

## WEEK 2 Lesson 2

### Science and Engineering: Plants Grow and Change

<b>S &amp; E Big Ideas</b>	<p>Plants are living organisms that need water, air, nutrients, light, and space to grow.</p> <p>Plants can produce new plants in many ways.</p> <p>Plants have different structures that function to help them survive. Individuals of the same kind of plant may look similar but also vary in many ways.</p>
<b>S &amp; E Guiding Question</b>	How have our seeds changed?
<b>Content Objective</b>	I can ask questions to get more information about a plant I am growing. (1-LS1-1, 1-LS3-1)
<b>Language Objective</b>	I can have a conversation with my classmates about the plants we are learning about and our method of growing new plants. (SL.1.1)
<b>Vocabulary</b>	<p><b>root:</b> a part of a plant that grows in soil</p> <p><b>leaf:</b> a structure on a plant that is usually green and makes food from sunlight</p> <p><b>germinate:</b> when a seed (or spore) starts to grow</p>
<b>Materials and Preparation</b>	<ul style="list-style-type: none"><li>● Mystery Science video: <a href="#">How Do Flowers Bloom in the Spring?</a></li><li>● root developed bag bean plants (from Week 1, Lesson 3)</li><li>● Seed Observation Journal, one for each child (from Week 1, Lesson 3)</li><li>● 6 inch ruler, one for each child or small group (from Week 1, Lesson 3)</li><li>● 1 cup measuring cup</li><li>● 1 tablespoon measuring spoon</li><li>● potting soil</li><li>● <a href="#">Needs of Plants</a> sheet, one per child</li></ul>

Science and Engineering U3 W2 L2

<b>Opening</b> 3 minutes	<p><i>Today we will give our seeds some nutrients. Like people, plants need minerals to be healthy. What could we add to our seed bags that would give our seedlings some nutrients?... Soil helps plants get the nutrients it needs to grow. What else should we add to our terrarium bags to help the plants grow?...That is right! Plants need water and sunlight to make the food they need to grow.</i></p> <p>Show Mystery Science: <a href="#">How do flowers bloom in the spring?</a> This video will discuss what plants need to live and grow.</p>
<b>Investigation</b> 20 minutes	<p>Have children make observations of their bean plants from last week. If there is visible growth, have children carefully measure it. Note any changes the bean has undergone in the journal.</p> <p>If roots have sprouted, add about 1 cup of potting soil to the Ziploc bag. Carefully place the bean, root side down, into the soil. The bean should be in the soil, but not too deep. Add more soil if needed. Add enough water to the bag to moisten the soil but not flood it (2-3 Tbs). Have the children slightly inflate the bag by adding a puff of their breath into the bag.</p> <p>Tape the baggies in the window that gets the most sunlight. The bean plants will begin to germinate in the bag and grow stems and leaves.</p>
<b>Discussion</b> 5 minutes	In pairs, children complete the Plant Needs sheet.
<b>Closing</b> 2 minutes	<p><i>How are people and plants similar in what we need?</i></p> <p>With the children, establish a regular schedule to monitor plant growth.</p>
<b>Standards</b>	<p><b>1-LS3-1</b> Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like their parents</p> <p><b>1-LS1-1.</b> Use evidence to explain that (a) different animals use their body parts and senses in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water, and air, and (b) plants have roots, stems, leaves, flowers, and fruits that are used to take in water, air, and other nutrients, and produce food for the plant.</p>
<b>Ongoing assessment</b>	Observe children as they work in their small groups. Are they participating in conversations about the development of the potato cuttings?