

What Plant Where?

Investigative Question: What is a plant's role in its habitat? What are physical features that can be considered when choosing plants for a native garden?

Goal: Student explore and observe native plants for attributes (height, width, flower color, leaf shape, and habitat) that should be considered when choosing plants for a native plant garden. Students understand a diversity of plant types is important for a native plant area/garden.

Objectives

Knowledge: Students observe plants for evidence of organisms using the plants.

Skills: Students use measuring tools and observation skills to determine plant height, width, flower color, leaf shapes, and the habitat the plants are found in.

Value: Students appreciate diversity of organisms that live on or use native plants.

Virginia SOL: Science 4.1, 4.4, 4.5. Math 4.7

Materials

- Native plants in Blandy's Native Plant Trail (NPT) or any native woodland habitat
- Plant Labels
- For each group:
 - o Clipboard
 - o Data sheets
 - o Measuring tools (tailor's tapes—fabric measuring tapes, cm rulers, meter sticks.)
 - o Hand lenses

Student Grouping: Groups of 4-5 students

Special Safety

- Be aware of any bee or insect allergies. Before the program, scout the activity area for physical hazards that should be avoided, such as poison ivy and, if needed, when introducing the activity show to students as a plant to avoid.

Set-up-

- Prior to the students' visit, create and place plant labels near several groups of plants (at least 5 groups). These will vary based on the season. Also, choose an additional plant for modeling the following procedure with the students.

Procedure

1. Blandy Introduction
2. Inquiry Part1: Engage
 - a. Take students to a sample plant to model the activity. Using some of the suggestions below to Ask:
 - i. How can you describe this plant? Guide students, as needed, to examples such as leaf shape, texture, bark, plant height and width, and so on.
 - ii. How can other organisms use this plant?
 - iii. Does anything depend on this plant for its life or habitat needs?
 - iv. Does the plant depend on anything for its life or habitat needs?
 - v. What is a native plant?

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- b. Explain to students that in order to learn what plants are best suited for their school garden, they can learn how plants are used by organisms as well as what plants look like.
3. **Model Activity:** Students will make observations using the data sheets. The information will be used as reference for building a native plant garden at school. Using the sample plant, model with students how to use the data sheet to make observations of the plant. As a team:
 - a. Record name of plant from large label and ask students to follow along on their data sheets.
 - b. Draw or describe what the leaves look and feel like, and color of flower.
 - c. Ask for student volunteer to help measure the plant's height and width. If needed, review how to use the measuring tools.
 - d. Ask students to look for evidence that the plant has been used by organisms. (They may have obvious responses at first, guide them to look for eaten leaves, webs or nests, insect galls, etc.)
4. **Student Observations:** Assign each group to a set of plants. Ask teachers and parents to assist students. If time allows, groups may be able to investigate multiple plants.
5. **Inquiry Part2:** Bring students back together to share what they learned. Ask student groups to share something interesting they observed. An option is to conduct a garden/gallery walk, with each group showcasing the plant they observed, sharing their observations and why/why not the plant should be included in a school garden.
6. **Conclusion-** Bringing class back together, choosing from the following questions, ask:
 - a. Should all the plants in the garden be the same height and flower color?
 - b. What are some reasons we would want to measure a plant?
 - c. Why is this something we should think about when we are designing a garden? [We want a garden to be visually appealing to us, the animal visitors don't care where they are but we want it to be diverse as well as.]
7. **Explain-**Our goal is for you to learn about how several native plants fit into their ecosystem to understand plant diversity. Why? What is the benefit of a diversity of plants? What is the importance of a diverse habitat? Guide students to the understanding that a diversity of plants brings a diversity of animals which create a healthier functioning ecosystem.
8. **Extend-** Back at school, each class can create a proposed planting map for the schoolyard garden area based on the plants they examined and the habitat/resources present. This can be an opportunity to tie in mathematics such as spatial relationships and making scale models.



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Student Names _____

Date _____

Name of Plant	
Draw or describe what the <u>leaves</u> <u>look</u> like.	
Draw or describe what the <u>leaves</u> <u>feel</u> like.	
What <u>color(s)</u> is the <u>flower</u> ?	
What is the <u>height</u> of the plant?	cm
How <u>wide</u> is the plant?	cm
Circle: Single Plant or a Group of Plants	
Circle any signs/evidence that the plant is <u>used by any organisms</u> . Animal Droppings Pollination Used as a home (ex. nest, web) Parts are eaten or damaged	Describe any other evidence that the plant is used by organisms.
What is the <u>habitat like</u> ? (circle all those that apply) Sunny Shady Wet Dry Rocky Leaf litter	Describe the habitat.



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