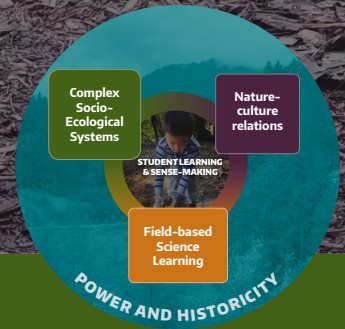




Family Science Learning Engagement



LE 4.A Choosing a Phenomenon to Observe

Activity Purpose

There are many things to study in our own neighborhoods. Scientists closely study what they call **phenomena** over time and across different places in order to understand and explain how our world works. Phenomena are observable events, behaviors, relations, or ideas that can be investigated. In this activity, you will brainstorm and make predictions about a phenomenon that can be observed in your own neighborhood ecosystem!

Activity Overview

- **Part 1.** As a family, brainstorm an event, behavior or relationship - a phenomenon- that you are interested in observing over the course of several neighborhood walks. You may want to take a neighborhood walk to brainstorm what you wonder and notice.
- **Part 2.** Make a prediction about what you might observe if you closely study your phenomenon. You can draw or write your predictions using one of our sheets or a blank piece of paper.
- **Extension activity:** Use LE 4B Observing Our Phenomenon to guide your observations of your phenomenon in three different locations OR across three different times.



What can
you do to
support
learning?

- » Choose a space you want to walk with your family and consider what phenomena you see that your child might find interesting. Look around at their eye level to get a glimpse of what is around. You can keep a notebook of noticings and wonderings as you go on walks to keep track of ideas of phenomena to observe later.
- » Choose a phenomenon in your neighborhood that excites you and makes you wonder. The checklist on the choosing our phenomenon sheet can help you choose a phenomenon
 - It is okay if you need to change your phenomenon choice as you go along to better suit your climate, season, location, or interests.

Connecting with other families

- » As you observe your phenomenon, take some pictures and share them with other families who are going on similar walks. If you have family or friends that live in another state or country, ask them to observe the same phenomenon and compare what you see!

Science Practices Emphasized

- Asking questions
- Planning and carrying out investigations

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

Phenomenon: *an event, behavior, relationship, or idea that we can study, observe, explain, and make predictions about. Plural: Phenomena*

- Phenomena happen all around us - from rainbows after a rainstorm to traffic jams after a big game- they are the events and relationships that make up our universe.
- Humans across the globe have closely observed, recorded, constructed explanations, and made important decisions about phenomena since time immemorial.
- Discovering of new phenomena is happening all the time and is often driven by new ideas that emerge from imaginative wondering and careful noticing and observation.
- Humans and more-than-humans (like plants and animals) are all connected. Our behaviors and decisions as individuals and as a collective impact each other in complex ways. Studying phenomena in our neighborhoods helps us better understand how we are connected and how we can create healthy places for humans and more-than-humans.



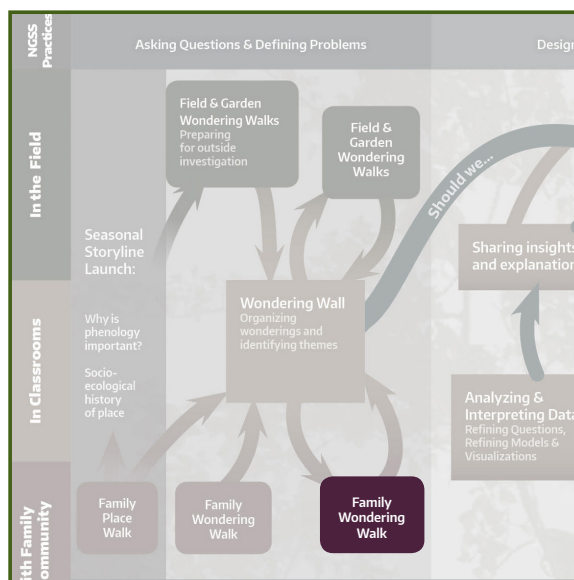
CONNECT TO OTHER ACTIVITIES

- Learning Engagement 1.A Sharing Our Neighborhoods Family Walk
- Learning Engagement 2.B Wondering Walk
- Learning Engagement 3 Focused Observation Walks
- Learning Engagement 4.B Observing and Comparing Our Phenomenon

LEARNING IN PLACES FRAMEWORKS TO CONSIDER

- Culture, Learning, & Identity
- Phenology - the Study of Seasons

YOUR PLACE IN THE SEASONAL STORYLINE





Choosing A Phenomenon

LE # 4.A

Part 1. Brainstorm a Phenomenon to Observe

As a family, think about your neighborhood ecosystem. You can use the prompts below to help you identify an event or relationship - a phenomenon - that you might observe.

1. What are some things you have noticed or wondered about in your neighborhood this season? Make a list - the goal is to think of as many different things you could observe.
 - a. What have you noticed about interesting species - animals, plants, bugs, fungi, etc? What have you noticed about interesting kinds, such as rocks, water, sunlight, etc.?
 - b. What have you noticed about interesting events taking place in your neighborhood ecosystem? For example, do you notice tapping noises in trees, plants blooming, or water flooding in places after a rainstorm?
 - c. What do you expect to see in this season, such as rainstorms in the spring, long shadows in the summer, low fog in the fall, or snow in the winter?

2. Use the checklist below to think about which of the things you listed above could be the focus of your observations the next time you go outside on a walk.

Checklist	Example of a Phenomenon that is easier to study	Example of a Phenomenon that is harder to study	Your phenomenon!
<input type="checkbox"/> easily located in a place or a few places close to home;	“Dead leaves in a pile in our apartment courtyard.” You can observe what is under and around the leaves at any time of year.	“We love to hike to a waterfall a few hours away. We want to observe what happens to rocks in the falls” - while it would be fun to observe here, this can be challenging to observe frequently.	
<input type="checkbox"/> quick to find given the season, climate, and location;	“Spiders around our windows in the late summer.” If you live in a temperate climate, spiders are easily found in late summer. You can closely observe their behaviors and relationships.	“We want to observe pollinators in the winter.” Pollinators would make great observations in the spring, summer, and early fall, but are difficult to observe in the winter. You can observe decomposing leaves, worms, and many birds in the winter!	
<input type="checkbox"/> readily observable with our senses	“Puddles in the potholes in our street.” You can observe how long it takes for the puddle to fill with rain, where the water goes after rain, and how animals and people interact with the puddle. Remember to be safe and always observe with an adult in the street!	“We want to observe a dying star.” This is a great phenomenon, but would make a better research project that you can do online.	
<input type="checkbox"/> raises interesting wonderings, questions, and excitement.	“There are squirrels on our block.. We are curious about their behavior.” Observing animals’ behaviors is a great way to hone your observing skills and get excited about scientific ideas.	Any phenomenon can be hard to study if it doesn’t excite you or make you wonder. While some scientists study things they are less interested in, they often do it in pursuit of explaining a bigger question that does excite them.	



Part 2: Make Your Prediction

Our family decided to observe _____.

In the space below, draw or write about what plan to observe the next time you go outside. Use symbols, pictures, and words to explain your thinking. Think about the following questions:

Where do you think you will find your phenomenon and why?

What relationships do you think your phenomenon has in this season? Who or what are the relationships with and why?

What do you think happens to your phenomenon in a different season and why?