

Nature Walk for At Home Learning

Standards application	<p>SC.3.L.15.2 Classify flowering and non-flowering plants into major groups such as those that produce seeds, or those like ferns and mosses that produce spores, according to their physical characteristics.</p> <p>SC.3.L.14.1 Describe structures in plants and their roles in food production, support, water and nutrient transport, and reproduction.</p> <p>SC.2.L.17.2 Recognize and explain that living things are found all over the Earth, but each is only able to live in habitats that meet their basic needs.</p>
Purpose	<ul style="list-style-type: none"> • Students will actively search for flowering and non-flowering plants on their nature walk. They will use pocket microscopes to view the structures of the plants such as chlorophyll, stems, vascular system, spores and flowers. • Students will identify the food, water, shelter, and space that provide for living things to survive in their habitat.
Materials	<p>Pocket microscopes (or use a phone camera with a zoom in feature)</p> <p><i>The Forest of S.T.Shrew</i> from Project Learning Tree</p> <p>Picture slides of the animals in the story</p> <p>Data Sheet for field observations</p> <p>pencil</p>
Background (please read to students)	<p>Plant Walk:</p> <p>Ninety percent of the Earth’s plants produce flowers. These flowers are the reproductive part of the plant from which fruit is produced. Inside this fruit are seeds, or embryos, that will be disbursed by wind, water, or animals. If they settle in the necessary environment, they will germinate and produce another plant.</p> <p>Non-flowering plants produce either cones that house their seeds, such as pine cones, or spores, such as ferns and mosses. These plants also depend on wind, water, or animals to disperse their seeds or spores. (Note the pictures of non-flowering plants)</p> <p>Habitat Walk:</p> <p>A habitat is a place where an animal or plant lives and gets all the things it needs to survive, including food, water, shelter, and space to grow, breed, and raise young. Within any habitat there are smaller microhabitats. For example, a decaying log is a microhabitat within a larger forest habitat. The decaying</p>

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	<p>log provides all essential elements for the many small animals and microorganisms that make the log their home.</p> <p>Show students the pictures of the organisms in the story of The Forest of S.T.Shrew. (These should be printed in color and laminated in a binder.) This will provide background knowledge and frame of reference for students.</p>
<p>Activating Prior Knowledge</p>	<p>Plant Walk:</p> <p>What do plants need to grow? (sunlight, water, carbon dioxide)</p> <p>How do plants produce their own food? (photosynthesis)</p> <p>How do plants support themselves? (stems, trunk, branches)</p> <p>How do plants get water from the ground? (roots)</p> <p>How does the water from the roots get to the rest of the plant? (xylem)</p> <p>How does the food from the leaves get to the rest of the plant? (phloem)</p> <p>Habitat Walk:</p> <p>What is a forest? Have you ever visited a forest? If so, what did you see? If not, what might you expect to see? What do you enjoy about the forest?</p>
<p>Instructions for Plant Walk:</p> <p>Look for these objects during walk and have students stop and make observations with microscopes.</p> <p>Explain to students that you are leading them on a nature walk and you are going to be stopping to look at leaves, flowers, and seeds. They are welcome to stop and look at things that interest them, but there will be times when you stop and have everyone look at something together. Students should stay close by and not get spread out along the trail.</p>	<p>1. Green Leaf:</p> <p>Have students look at leaf under pocket microscope.</p> <p><i>Chlorophyll:</i></p> <p>Point out the chlorophyll. Explain that this is what makes plants green. Chlorophyll absorbs light energy from the Sun and uses water and carbon dioxide to produce food (glucose) for the plant through photosynthesis.</p> <p><i>Vascular system:</i> Note the veins in the leaf. Explain that the veins are really xylem and phloem. Xylem and Phloem are in stems, branches, trunks as well.</p> <p>“Xylem tissue transports water and dissolved minerals to the leaves, and phloem tissue conducts food from the leaves to all parts of the plant. “</p> <p>From: https://www.britannica.com/science/vascular-system</p> <p>2. Ferns and moss:</p> <p>Look at the underside of a fern that shows signs of spores under a microscope. Explain that the plant releases these spores and they are transported by the air to reproduce more ferns.</p>



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	<p>3. Flowers: Look at flowers under the microscope. Explain that flowers are the reproductive part of the plant. Pollen, petals, seeds, fruit are all things to point out.</p> <p>4. Seed pods or clusters: Have students look at seeds under the microscope. Notice the seeds that are adapted to attach themselves to animals or be moved by wind. Look for flowers, berries, or seed pods.</p> <ul style="list-style-type: none"> • Be careful where you step, keeping an eye out for any animals or insects that might be surprised by your presences.
<p>Instructions for Habitat Walk</p>	<p>Read story <i>The Forest of S.T. Shrew</i> from Project Learning Tree.</p> <ul style="list-style-type: none"> •Take students on a nature walk looking for habitats. Have students be on the lookout for things living things need such as food, water, shelter and space. Students should take data sheet and check off what they find for each organism. For example, they may see a bird in a tree eating a fish near a lake. They would record BIRD and check off FOOD, WATER, SHELTER, and SPACE. •Remind students to look for microhabitats as well as ones for larger animals.
<p>Final instructions</p>	<p>Please leave only footprints and take only pictures or memories as you enter our nature trail. Please leave trail in its natural state.</p>