

## LE 4.B Observing & Comparing Phenomena

### Activity Purpose

In this activity, you will make close observations of one phenomenon over time or in different places to better understand patterns and relationships in your neighborhood ecosystems. A phenomenon is an event or relationship that we can observe, study, explain, and make predictions about.

### Activity Overview

Use your phenomenon from LE 4.A Choosing a Phenomenon, or go for a walk in your neighborhood and find something interesting that you can observe multiple times. This activity can be done in two different ways:

- **OPTION 1:** Observe in 3 Different Places: Make observations of your phenomena in different places. Notice of and how the different places affects your observation.
- **OPTION 2:** Different Times: Observe your phenomenon in the same place over time. Try observing across the day (morning, afternoon, evening) or over multiple days, weeks, or months to see change occurring.
- Draw or write what you observe using the sheet provided or a blank piece of paper. Include what is above, around, and below your phenomenon. Use arrows or words to show relationships. Use a new sheet for each observation.
- Do this at least two more times. After your observations, compare and contrast what was similar or different using the sheet provided (page 7) or a blank piece of paper.



What can  
you do to  
support  
learning?

- What kinds of roles and relationships do you notice in your neighborhoods? You might observe pollinators (bees, birds, etc), decomposers (worms, fungi, etc), bioengineers (ants, woodpeckers, humans, etc), and more!
- Similarities and differences help us see patterns in our world. We begin to notice patterns when we are infants as we learn to recognize the important people, places, and beings in our lives. We naturally make sense of these patterns and give explanations for why or how our world works. This activity builds on this skill by focusing on systematic observations of our neighborhoods.
- Your explanations can be initial guesses, ideas that you refine over time, or even stories that you tell to help explain what you observed and why you think that is. The goal is not to get the right answer, but to surface ideas and think deeply about the phenomenon you observed.

## Connecting with other families

- » Share your observations with your extended family or other families and compare and contrast. Ask your friends and relatives to share a story related to the phenomenon you are studying.

### Science Practices Emphasized

- Planning and carrying out investigations
- Analyzing and interpreting data
- Constructing explanations

### Disciplinary Core Ideas

**The History of Planet Earth** Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. (2-ESS1-1)

**Biodiversity and Humans** There are many different kinds of living things in any area, and they exist in different places on land and in water. (2-LS4-1)

## Key Ideas

### Generating explanations from our observations

- Using observations to create explanations about phenomena is an important scientific practice. Explanations can be tested by making more observations, as well as collecting other types of data when necessary. If we learn more about whatever phenomena we are studying, then our explanations change and deepen.
- Explanations also serve an important role in our everyday lives as part of our interactions with others. We often explain the world in terms of stories, fables, parables, and myths. Our sensemaking may mirror these narratives as we explain social (human) and natural (non-human) phenomena.



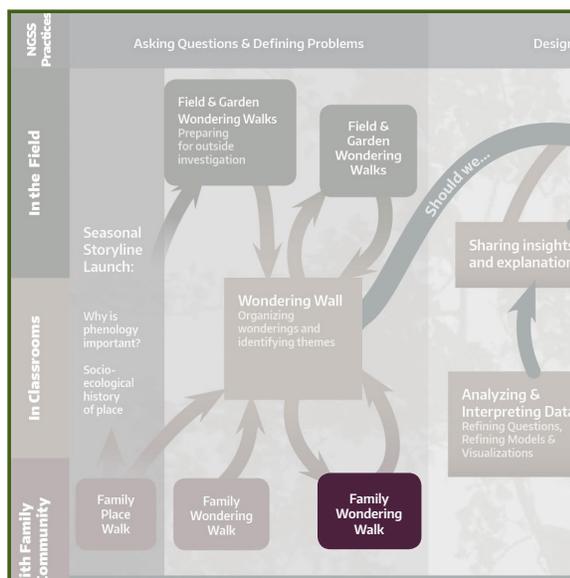
### CONNECT TO OTHER ACTIVITIES

- Learning Engagement 4.A Choosing Your Phenomenon
- Learning Engagement 7A Daily Seasonal Data You Can Collect

### LEARNING IN PLACES FRAMEWORKS TO CONSIDER

- Observations and Data Collection

YOUR PLACE IN THE SEASONAL STORYLINE



We are observing: \_\_\_\_\_

Location: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Weather (circle one):       Temperature (hot, warm, cool, cold): \_\_\_\_\_

**Draw what you observe here, including relationships between animals, plants, weather, soil, etc.**

↑ above

around



↓ below

We Wonder...

What was something that surprised you on your observation walk?

Has anything changed since the last time you did an observation walk? If so, why do you think this was so?

How do you think the weather and season today influenced what you observed? Do you think anything else influenced what you observed today?



# Let's Compare our Observations!

LE # 4.B2

We observed (our phenomenon) \_\_\_\_\_

The season is \_\_\_\_\_

	<b>Location/Time</b> Weather: _____ Temperature: _____	<b>Location/Time</b> Weather: _____ Temperature: _____	<b>Location/Time</b> Weather: _____ Temperature: _____	<b>What Questions do We Have?</b>
<b>Differences</b> What is something you noticed that is different about your observations across locations or time?	Something <b>different</b> we noticed was: _____ We think it was different <b>because</b> : _____ _____ _____			
<b>Similarities</b> What is something similar that you noticed about your observations across locations or time?	Something <b>similar</b> we noticed was: _____ We think it was similar <b>because</b> : _____ _____ _____			

