



Community Science

Urban Wildlife

Lesson 7: Observational Mapping

Duration: 25 minutes **Location:** Outdoor

Overview

In this lesson students will use their senses to reflect upon the biotic and abiotic components in their school grounds.

Learning Objectives

By the end of the session, participants will be able to:

- Create a sound map of the schoolyard representing biotic and abiotic components; and
- Articulate biotic and abiotic characteristics of the area which were not documented in the map.

Curriculum links

Grade: 7

Science, Interactions & Ecosystems

- Trace and interpret the flow of energy and materials within an ecosystem
 - Analyze ecosystem to identify biotic and abiotic components and describe interactions among these components

Equipment required

- A journal/notebook and writing utensil for every student
- Sit upon (optional)



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- Clipboard (optional)

Additional information

This activity is ideal to complete before the field study lesson plan because it attunes students how to utilizing all of their senses and adds a deeper sense of place. A sense of place is also described as how someone perceives and experiences a place or environment. Students that are both familiar and unfamiliar with the schoolgrounds will be able to see their surroundings through a different lens with the help of this activity.

This lesson can be an introduction-to or follow-up activity for the concept of biotic and abiotic ecosystem characteristics.

Lesson plan

Time	Activity	Equipment Needed
10 minutes	<p>Take your group outside, dressed for the weather. Your group will need to find a spot within the designated boundaries that is within sight of the facilitator but away from other students. It is ideal to have the students near trees or forested areas for this exercise.</p> <p>Sense maps are a quiet, individual activity. They need to be as quiet as possible and not interact with other students. Participants can choose to sit however is comfortable for them.</p> <p>They begin by drawing a dot in the center of the paper to represent them. Space at the top of their paper represents space in front of them. Space at the bottom of the</p>	<ul style="list-style-type: none">• Writing utensils• Journal or notebook• Clipboard (optional)• Sit upon (optional)• Weather appropriate clothing



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	<p>paper represents space behind them. The right side of the dot represents space to their right and so on.</p> <p>Before beginning, have all participants do a breathing or meditative activity (e.g., 5 finger breathing or 5 senses meditation) to settle their nerves. When the facilitator gives the signal to start, students record everything they hear using a symbol they create. Students can use letters or shapes to represent what they hear. Each time they hear something they record it using the same symbol (if experienced multiple times, they will record it multiple times).</p> <p>For example, if they heard a bird chirp in a tree to their left, they could draw a musical note as close the chirp felt between their "X" and the left edge of their map. Tell them they can choose any symbols they want to represent sounds: i.e. pictures, shapes, words, squiggly lines, etc. Instruct the students to try and incorporate all elements of the natural area into their sense map including plants, trees, animals, birds, insects, etc. while paying close attention to their unique characteristics.</p> <p>Participants keep listening, looking, smelling and feeling and recording until the time is up. Participants will finish by creating a legend to accompany their sound map. They do not need to know what the sound they experienced was, students need to use their imagination to create the legend.</p>	
15 minutes	<p>After several minutes of recording, gather back together to share each other's maps, symbols, and discoveries.</p> <ul style="list-style-type: none">• What sound(s) stood out the most to you? Why?• Which sounds that you observed were abiotic (non-living)?	<ul style="list-style-type: none">• Pencils• Journal / notebook• Clipboard (optional)



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	<ul style="list-style-type: none">• Which sounds that you observed were biotic (living)?• Are our sound maps a complete representation of all the abiotic and biotic characteristics of our schoolgrounds ecosystem? Why or why not? What are some examples of abiotic/biotic characteristics that we could not hear (<i>e.g., soil, sun, houses, etc.</i>)? Can you add two of these examples to your map?	<ul style="list-style-type: none">• Sit upon (optional)
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Extension

1. Have students take their map and create a flow chart which visually represents the interactions between the biotic and abiotic components that were on their maps.
2. Maps could be used to make inferences about local species abundance and reflect on the environmental impact of human activities in your schoolyard. Discussion could be lead around; the lack or abundance of wildlife sounds in certain areas of the schoolyard, how the schoolyard could change to increase wildlife sounds, etc.

This would connect with the following curriculum:

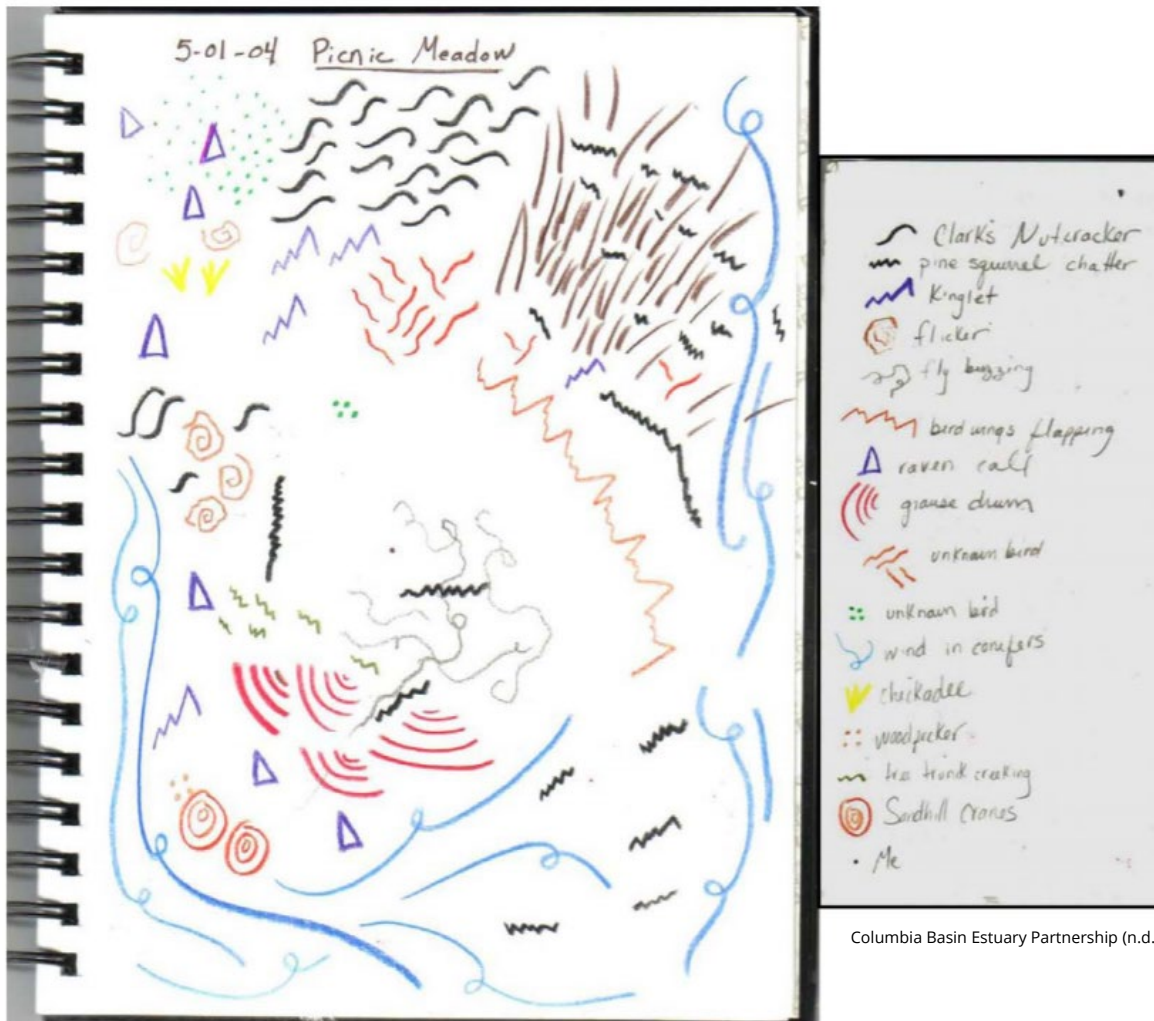
- Describe the relations among knowledge, decisions and actions in maintaining life-supporting environments
 - Identify intended and unintended consequences of human activities within local and global environments



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Columbia Basin Estuary Partnership (n.d.)