the Seek or iNaturalist apps are excellent digital tools to integrate into an investigation of any habitat.) It is important here to also discuss ways your students will keep themselves and the wildlife they are observing safe. Are there areas nearby roads or open water you intend to investigate? What rules will we follow to make sure we do not harm local plants and animals during our investigation? Have these conversations now before entering the field.

Make sure to make decisions about how students will record observations in advance, and take time during the investigation to take a pause on observations to record them. It is recommended that students simply list observations as they investigate and save conversations for how and where to sort their observations into their tables for later. Photographs may also be used and are easy to include in tables and charts if completing such work digitally.

In the case of locations that are affected by COVID-19 restrictions, it may be necessary to conduct an investigation inside the home or apartment. These locations, while not the natural habitats of wildlife, still have all the parts or components of a habitat necessary for living creatures to survive in and are just a capable of being investigated.

## **Making Sense of Investigation Results**

Depending on the number of students participating in the investigation, you may have an overwhelming number of observations to consider including in your data table. Ultimately you will want to make sure that as many students voices are heard and included in the data and analysis. Consider having students generate one or more stickies with their observations to place on a larger group or class table, so that similar stickies can be clumped together collaboratively or observations that contradict one another can be discussed. You may also want to ask different groups of students to focus on recording and adding their observations to one or more specific parts of the table to ensure that all of the components of the neighborhood habitat are discussed and comparable to the vernal pool. For components such as “air” which may not have been included in either observations because of their more subtle importance, have a class conversation about such

components specifically, drawing on student prior knowledge or observations not recorded (such as an animal in flight, or reference to the students and wildlife's own needs to breathe air during the investigation.)

## Assessing Student Understanding

With class or individual charts complete, provide students the following sentence frames designed to assess student understanding around the disciplinary core ideas and crosscutting concepts utilized during the investigation.

List three or more things that all habitats provide for its wildlife:

- 1.
- 2.
- 3.

Identify two parts of your neighborhood that provide its wildlife at least one of the things listed above. Share how each of those parts helps the wildlife in your neighborhood survive.

- The \_\_\_\_\_ in our neighborhood provides \_\_\_\_\_ to the wildlife.  
I observed this when \_\_\_\_\_.

Explain one way different parts of the neighborhood work together to support one or more plants or animals you observed during your investigation:

## NSTA Collection of Resources for Today's Daily Do

NSTA has created a [How Does Our Neighborhood Provide for its Wildlife?](#) collection of resources to support teachers and families using this task. If you're an NSTA member, you can add this collection to your library by clicking ADD TO MY LIBRARY located near the top of the page (at right in the blue box).

## Check Out Previous Daily Dos from NSTA

The NSTA Daily Do is an open educational resource (OER) and can be used by educators and families providing students distance and home science learning. Access the [entire collection of NSTA Daily Dos](#).

## Acknowledgement

This Daily Do is adapted from the Burlington, MA, Science Center's "How do Humans Model Habitats for Captive Animals Family Challenge" created by K-5 science educators and NSTA members, Wendy Pavilcek and Sean Musselman. Learn more about their work and the Burlington, MA, Science Center at <https://bsciencecenter.wordpress.com/>