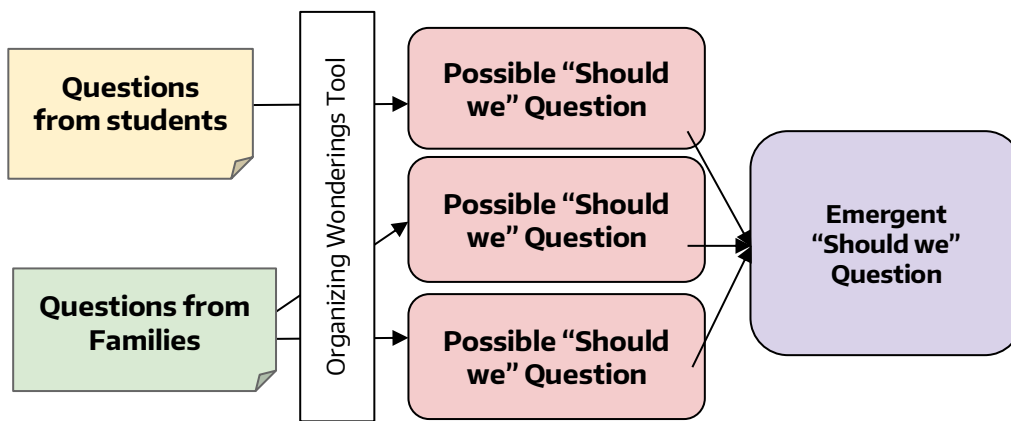


Questions Arc: From Wonderings to “Should We” to Investigations

I. Questions Arc

Overview: In LE 4, students and families continued to go on wondering walks and collect initial data in the field. The class will now have a series of wonderings and questions that can be narrowed down into an overarching “Should We” question that will guide the rest of the storyline. The “Should We” question should also connect to socio-ecological issues, events, or decisions that are being made in local places. This may emerge as students are conducting their wonder walks. For example, students may observe field ecologists or engineers addressing a socio-ecological concern as they do their walks. Alternatively, you may need to do some research on local issues that are connected to what students are wondering. The following diagram depicts how we will move from initial questions or wonderings to a “Should we” question.



II: “Should We” Question as a Storyline Guide

Overview: “Should We” questions emerge from classroom wonderings and will drive our seasonal storyline investigations. Creating “Should we” questions are important because they:

1. center social *and* ecological (socio-ecological) systems in our seasonal storyline;
2. give purpose, direction, and cohesiveness to subsequent “investigation questions”;
3. create spaces for kids to *reason & deliberate* about socio-ecological systems and decisions by using observations and evidence;
4. create space for *ethical decision-making* around nature-culture relations.

Components of a good “Should we” Question: A “Should we” question may seem very broad, but it is supposed to frame the storyline investigations. After students engage in a series of Wondering Walks with their class and their families, they will have a series of questions or wonderings. The “Should we” question will emerge from these. A good “Should we” question should lead to investigations that incorporate the 5 Socio-ecological Dimensions ([LE 3.3](#)).



Base Structures of a “Should We” Question: Your classroom “Should we” question may take many forms, but the core of the question should ask students to reason and make decisions about whether and how to intervene in a complex socio-ecological system. Examples of “Should we” question base structures are below.

1. *Intervening in an out of balance system or relationship.* This asks students to reason about what makes a healthy and unhealthy system and what they might do to help return the system to a balanced state. They may consider **adding or removing a species or kind from the system** to bring it back in balance.
 - a. For example, students may notice that the leaves of plants in their garden keep getting eaten. They may wonder whether and how they should remove the herbivores from the garden by adding more predators that eat the herbivores or removing them with pesticides.
 - b. In another example, students may wonder whether they should remove dead wood to decrease the likelihood or impact of a fire.
2. *Changing a landscape or waterways.* This type of question asks students to consider how **lands and waters are impacted by human interactions** and how this ripples to other relations.
 - a. For example, students may notice that rain water hitting the school runs off into parts of the school yard and creates micro-ecosystems. They may wonder whether they should re-route the water to be distributed more evenly across the yard or siphoned off into rain barrels to be used in the school garden.
 - b. In another example, students may notice tree roots breaking up sidewalks in their neighborhood. They may wonder about how the changing of their human pathways are being impacted by tree growth. They may wonder about whether people should build sidewalks, or plant trees near sidewalks.
3. *Altering community practices.* This type of question asks students to think about human activities that contribute to in-balanced systems or changes to landscapes/waterways. They might consider **stopping, starting, or altering a human practice or activity**.
 - a. For example, students may notice a nesting pair of ducks at a nearby pool of water. They may wonder whether people should stay away from the area and/or keep their pets from the area.

LEs 5-8: Arc of the Storyline with a “Should we” Question

This following chart is meant to provide an overview of the storyline arc after your class has chosen a “should we” question

[LE 5] Should We...				
[LE 6] Relationships, Models and Predictions	[LE 7] Data Collection (Field Investigations)	[LE 8-9] Analyzing and Interpreting Data	Socio-ecological Decision Making (emergent)	Connection to “Should we” Question
