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## Quick & Easy Habitat Education Activities

# Maple Seed Mix-Up

Developed from "Maple Seed Mix-up," *Trees are Terrific*

First Grade 1-7  
15-20 Minutes  
Outdoors

<p><b>Description:</b> This interactive game helps students understand the combination of basic environmental conditions necessary for a seed to sprout. Students role-play a seed or one of its needs (sun, soil and water) in a game similar to cake walk. Where a 'seed', 'water', 'sun' and 'soil' have landed together on a 'base', a seed can sprout. Students then evaluate outdoor areas that may or may not provide those same needs.</p>	<p><b>Vocabulary</b>  <b>Reproduce:</b> to produce new individuals of the same kind  <b>Seed:</b> the fertilized part of a flowering plant that can produce a new plant  <b>Sprout:</b> to grow, spring up, come forth; to send out new growth</p>
<p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>• Students show understanding of plant growth requirements by organizing themselves during the game in a manner that would allow a seed to sprout.</li> <li>• Students evaluate conditions in a natural habitat area to predict the potential survival of a seed.</li> </ul>	<p><b>Washington State EALRs</b>  <b>Science 1.2</b> Describe how an organism's behavior and ability to survive is influenced by its environment, other life forms, and availability of food and/or other resources.  <b>Science 2.1</b> Develop abilities necessary to do scientific inquiry using modeling.  <b>Seattle School District Standards 1.2, 1.4, 1.5</b> Plants need water and also light from the sun to make their own food to grow.  <b>1.4</b> Recognize the components, structure, and organizations of systems and the interconnections within and among them.  <b>Science Kit: Organisms</b></p>
<p><b>Print Materials</b></p> <ul style="list-style-type: none"> <li>• 'How-to-do Activity: Playing the Game'</li> <li>• Image: 'Bigleaf Maple Tree'</li> <li>• Masters: 'Game Cards: Sun, Soil, Water and Maple Seed'; 'Maple Leaves'</li> </ul> <p><b>Kit Materials</b></p> <ul style="list-style-type: none"> <li>• Starflower Plant ID card: Bigleaf Maple (to help identify a tree for the activity)</li> <li>• Laminated copy of 'Game Cards' (see 'How-to-do Activity')</li> <li>• Laminated copies of 'Maple Leaves': one leaf per student</li> <li>• 4 'Bases' (e.g., kneeling pads, fabric squares or carpet squares)</li> </ul>	

<p><b>Before Activity:</b> Discuss the major parts of a plant (roots, stem or trunk, leaves). Use the Starflower Plant ID card to locate a bigleaf maple tree with enough area around it to play the game (see 'How-to-do Activity').</p> <p><b>Activity:</b></p> <ul style="list-style-type: none"> <li>• Gather students near a bigleaf maple tree. Point out the tree and any seeds that may be present.</li> <li>• Show the class a maple seed (or image). Ask them what things the seed needs in order to sprout and grow into a tree (point to the bigleaf maple tree). As students say <b>sun, soil, and water</b> show them the game cards that match these needs.</li> <li>• Ask the students how many seeds they think the tree makes each year (e.g. 10? 100? 1000?) State that "In the spring a large bigleaf maple tree may have over a thousand seeds." Ask students "Do you think that all the seeds will sprout and grow into a big tree? Let's see if we can find out the answer."</li> <li>• Say, "We are going to play a game to pretend to see if we can get a maple seed to sprout. Everyone will get a chance to pretend to be a maple seed, sun, soil or water. The object of the game is for a maple seed to 'land' in a place that has all three requirements for survival (i.e., sun, soil, and water)".</li> <li>• Play the game (see 'How-to-do Activity').</li> <li>• Repeat game until the students show an understanding of the concept revealed by their developing strategies for a successful 'landing'.</li> <li>• Summarize: "What have we learned? Will a seed grow if it has no water? Sun? Soil? What happens if the maple seed does not get all of its needs? Did every maple seed land in a good location? Will every seed be able to grow into a tree? Why might it be good that not all seeds become a tree?" (too many trees, not enough seeds for animals).</li> <li>• State that "Only a few of the seeds will become trees because most seeds will land where they cannot get enough soil, sun and water together. Where are some places like this? (under a rock, on a rock, on pavement, under eaves, on a roof, in a garbage can, eaten by an animal, into a lake, inside a car, gathered by a naturalist, etc.).</li> <li>• Have students form a 'tree' or a 'forest' using their 'maple leaves'. Congratulate students for their success!</li> <li>• Go on a short walk with students and ask them to look for places where conditions may be ideal for seeds to grow, and where seeds are not likely to be able to grow. Ask each student to identify a good and a not-so-good place for a seed to land.</li> </ul> <p><b>Extension:</b></p> <ul style="list-style-type: none"> <li>• Pass out cards again, having students keep their cards a secret to emphasize natural random selection.</li> <li>• In spring, look for signs of seeds sprouting (especially maple seedlings, which are common in urban forests).</li> </ul>
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