



Building Family-Centered Models for Science Education through Learning in Places

Image source: the Learning in Places project, learninginplaces.org

What Is The Issue?

Families and communities are always engaged in complex sensemaking about scientific phenomena—navigating social and ecological systems through everyday observations, questions, and decisions. Place-emergent science investigations are powerful opportunities for families to consciously engage in collaborative scientific sensemaking and culturally regenerative interactions. Family and home-based activities represent opportunities for educators to re-think and re-shape science learning in ways that put partnerships with families at the center. Frameworks and lessons from the [Learning in Places](http://learninginplaces.org) project can support families and educators in this endeavor.

WHY IT MATTERS TO YOU

- **Family members** can take on a [wide variety of roles](#) to support science learning. [You do not need to think of yourself as a science expert to help children learn science!](#) Use [these questions](#) to support investigations.
- **Educators and community partners** should consider how their institutional resources [can support field-based investigations at home](#)—rather than trying to replicate school at home.
- **School leaders and PD providers** should [examine the values and relational qualities that drive partnership with families](#).

Things To Consider

- Science investigations should directly build upon students' [cultural funds of knowledge](#), which can include their [family's shared experiences, stories, and relationships with places](#). The [Learning in Places](#) project's neighborhood walk activities for [classrooms](#) and [families](#) focus learning on these family understandings of a place, its histories, and its significance to families, communities, and science.
- Family-centered investigations—like those developed for [“family making”](#) in the [TechTales robotics program](#)—[create a space](#) where families [build and share their relationships and identities](#).
- Recent events offer an opportunity to [rethink education](#) and [center culturally resurgent learning](#). To that end, educators can support more home-based learning activities, more communication between educators and families, and a focus on [ethics in science learning](#). The resources from Learning in Places offer starting points in that work, as they [position families and communities as equal decision makers and co-designers of curricula and learning experiences](#).

Recommended Actions You Can Take

Implement the [Learning in Places classroom storyline](#) to engage in meaningful science learning that strengthens the relationships between families and educational institutions. The following activities are a few examples of how family and community knowledges and practices are centered in the classroom storyline:

- To share stories in relation to a place: [Family Learning Across Places](#)
- To share cultural knowledge and practices in relation to time and seasons: [Why is this season important to our family?](#)
- To consider family relationships to neighborhoods and communities: [Sharing Places: Neighborhood Walk](#); [Species, Kinds, and Behaviors](#); [Places, Lands, and Waters](#); and [Human Decision Making](#).
- To consider questions of ethics and health as they relate to families: [Preparing for the Outdoors](#); [Exploring your Family's Daily Decisions](#); and [Modeling a Neighborhood “Should We” Question](#).

Deepen your own thinking and practice around family engagement through resources like the Learning in Places educator frameworks, which include research-based information, vignettes, and self-assessments you can take about your practice:

- To explore the importance of family engagement and collaboration: [Family and Community Engagement and Leadership Framework](#)
- To reflect on issues of learning, equity, and scientific knowledge: [Culture, Learning, and Identity Framework](#)
- To make sense of key dimensions of identity and relations in learning: [Power and Historicity Framework](#)

REFLECTION QUESTIONS

- How are the learners you work with already engaging in activities with their families around science phenomena? How could you find out?
- How can your school/institution support family and community engagement in designing curricula and learning? Reflect further with the [Self-Assessment for Family Engagement](#).

Attending to Equity

- Co-design learning activities with families and communities at the table. Explore justice-based models of [Family Leadership and Design](#), and refer to the Learning in Places [Family and Community Framework for Engagement and Collaboration](#) to explore different models of partnership with families.
- Neighborhood walks do not require a particular distance to be covered. Many of the activities can be done by just looking out a window. If visual observation is a challenge, other senses can perceive phenomena—like smelling fresh tree sap, feeling a leaf's texture, or close listening.
- Relations to place are mediated by powered historical dynamics. Often these privilege Eurocentric/settler-colonial ways of knowing and relating to places that exclude the Indigenous peoples who still reside on, or were forcefully removed from, their homelands. Engage in ongoing education about [whose lands your family or school live on](#) and [take actions that support Indigenous self-determination](#).

ALSO SEE STEM TEACHING TOOLS:

- #61 [Ecological Caring](#)
- #68 [Resilience in Climate Edu.](#)
- #70 [Intersectional Environ.](#)

