Leaf Observations

 Field Based Investigations	Use this tool if you are interested in asking investigation questions like: 1. How do leaves change when they fall off of a tree? 2. What happens to different types of leaves over time (i.e. pine needles vs broad-leaf leaves)? 3. Do leaves decompose differently on pavement vs soil or grass?	**We will gather data about:** 1. How leaves look at different points of decomposition. 2. How different leaves decompose. 3. The relationship between leaf decomposition and other variables such as weather and ground surface.

Why is leaf decomposition important to socio-ecological systems?: When leaves fall to the ground they break down to become the soil that supports all things growing in a place. There is a deep relationship between the type and amount of leaves that fall in places and the types, abundance and health of organisms that grow there. Usually this cycle is one that supports abundant growth. However, sometimes leaves like some pine needles can actually release chemicals into the soil that keep other plants from growing! While this may sound problematic, it is actually a natural process that protects the parent pine tree from competition so it can continue to grow healthily while also building soil.

Why does observing leaves matter to my neighborhood--connecting to our "Should We" questions: Leaves can tell us a lot about how plants are responding to many environmental factors, like drought, pollution, and development. Leaf abundance and color are indicators of our neighborhood's ecological health as well as markers of natural seasonal changes. "Should we" questions such as "Should we rake up leaves when they fall" or "Should we remove leaves from a waterway" or "Should we plant evergreen or broad-leaf trees around our neighborhood" all relate to observing the leaves in your own community!

The investigation question we are asking is:

_____

The “Should We” question we are exploring is:

_____

Materials needed:	Directions:
❏ pencil ❏ this sheet or blank paper ❏ optional: magnifying glass	**Choose 3 leaves in different stages of the decomposition process to first make observations of and then draw the stages of what you observe.** ❖ Include labels of different parts of the leaves and any functions of these parts that you can describe. ❖ Describe what is happening with the leaf (ex. The leaf is telling me that it is slimy because_____is causing it to decompose). **Look for and describe evidence of decomposition.** ❖ Ideas to include or think about are the roles of water, surrounding plants, animals, fungi, temperature, & seasonal changes. **Notice how the ground looks around each set of fallen leaves.** ❖ What does the ground look like below this leaf (or leaves)? ❖ What other organisms do you notice?

Draw your leaf sample. Describe your observations, and identify any relationships that you notice to other surroundings.		
Leaf Sample 1 Location: Leaf Type: Season:	**Leaf Sample 1** Location: Leaf Type: Season:	**Leaf Sample 1** Location: Leaf Type: Season: