

<b>Title of Lesson Plan</b>	Seeds! What is Inside; How Does it Grow and Why is it Important?
<b>Prepared By</b>	Louise Kimball
<b>City and State</b>	Ridgefield, WA
<b>Grade Level(s)</b>	K-2
<b>Keywords (subjects covered)</b>	Seed, root, seed embryo, shoots, sprout
<b>Brief Description</b>	Through a variety of activities students will increase their awareness of the importance of seeds in relationship to growing trees, shrubbery, and flowers.
<b>Total Time Required</b>	Time will vary depending on activity. Lesson planned out for 12 days, 20 to 30 minutes per day.
<b>Setting</b>	Classroom and if possible a walk outside in forest area, playground, or park where there are many plants and trees
<b>Lesson Objectives/Goals</b>	<ul style="list-style-type: none"> <li>• Students will become aware of seeds by making a collection of seeds from home, school or surrounding playground or forest area.</li> <li>• Students will think about how seeds travel from place to place.</li> <li>• Students will understand what kind of environment seeds will flourish in.</li> <li>• Students will plant two different kinds of seeds and observe them growing.</li> </ul>
<b>Materials Needed</b>	<p>Books: <i>How a Seed Grows</i> by Helene J. Jordan  <i>Planting a Rainbow</i> by Lois Ehlert  <i>All About Seeds</i> by Susan Kuchalla  <i>The Lima Bean Monster</i> by Dan Yaccarino  <i>Seed, Sprout, Flower</i> poem by Helen H. Moore</p> <p>Chart paper divided into 4 columns  Variety of seed samples: pea pod, bean pod, peanut, avocado, cherry, banana, tomato, and apple, peach, apricot, green pepper, yellow pepper, seed packets, sesame seeds etc.  Bag of lima beans  Wheat  Paper towels  Straws  Plastic cups</p>
<b>Standards Addressed</b>	GLE (Grade Level Expectation) for Washington State Science

	<p>GLE 1.3.8 Observe and record that most living things need food, water and air. Observe and record or demonstrate that plants need light.</p> <p>GLE 2.1.1 Wonder and ask questions about objects, organisms and event based on observations of the natural world.</p> <p>GLE 2.1.2 Make observations and record characteristics or properties.</p> <p>GLE 2.1.5 Report observations of simple investigations using drawing and simple sentence.</p> <p>GLE 2.2.2 Raise questions about the natural world and seek answers by making careful observations and trying things out.</p>
<p><b>Procedure</b></p>	<p><b>Day 1:</b> Read and discuss <u>Planting a Rainbow</u> by Lois Ehlert and <u>How a Seed Grows</u> by Helene J. Jordan. Read <u>Seed, Sprout, Flower</u> poem by Helen H. Moore</p> <p>Ask students to bring seeds from home to make a classroom display.</p> <p><b>Day 2:</b> Make classroom seed display on large chart paper with four columns. (Name of seed, where seed was found, how seed traveled to the place it was found; prediction of the plant or tree seed will become.) Continue adding to chart as more seeds are brought to school.</p> <p><b>Day 3:</b> Have students work in pairs. Each pair of students is given two lima beans that have been previously soaked overnight in wet paper towels and two dry lima beans. Students will compare the outside of the wet lima beans to the dry lima beans (dry lima bean will be hard, wet lima bean skin will be wrinkled and easily removed). Next students will carefully split open the wet lima beans and observe what is inside. (A baby plant is in the seed; the seed sprouts and the little plant begins to grow; the seed has food for the new plant until it grows leaves to make its own food.)</p> <p><b>Day 4:</b> Have students look at the seeds inside of a variety of foods: pea pod, bean pod, peanut, avocado, cherry, banana, tomato, apple, peach, apricot, green pepper, and yellow pepper. List the seeds that you are able to eat and those that are not edible.</p> <p><b>Day 5:</b> Begin growing lima beans two different ways for observation.</p> <p>1. Soak paper towel with water, carefully and</p>

	<p>loosely wrap paper towel around three to four lima beans. Place wet paper towel with beans inside a small sealable baggie and tape to window, wall or whiteboard. Label bag with date. Keep paper towel moist.</p> <p>2. Plant soaked lima beans in small plastic cups filled with soil. If possible plant some beans close to the inside edge of the cup and others in the center of soil inside of cup. Keep soil moist. Label cup with date.</p> <p><b>Day 6:</b> Begin to grow wheat seed inside of a straw. Cut large paper towel into fourths. Tightly roll ¼ of the towel so that it will fit inside of a straw. Put paper towel inside straw leaving about ½ inch below bottom of straw. Put a wheat seed or kernel inside of straw on top of rolled paper towel. Place straw inside paper cup with water. Paper towel acts as a wick to bring moisture to the seed. Over several days students will be able to observe seed sprouting, growing roots, etc.</p> <p><b>Day 7 to Day 12:</b> Have students observe and then draw in a science journal what changes are taking place with the beans and the wheat.</p>
<b>Assessment</b>	<p>Science Journal pictures with 1 short sentence. Students will be able to tell or write at least two different ways seeds travel. Students will put pictures in order that show seed to mature plant.</p>
<b>Literature Cited/References</b>	<p><u>How a Seed Grows</u> by Helene J. Jordan  <u>Planting a Rainbow</u> by Lois Ehlert  <u>All About Seeds</u> by Susan Kuchalla  <u>The Lima Bean Monster</u> by Dan Yaccarino  <u>Seed, Sprout, Flower</u> poem by Helen H. Moore</p>
<b>Forestry Tour Attended</b>	Pacific Northwest 2008

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