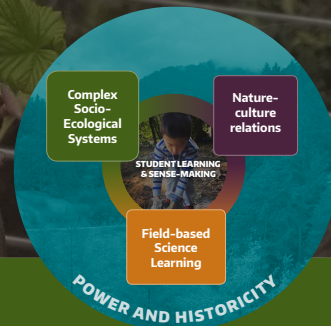




# Family Science Learning Engagement



## LE 3.E Taking a Focused Walk Together: Thinking Across Scales

### Activity Purpose

This guided walk will help focus your thinking across scales while observing your place. This helps us to develop a deeper understanding of our socio-ecological systems. We often observe what is in front of us, but there is so much more to notice and wonder about! Consider the history of the place where you live. What does it look like vertically, horizontally? How does it change across seasons? Across years?

### Activity Overview

- Use the activity sheet to guide your thinking while you walk. You can draw the template on a piece of paper or try using a journal to collect your observations over time.
- Look for something interesting you notice while thinking across scales and draw or write what you see.
- If any new questions come up, write them down and come back to them later.
- **Extension ideas:** Try taking a hand lens and go for a “micro-hike”. Take a length of string and stretch it out on the ground. Pretend you are a tiny bug going for a hike.



What can  
you do to  
support  
learning?

- » Before you head out on your walk, do some research about the place you are in. What did this place look like before animals and humans? What will it look like in the future?
- » What is life like for this tiny bug? Who is this tiny bug in relationship with? Stand under a tall tree and look up towards the sky. What has that giant tree lived through?
- » Ask questions that draw attention to seasonal time scales. What will this place look like in the winter? How will it change as we move into the summer months?

## Connecting with other families

- » Write to an elder in your family or neighborhood. Ask them what they remember about this place, or what their journey to this place was like. Write an email to your friends with a few photos or drawings of what you saw and ask them what they noticed on their walk.

### Science Practices Emphasized

- Asking Questions
- Planning and Carrying Out Investigations
- Obtaining, Evaluating, and Communicating Information

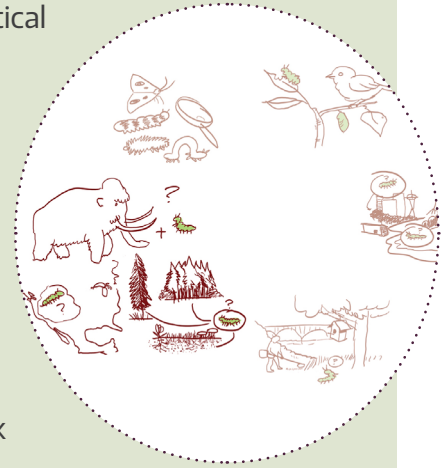
### Disciplinary Core Ideas

- ESS2.A: Earth Materials and Systems
- ESS2.B: Plate Tectonics and Large-Scale System Interaction

## Key Ideas & Practices

### Thinking Across Scales

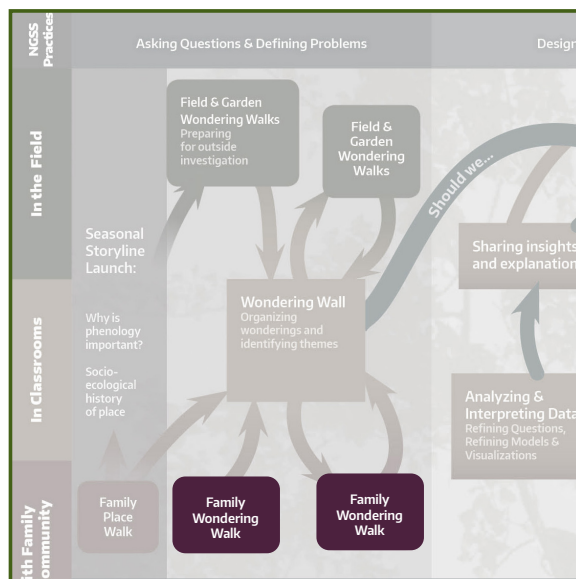
A key way to understand socio-ecological systems is to think across multiple scales. These include time scales (past, present, and future), and spatial scales (horizontal and vertical scales like looking side to side, or up and down; above and below ground; near and far). Thinking across scales can help people more closely observe phenomena, and it can help them think about change.



### Complex Socio-ecological Systems

Socio-ecological systems refer to the interactions between human systems and ecological systems. Humans are part of the natural world, and all of our systems (e.g. social, political, institutional) are always in relationship with ecological systems. Complex socio-ecological systems involve several space, time, and organizational scales.

## YOUR PLACE IN THE SEASONAL STORYLINE



## LEARNING IN PLACES FRAMEWORKS TO CONSIDER

- Thinking across Scales
- Socio-ecological histories of place
- Observation and Data Collection
- Complex Socio-ecological Systems Reasoning

## CONNECT TO OTHER ACTIVITIES

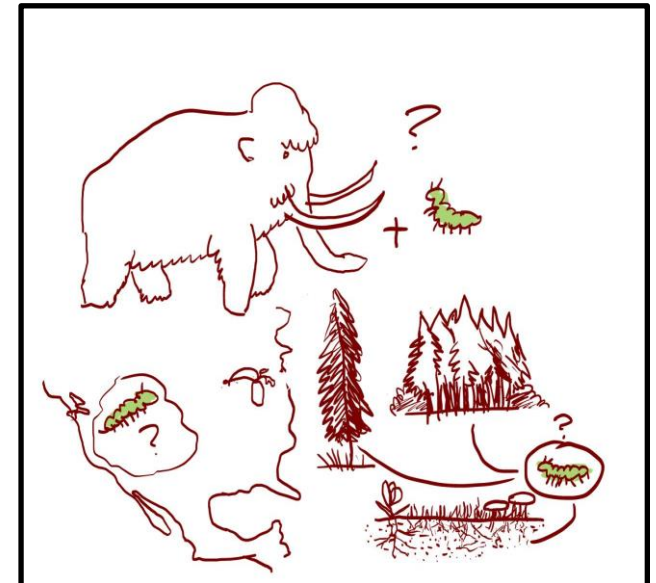
Learning Engagement 3: Taking a focused walk together

- 3.A: Species, Kinds, and Behaviors
- 3.B: Relationships
- 3.C: Places, Lands and Waters
- 3.D: Human Decision Making

### LE. 3.E Taking A Focused Walk Together: Thinking Across Scales

Thinking across scales while observing helps us to develop a deeper understanding of our socio-ecological systems. This includes considering different time and space scales, looking for signs of life cycles, energy cycles, water cycles, etc. Some questions to consider while you are walking with your family:

- *What did this place look like before animals and humans? What will it look like in the future?*
- *What is life like for this tiny bug? What has that giant tree lived through?*
- *Where has this water been before it came here? Where will it go from here?*





*Draw or write down any signs you notice while thinking across scales  
What scales have you used to think with? What do your observations  
make you wonder?*

We noticed:

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	We wonder: