Species Behaviors in Places

 Field Based Investigations	Use this tool if you are interested in asking investigation questions like: 1. How do plants, animals, and humans behave in different places? 2. How do the natural and built structures in different places affect behavior (even for plants)? 3. How do an organism's structures (such as wings, legs, petals) relate to behavior?	**We will gather data about:** 1. the types of species found in different places. 2. how natural and built structures relate to species behaviors. 3. the role that body structures (like wings, fins or petals) play in species behaviors.

Why are species behaviors in places important to socioecological systems?: One of the central things that scientists study is the relationships between species (including plants, animals, and humans) to places. Over time all species have developed a unique set of traits, behaviors, and relationships to help them survive in a particular place. Many different factors relate to how species behave in different places, including the presence of natural and human-made structures such as trees, rivers, buildings, and roads. We can learn a lot about organisms by watching these behaviors, and understanding behaviors in different places can help us create space that helps species survive and thrive! Many species even depend on and thrive around humans and human-altered spaces!

Why does species behavior in places matter to my neighborhood--connecting to our "Should We" questions: Even in our own neighborhoods we live in partnership with other plants and animals. We might enjoy climbing trees, feeding birds, visiting a local duck pond or eating from our garden! We can learn a lot about the species who share our neighborhoods by watching their behaviors over time and our observations can help us answer "Should we" questions such as "Should we lower our shades at night to protect migrating birds" or "Should we use bug killers to get rid of pests (who might be eaten by birds)." Use the tables in this protocol to document the behavior of species that you observe in three different places over the course of three different periods of time. Remember to include humans in your documentation if they are present in the place you are observing. For each behavior you document, think about why a species might be doing that behavior.

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: binoculars ❏ optional: field guide for your local area	**Choose three different locations to observe plant, animal and human behaviors. You can visit these sites on different days!** ❖ at each location record the place, temperature, and precipitation (yes or no and type of precipitation) for each site. ❖ at each location conduct three observations at three points of time during your visit. **Record your observations of species that include plants, animals and humans.** ❖ In the first column record which species you are observing. If you don't know the name of the organism, you can write a descriptor such as a blue bird with black crest on its head. ❖ In the second column, notice and describe the behavior of each organism, and be as specific as possible. For example, "digging in the ground with its beak." ❖ In the final column, describe why you think the organism is doing this behavior. For example, "looking for worms in the dirt." **After observing three spaces, compare your observations to understand how species behaviors are related to places and the other organisms in these places.**

Location 1:_____ Time of observation 1: _____

Temperature at location 1: _____ Precipitation at location 1: _____

Species	Behavior(s)	Why do you think these behaviors are happening?

Time of observation 2: _____

Species	Behavior(s)	Why do you think these behaviors are happening?

Time of observation 3: _____

Species	Behavior(s)	Why do you think these behaviors are happening?

Location 2_____

Temperature in Location 2: _____ Precipitation in Location 2: _____

Time of observation 1: _____

Species	Behavior(s)	Why do you think these behaviors are happening?

Time of observation 2: _____

Species	Behavior(s)	Why do you think these behaviors are happening?

Time of observation 3: _____

Species	Behavior(s)	Function(s)

Location 3_____

Temperature in Location 3: _____ Precipitation in Location 3: _____

Time of observation 1: _____

Species	Behavior(s)	Function(s)

Time of observation 2: _____

Species	Behavior(s)	Function(s)

Time of observation 3: _____

Species	Behavior(s)	Function(s)