Lesson Overview

Big Idea: Plants, Animals and Insects are all unique and exist within our own communities. As inquiry focused students we can find such organisms within our community and learn about them through outdoor exploration and research.

Guiding Questions:

1. **What does the ecosystem of your neighborhood/ backyard/ block look like? Do you notice any vegetation you can identify (Flowers, Trees, Grass?)**
2. **What information is helpful in a guidebook?**
3. **What roles do plants, animals and insects play in your community?**

Objective: To connect students to nature and ecological systems in both Idaho and other locations through interactive distance learning in their communities. Students will also use observation and inquiry skills to identify plants, animals and insects in separate natural spaces and learn to connect their findings through research and understanding to identify and understand the features, names and characteristics of what they observed.
This activity is colorblind accessible to students as the activity focuses on observing features outside of just color, such as shape, texture, and other physical features.

You will find the template for both your community field guide and the "I notice I wonder it reminds me of…" activity sheet at the end of this lesson plan.

Notes for Parents/Teachers

- The purpose of this project is to help students learn what is around them in the natural world and what those plants and animals are called. This activity is centered around the student's interest and excitement to explore the natural world around them. Using a model of experiential learning, the students will be able to explore the natural world around them and learn to see the small details of what they find. Students will document their findings, and research names and information about the plants and animals they have observed.
- For this activity, students will create their own version of a local ecological guidebook based on observations they make around their community. Students will identify the names, descriptions, and facts about what is around them, and be challenged to share that book with someone and facilitate their discovery of the natural world. To wrap up, students will be asked to reflect on how knowing information about the animals and plants around them changes their view of those animals and plants.

Age Group:

- 8th- 12th Grade

Total Time Needed:

- 1 hour 45 minutes

Materials Needed

- Guidebook printout, pencil or pen, Computer via home computer, library or community or school computer lab

See more from MOSS Adventure Learning at moss.uidaho.edu/adventure

What is in your Community? Plants, Animals, Insects.

Step 1: Writing warm up

- Look outside your window, on your windowsill and think about plants you might be able to see near you. Take 5 minutes to think about plants, animals or insects you can possibly observe. What connections can you make about how they gain energy or interact in our outside world? What resources might they need to survive, think might they need food, shelter or other features like we do to live comfortably?
- Write some pre-observation guesses about what you will observe and the interactions the organisms in your community might have.

Step 2: Let's go outside!

- Take the Plant and Animal/Insect observation worksheets with you into your community and spend five minutes looking around and observing everything you could connect to the term "nature".
- Now use the guiding questions on the sheet to make as many observations as you can about both plants and animals or insects in your community. What do you think you might see?
- Fill out the sheet with your observations and log onto a computer at home, at the community center or library, you will be using google or another search engine to research what you found.

Step 3: Prompts for Parents and Teachers

Have students go out into their neighborhood, which can be a backyard, a public park area, a street with vegetation, or other observable locations in their community.

- (5 min) Ask your student to spend five minutes looking around and noticing what connections they might see between plants and animals and insects. Have them share with you what they find.
- (15 mins) Start with the plant observation worksheet. Have the students go find a plant they find interesting. After they write a couple sentences in the first three boxes, have them draw, trace, or rub, the plant into their observation box. (Labels?)
- (15 Minutes) Have students then use the animal observation worksheet. Have the students identify and animals within their community (Birds, Mammals, etc.) or have students find evidence of animals living in their communities (poop, tracks, other signs)

Think about....

- What animals do you know live in your area?
- What plants do you know that are native to your area?

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- (15 Minutes) Have students then move onto the insect identification worksheet, have students use the zoom in zoom out practice to look really closely at objects in their community that might be evidence of insects, or their habitat and then zoom out looking at the broader picture of where these insects might reside.
- (30 Minutes) Once students have completed their observations, allow them to return to their place and conduct research on their own. Students will use online search engines to find relevant information and facts in regard to their observations. Students will then use empty template guidebooks or can create their own to input images, and information based on the organisms they have observed.
- (15 minutes) Have students share their guidebook with a neighbor, friend, family member or community individual and get feedback about one aspect of the information in their guidebook. Students will then discuss the role a guidebook could play for their people in their community and their interest in natural features and organisms in their "place".
- (10 Minutes) Students will have a brief reflection with instructors through guided open questions and will have time to share their experiences through this activity.

Step 4: Guidebook

Now that we have made observations on plants, animals and insects in our local area go online and use the example web pages or search on your own to find facts and information about the things you observed in your community. You may also use an established guidebook, to find information or facts about your observable organisms (these can be found as an online source, or as a book at your local library).

Once you have completed your research add a photo and the information and facts you have found into boxes provided that you find relevant or interesting, this should include the known name of the insect, the scientific name and possible habitat it would be found in.

Complete your guidebook.

Please find the guidebook and "I notice, I wonder, It reminds me of" templates at the end of this lesson plan.

Online Resources:

- https://green2.kingcounty.gov/gonative/index.aspx.
- http://nativeplantspnw.com/design-shopping-guides/

Example: online guides students could offer to their community or cite through their research into local plants.

What is in your Community? Plants, Animals, Insects.

Step 5: Sharing with others

- Give your guidebook to your siblings/parents/someone in your community so they can use it to learn about the plants/animals in your area. Write one to two sentences about feedback or use your community member had with your guidebook.

- Zoom Meeting: Have students return when they've shared their guidebook and have them share feedback they received. Allow students to share what they learned and discuss the role this program offered them. Has it supported their learning about ecological systems in their community?

Step 6: Putting it all Together

- How does knowing the name both common and scientific for plants, animals and insects around you affect how you feel about them?
- How does connecting the interactions between vegetation, insects and animals change your perceptions on the role and size of your ecosystem?
- Do you feel humans are more connected to nature than you previously thought?
- How can we feel more connected to nature?
- What connections or interactions can you now actively observe about the natural world in your community?
- Knowing what is around you is extremely important, (what if you didn't know what a sink was) and knowing the names of things is also vital for effective communication (how awkward is it when you forget someone's name!).

Think about....

- What need for understanding can you identify in your community that your guidebook can provide?
- What information you learned while working on this project, can it be applied to others in your community outside your immediate circle?
- What tools such as imagery and information did you use to make your community curious to learn more about the ecosystem around them?

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Step 7: What can change?

- Now that we've identified organisms during this time of year, we don't have to stop making observations and connections to our natural ecosystems.
- Return to this activity during weather events such as rain, snow or high wind or even dry periods or when the seasons change.
- What organisms are still active in your ecosystem with these changes.
- What organisms shift their appearance or habits to adapt to these weather patterns, what assumptions can you make about how weather and season will alter the behavior of some

Think about....

- Seasons and the role weather might have in your community or ecosystem.
- What adaptations do animals, plants and insects have to survive changes.
- What types of adaptations do organisms in your community have to ensure their survival when food or water becomes scarce?

Animal/Insect Discovery Worksheet

Name(s) I gave to Animal/Insects in my community:

Organism Identification:

Observations you can make about animals and insects in your community/place (I notice …)	Evidence of Animals and Insects in this outdoor place (What physical or inferred evidence can be found to show animals or insects are here?)

What features does your observed animal or insect have?	Questions: I wonder?

This animal/insect reminds me of…..in my community(object, living thing, etc.)	Does your animal or insect have unique colors or traits?

Interactions in this community: What I notice around my animal or insect and how it interacts with my community's natural and human ecosystem.

Plant Discovery Worksheet

Name I gave my plant:

Plant Identification:

Observations I notice about this plant…	Leaves (What do I notice about the leaves?)

What does the body of the plant look like?	Questions: I wonder?

This plant reminds me of…..in my community	This plant has a cone, flower, nut, fruit

Interactions in this community: What I notice around my plant, on the plant, how I feel this plant interacts with the ecosystem in my community.

A Community Guidebook

An explanation of my community (can be explanation of local features, businesses or a brief summary of what the students feel comfortable discussing about their community)

Natural Features in my community: (Students outline basic features ie hills, farmland, rivers, creeks, grasses, or other features common in their community)

Plant Field Guide

#1	#2	#3
#4	#5	#6

A guide to
community animals

#1	#2	#3
#4	#5	#6

A Guide to Insects

