



Garden Learning Engagement

LE 1 Histories of Places Gardens Walk

Background

Thinking within and across many time scales is necessary to understand the complexity of socio-ecological systemsore deeply. As learners explore the garden place from multiple perspectives of time, you can also help them understand gardening as a set of human and more-than-human practices that are situated throughout history and communities by thinking around the following questions:

- Who does gardening and for whom?
- How has human decision-making shaped the land through gardening practices over time?
- How do the land and land-based practices like gardening shape each other over time?

Purpose

In this LE, we will build learner’s connections to places by considering the local and global histories of the garden and how they are connected to seasons and seasonal gardening practices. Learners will share and develop their sensemaking around the concepts of multiple histories, futures, and place. They will take a Histories of Places garden walk to consider how humans are, and have always been, a part of complex natural and gardened landscapes. Learners will explore how human decision making has changed this place over time and how changes to the land can and have impacted socio-ecological relationships. This exploration will support learners to think about future work that supports human and more-than-human thriving in this place. For example, learners might consider how garden pests are identified, managed and exist in relation to other garden species and kinds across space and time.

Connections to family and community gardening knowledges and practices

In this lesson, it is important to connect to learners’ prior knowledge, experiences and family practices to places around the garden. Your questions should position learners’ home-based knowledge as strengths for garden learning. Prompt learners to draw on these knowledge bases and experiences as they observe, wonder and draw on the Garden Exploration Walk. Some example questions could be: does anyone in your family garden, even if they live in another country? Why and how do they garden?

Optional: you can send home the Histories of Places family tool for learners to fill out with their families about their neighborhood.

MATERIALS

- » Histories of Places overview graphic
- » Histories of Places graphic organizer

LEARNING GOALS

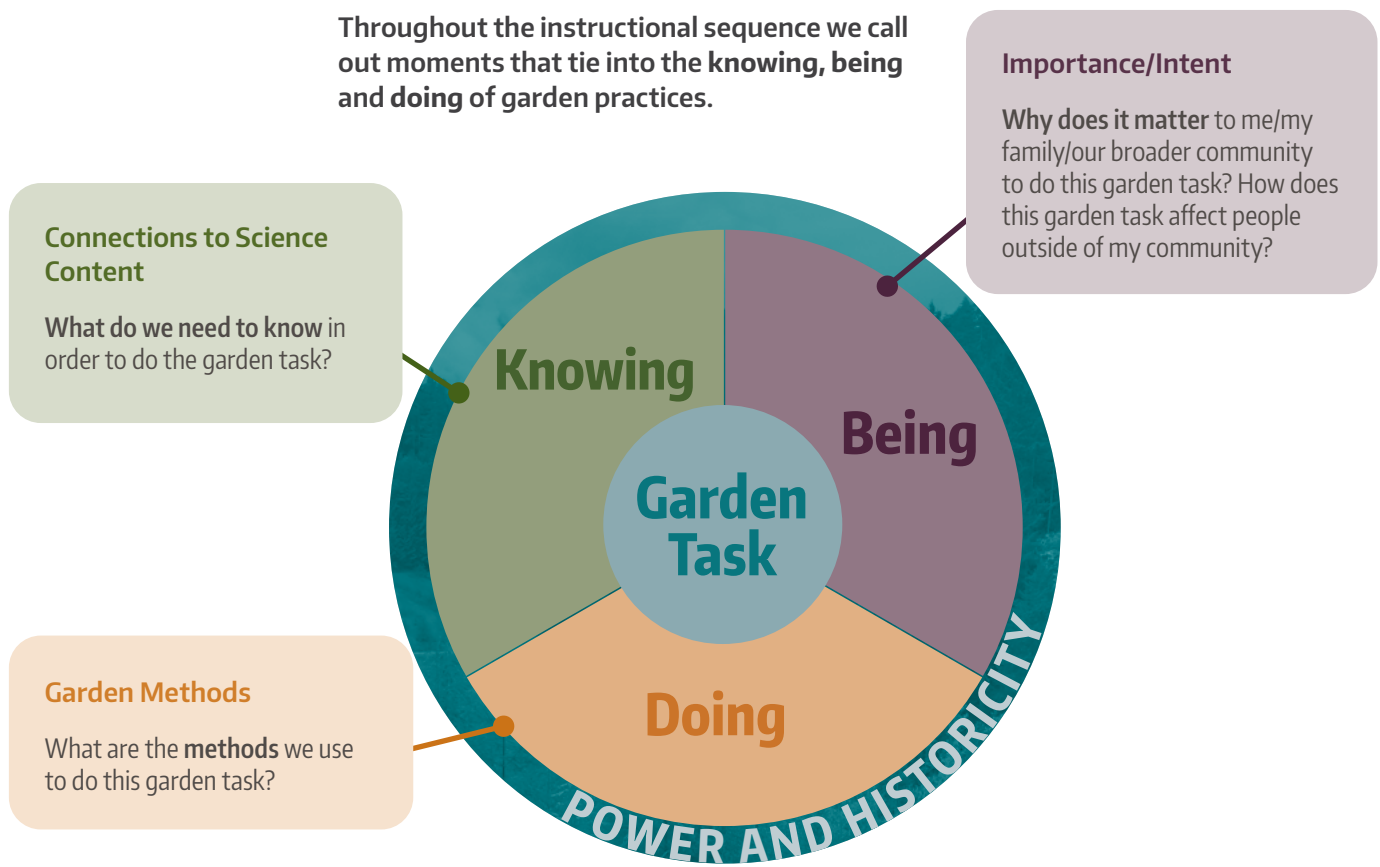
Learners will...

- » Share ideas and define histories, future and place
- » Understand how the garden can be seen from the Histories of Places timescales, and consider any other missing perspectives of time.

- » Describe what they observe and notice in the garden in relation to multiple timescales
- » Imagine more-than-human (animals, birds, insects, water, rocks, etc.) relationships in places
- » Describe human decisions that have occurred in gardens over time

Centering Equitable Practices

- **Broaden what “counts” as science:** Science is often taught from very narrow conceptions of what counts as science (such as bench sciences like chemistry and physics), who does science, and where science is done. This lesson gives you an opportunity to open up the thinking space in science to include learners’ prior knowledge, family- based knowledge, and expertise as they begin to engage in place-based investigations.
- **Provide equitable access to outdoor learning experiences:** It is natural to be nervous about learners’ behavior while outdoors. This might come from concerns about safety while outside, but it often results in policing of children of color more often and more harshly than white children. Learners will be excited to be outside. They may speak in louder voices than they normally would indoors. They may spread out but will come back together as they share their ideas. Allow them both emotional and physical space to do this.
- **Encourage more-than-human perspective taking:** Descriptions of ecosystems are often framed in terms of how ecosystems are useful for humans. In order to engage in ethical deliberation about places, however, we need to support learners in taking the perspective of more-than-humans in natural systems. How is this decision good for the trees? How is this place good for the worms? for the soil? Beginning to ask these questions will encourage learners to take on broader perspectives when engaging in ethical deliberation and decision-making around ecosystems.
- **Encourage human connections to ecosystems:** It is common for science learning to position humans as disconnected or apart-from nature. This activity encourages thinking about connections between humans and the rest of the natural world and starting from assumptions of complex interdependence.



Instructional Sequence

Part 1: Introduction to Histories of Places (15 minutes)

- » Share ideas and define history and future:
 - » Ask learners: when I say the word “history”, what do you think of? What kinds of places do you think have histories? What kinds of people have histories? Do you think gardens have histories?
 - » Allow learners to share the histories that they know about. You can record these ideas on a whiteboard, easel paper or in another way to refer back to as you reflect on this activity or in future activities.
 - » Ask learners: when I say the word “future”, what do you think of? What kinds of places do you think have futures? What kinds of people have futures? What does it mean for a garden to have a future?

» Introduce the Histories of Place time scales

- » Show learners the Histories of Places graphic organizer. You might want to print a larger version of the graphic to share with learners or print copies on the back of the Histories of Places activity sheet so learners can look at it while you talk.
- » Briefly introduce the timescales to learners and explain that the timescales are not just chronological, but they are also layered and continuously interacting in real time. For example, in the garden, soil is a part of Plant, Animal & Soil time, but also as a part of Geologic Time as rocks break down and glaciers formed and receded. Spend some time before the discussion learning the kinds of relationships Native people have or have had with this place. For example, what types of plant cultivation, fire management, or farming did they develop? How has settler colonization affected those practices?

TIME

45 minutes



Being

Recognizing that all places and peoples have histories and futures is important when considering different garden “Should We” questions. Reflecting on the futurity of the garden task will be important throughout the garden storyline.



- » Geologic time: this is about the land and water forming, including our mountains, glaciers, rivers, and oceans. While these were formed in the past, they are always continuing to change.
- » Plant, animal, and soil time: this is plants, animals, and soil, their histories in places, and also how their relationships with each other and with humans (because we are animals too!) are changing as the climate changes.
- » Indigenous peoples' time: this scale of time takes the perspective of the peoples indigenous to this place. Indigenous peoples have always been on this land and still are.
- » Share with learners that the land you are on is Indigenous peoples' land. You may use the this online tool (native-land.ca) to locate and share with learners whose land you are on.
- » Nation-state time: this is how countries, cities, and other political entities interact with the land, waters, plants, animals, and soil based on the things that are important to them. This can include ideas of political borders and resource extraction.
- » Global time: this is how the places where we live are connected to other places around the world.
- » Living ethical responsibilities and possibilities: this is how we imagine the future for all of the other timescales!

Part 2: Histories of Places Gardens Walk (30 minutes)

- » **Before the walk ask learners: when I say the word “place”, what do you think of? (5 minutes)**
 - » Build on learners' responses by sharing that place is a combination of many things that are more than just a setting or a physical location. Place also includes everything and everyone in that location and their relationships to each other, the history of that location, as well as our own relationships and memories of that space.
 - » Ask learners to think about what they would see if we walked around the outside of the garden or through the neighborhood. What plants and animals would we see? What buildings? Would we see rocks? Water? Sand or soil? Other people? Do these things help make the garden healthy for species (including humans)? Or do they hurt the garden? How? How might they impact what we can do in the garden?
- » **Go on a Histories of Places Garden Walk (20 minutes).**
 - » Explain to learners that we are going to walk through the garden in order to think about the garden from the multiple time scales discussed in Part 1.
 - » **For younger learners:** you can either print the Histories of Places graphic organizer or use the back pocket questions to support learner's ideas about histories of the garden. Be sure to prompt learners to think about each time scale.
 - » **For older learners:** you can double-side print the Histories of Place graphic on one side and the table on the other side. These questions can anchor the whole group discussion.

Knowing

Humans are deeply connected to gardens. It is important to demonstrate humans are a part of socioecological systems.

Reflection (5 minutes)

- » After the walk, bring learners together as a whole group.
- » Ask learners:
 - » What did we notice on our walk about time scales and the garden?
 - » Are there time scales that we should learn more about?
 - » How might the different time scales influence our gardening practices? (example: We noticed a lot of blackberry bushes, and we know these plants came to this place recently. Does that mean we should weed them?)
 - » How do you think gardening practices change over time and by season?(example: How might weeding be different in the winter? What might happen to this compost bin in 10 years?)
 - » What do you wonder about?
- » Record learners' wonderings to guide the garden task wonderings in LE 2.

Knowing

If there are certain time scales that don't have many observations, return to those time scales and learn more about them.

Optional:

- » You may send students home with the Histories of Places family tool to fill out with their families about their neighborhood.

LE 1 Educator Backpack Field tool

TIME	
15 min	Introduce the Histories of Places Time scales
25 min	Take a Histories of Places Garden Walk
5 min	Reflection

Thinking Across Scales:

- What do you see, hear, smell, or feel outside today? Is this similar to what you see/hear/smell/feel in a different season?
- Do you notice the same animals or plants here as in your neighborhood?
- Does this remind you of a place that you go to often? What are the similarities and differences?
- Why do you think it is important to think about the history of the garden?
- How does knowing a garden's history help us make decisions about what we should do in the garden?

Focus on Observations:

- making and recording observations is a key science practice in the garden:
 - What do you see, hear, smell or feel today?
 - Look up, down and around.
 - Zoom in and look at this up close!
 - What do you notice? What do you wonder?

Place/Lands/Waters:

- You noticed a hill. How do you think that came to be? How might water move when it reaches this hill?
- Does the land and/or water here look the same or different than the land and/or water in your neighborhood?
- How did this place come to be this way?
- Why do you think it's important for us to learn about this place and who we might share it with?

Connections to family and community:

- Does anyone in your family garden, even if they live in another country? Why and how do they garden?
- Send home the Histories of Places family tool for learners to fill out with their families about gardens in their neighborhood.

Centering Equitable Practices

Broaden what "counts" as science: :

- How are gardeners also scientists?
- Connect learners' prior knowledge, family-based knowledge and expertise to the science thinking in the garden.

Encourage human connections to ecosystems:

- You found flowers! Who else besides humans do you think would like to find flowers and why?
- Prompt learners to consider web-like relationships about species or kinds they find. For example, who else, in addition to aphids, might eat kale leaves?
- Why do you think some animals are easy to observe by humans and others are harder to observe by humans?
- What role do you think ___ plays in this place? What are they doing? Why is what they are doing important?

Histories of Places Time Scales

Geologic Time

Plant, Animal, and Soil Time

Indigenous Peoples' Time

Nation State Time

Global Time

Living Ethical Responsibilities and Possibilities