



Bundle Overview LEs1.1-1.5

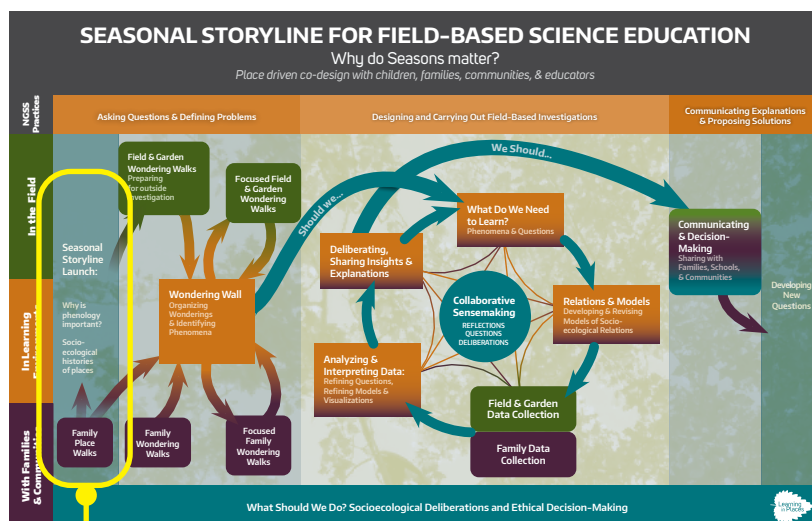
Bundle 1.A: Learning outdoors as place-based and historicized

This is the launch of the Field-Based Seasonal Storyline. This bundle supports learners and families in deepening their relationships with places, and reflecting on what we do in those places to build a *place-centered foundation* for our Storyline investigations.

This launch will give our learning activities throughout the Storyline purpose, rooted in our unique relationships with places—including all the humans and more-than-humans who share these places. In this bundle, we will intentionally make learning connections to places by considering families' local and global histories with places, going on outdoor observation walks to think about who/what else we share our places with, and expanding learning opportunities for often-marginalized students to feel themselves centered in teaching and learning. Because no two sets of learners are the same—they will have different experiences, histories, and relationships to power and privilege—it will be important to take time learning about the social and ecological histories of places in our learners' lives. By beginning with the places that are important to everyone in our learning environment, we may open pathways for scientific sense-making and socio-ecological decision-making that are meaningful to learners and their families. Importantly, in this bundle we will lay the foundations for learner agency and decision-making, which are critical to equitable classroom management and necessary 21st century skills—as we consider the daily social and ecological decisions we make in our everyday lives and how they impact others in the places that are important for us.

Big Ideas About Nature-culture Relations To Have In Mind As You Plan For This Bundle of Activities

Socio-ecological decisions are those decisions made by humans, communities, organizations, and institutions that are informed by and impact the natural world. These decisions are affected by how we think about and enact relationships between humans and the natural world, what are called “nature-culture relations”. Emerging research demonstrates that there is cultural variation in how these relationships are conceptualized and impact how learning and teaching occur. For example, there is important variation across cultural communities around the coordination of attention in observation practices. Further these relational construals are shaped by history and powered social dynamics. For example, variations in air quality and soil quality in neighborhoods are often correlated with race and class. Engaging cultural variation as well as historicity and power, can and should serve as resources for more equitable and expansive field-based science learning. This suggests that learning outdoors in places that matter for learners and their families, that is, in complex socio-ecological systems, may enhance reasoning and decision-making and equitable science education.



LEARNING GOALS

This engagement incorporates both school and family learning activities to introduce place-based learning. By the end of this bundle, learners will be able to:

- » Describe places that are important to them and their families
- » Describe what they observe in places around the school
- » Start to describe wonderings about places and their histories across various timescales
- » Imagine more-than-human uses of places
- » Describe human decisions that have occurred in places across time and space

CONNECTIONS TO NGSS/ FIELD-BASED SCIENCE

- » **Crosscutting Concepts:** Cause and Effect; Scale; Systems and System Models, Stability and Change
- » **Science Practices:** Obtaining, Evaluating, and Communicating Information
- » **Disciplinary Core Ideas:** ESS3.C: Human Impacts on Earth Systems (K-2)

Learning Engagements in this bundle

- **LE1.1: Socioecological Histories of Places Launch:** This is a **launch** of the bundle and the storyline. It introduces teachers and learners to the Histories of Places framework, which will be a key tool in organizing sensemaking across the storyline.
- **LE1.2: Family Histories of Places Walk:** This is a **family-based** walk where families explore the various timescales from the Histories of Places framework introduced in LE1.1.
- **LE1.3: Sharing Places:** This is a **school-based** introduction to place and who we share places with. Students will make predictions about who they share the schoolyard with, do outdoor observations of places, and then begin to discuss their observations in relation to Histories of Places.
- **LE1.4: Families' Learning Across Places:** This is a **family-based** exploration of places that are important to families, both now and historically. It allows families to reflect on what they know about places, and how they might imagine ethical futures for those places, their families, and their communities.
- **LE1.5: Synthesizing Place-Based Learning at home and at school:** This is a **school-based synthesis** of the bundle and an opportunity for the class to reflect on all of the place-based wonderings done by learners and their families. This is the beginning of wonderings about place that will continue throughout the storyline, so it's important to record them now and return to them as you proceed!



Engaging the Rhizome

Complex Socio-Ecological Systems: This bundle introduces the Histories of Places framework as an integral tool for sensemaking across multiple timescales. It will be used throughout the storyline. It is essential that learners come to understand that socio-ecological systems do not exist in a temporal vacuum, and therefore neither does socio-ecological decision making.

Culture, families, and communities: This bundle orients students to their cultural and familial connections to places, as well as beginning to notice the places, lands, and waters that surround them and shape their everyday lives. This connection between humans and natural systems is a critical perspective.

Field-based science Learning: It is important in this bundle to support a sense of wonder and making place-based observations. This will be the foundation for place-based investigations later on in the storyline.



Power and Historicity:

Science is often taught from ahistorical, narrow, and decontextualized viewpoints. In contrast, when learner and family ways of knowing and doing are included in the classroom and positioned as equal to the knowing and doing generated in school, it signals to learners and families that family knowledge and practices are important and valued. In addition, research has shown that helping learners make connections among knowledge, ideas, and practices across contexts (home, school, hobbies, for example) is a critical and powerful learning strategy. When learners see themselves, their families, and the places that are important to them connected to the science they are learning in school, they understand that science is related to their lives and the lives of their communities. With respect to Histories of Places, school science often privileges geologic time if time is acknowledged at all. It is critical to support learners in investigating and analyzing phenomena across multiple time scales as part of their sense-making about complex socio-ecological systems, and to help them deeply engage in deliberations and decision-making related to socio-ecological systems.

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 (especially black and brown children) more often and more harshly than white children. Students **will** be excited to be outside. Many **will** speak in louder voices than they normally would in the classroom. Many **will** spread out but will come back together as they share their ideas. Allow them both emotional and physical space to do this. Black people especially have historically not felt welcome in outdoor spaces. This is an opportunity to directly refuse anti-blackness while outdoors. For more ideas and practices related to supporting learning outdoors, consult the Supporting Learning Outdoors Framework.