

**Montessori Science Lesson Plan**  
**Grace Streeter**

<b>Grade:</b> Preschool		<b>Subject:</b> Montessori Science – Life Cycle of a Flower	
<b>Materials:</b> <ul style="list-style-type: none"> <li>Felt Seed to Flower Set (See Appendix A) <ul style="list-style-type: none"> <li>You can make your own using hot glue and different colors of felt</li> </ul> </li> <li>Tray</li> <li>Seed to Flower Cards (See Appendix B)</li> <li>Labels (Water, Soil, Sunlight (See Appendix C)</li> <li>Small dishes for the felt pieces, cards, and labels</li> </ul>		<b>Technology Needed:</b> N/A	
<b>Instructional Strategies:</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Direct instruction</li> <li><input type="checkbox"/> Guided practice</li> <li><input type="checkbox"/> Socratic Seminar</li> <li><input type="checkbox"/> Learning Centers</li> <li><input type="checkbox"/> Lecture</li> <li><input type="checkbox"/> Technology integration</li> <li><input type="checkbox"/> Other (list)</li> <li><input type="checkbox"/> Peer teaching/collaboration/cooperative learning</li> <li><input type="checkbox"/> Visuals/Graphic organizers</li> <li><input type="checkbox"/> PBL</li> <li><input type="checkbox"/> Discussion/Debate</li> <li><input type="checkbox"/> Modeling</li> </ul>		<b>Guided Practices and Concrete Application:</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Large group activity</li> <li><input type="checkbox"/> Independent activity</li> <li><input type="checkbox"/> Pairing/collaboration</li> <li><input type="checkbox"/> Simulations/Scenarios</li> <li><input type="checkbox"/> Other (list)</li> <li>Explain:</li> <li><input type="checkbox"/> Hands-on</li> <li><input type="checkbox"/> Technology integration</li> <li><input type="checkbox"/> Imitation/Repeat/Mimic</li> </ul>	
<b>Standard(s)</b> <ul style="list-style-type: none"> <li>K-LS1-1 Describe patterns, through observation, of what plants and animals (including humans) need to survive.</li> </ul>		<b>Differentiation</b> <p><b>Below Proficiency:</b> Students below proficiency will be given more one-on-one attention throughout the activity. During the time in which the student would normally be working on their own, the teacher will walk through the activity step by step with them.</p> <p><b>Above Proficiency:</b> For students above proficiency, they will follow the steps given for the kindergarten level and high-flyer students described later throughout the lesson plan. These students will be expected to provide more labels for the pieces on the felt picture as well as attempt to read the labels out loud for practice in reading.</p> <p><b>Modalities/Learning Preferences (Auditory, Visual, Tactile, Kinesthetic)</b></p> <ul style="list-style-type: none"> <li><b>Auditory:</b> Students will hear guiding questions and definitions to help them better understand the content.</li> <li><b>Visual:</b> The materials in this lesson provide good visuals so as to help students better understand the concepts.</li> <li><b>Tactile:</b> Students will be using the felt pieces as manipulatives to help them show the process of a seed turning into a flower.</li> <li><b>Kinesthetic:</b> Students will be practicing fine motor skills when moving the felt pieces on the felt picture.</li> </ul>	
<b>Objective(s)</b> <ul style="list-style-type: none"> <li>By the end of this lesson, students will be able to identify the steps in the process of a seed growing into flower (seed, germination, seedling, bud, flower) by placing felt pieces in the correct order.</li> <li>By the end of this lesson, students will be able to identify the three elements that seeds need to grow into a flower (water, soil, sunlight) by verbally identifying them and/or labeling their corresponding felt pieces.</li> </ul> <p><b>Bloom’s Taxonomy Cognitive Level:</b> Remember, Understand, Apply, Analyze</p>			
<b>Classroom Management- (grouping(s), movement/transitions, etc.)</b> <ul style="list-style-type: none"> <li>Students will be shown this work one student at a time. It is also possible that the work could be shown to a couple 2-3 students as well.</li> <li>Students will be transitioned to this activity by simply telling them that you would like to show them a new work.</li> <li>Students can complete this lesson at a working mat or table of their choice.</li> </ul>		<b>Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)</b> <ul style="list-style-type: none"> <li>Students will be expected to pay attention to the teacher as she models the lesson for the student.</li> <li>Students will be expected to stay in their chosen spot for the entirety of the lesson.</li> <li>During their independent work, the student will have their voice at zero or will speak with quiet self-talk.</li> </ul>	
<b>Minutes</b>	<b>Procedures</b>		
<b>1 min</b>	<b>Set-up/Prep:</b> <ul style="list-style-type: none"> <li>Have the “Seed to Flower” set on a tray, and the pieces in a small dish. Have the cards set out in another dish on the tray.</li> </ul>		
<b>2 min</b>	<b>Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)</b> <ul style="list-style-type: none"> <li>This activity is to be done with one child at a time.</li> </ul>		

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	<ul style="list-style-type: none"> <li>• Ask the child if you can show them a new work. <ul style="list-style-type: none"> <li>- “Hi (<u>name of student</u>)! Can I show you a new work?”</li> </ul> </li> <li>• Guide the student to the shelf containing the new work, drawing attention to where the work is so that the student can</li> <li>• Help the child find a spot to set up and carry out the activity.</li> </ul>
<p><b>5-7 min min</b></p>	<p><b>Explain: (concepts, procedures, vocabulary, etc.)</b></p> <ul style="list-style-type: none"> <li>• Once the student is settled at their working spot, model the activity for the student.</li> <li>• “This work will show us how a seed grows into a flower! Watch carefully as I show you this work.”</li> <li>• As you model laying out the felt pieces in order from seed to flower, talk through the process (have the student say the definition words/words in bold after you): <ul style="list-style-type: none"> <li>- “When you want to grow a flower, you should first start by planting the seed. You will need to plant the seed in <b>soil</b>.” <ul style="list-style-type: none"> <li>&gt; Place the felt seed on the soil part of the picture.</li> </ul> </li> <li>- “You will not just need soil to make the seed grow. You will need <b>water</b> and <b>sunlight</b>.” <ul style="list-style-type: none"> <li>&gt; Model watering the seed with the felt watering can and place the sun felt piece in the sky above the seed. Place the water and sun felt pieces on the picture off to the side when you are done with them (continue to do this throughout the different stages of the activity).</li> </ul> </li> <li>- “With the help of water and sunlight, the seed will <b>germinate</b>. When a seed germinates, it begins to put out roots.” <ul style="list-style-type: none"> <li>&gt; Place the germination felt piece on the picture next to the seed.</li> </ul> </li> <li>- “With more water and more sunlight, the germinated seed will grow into a <b>seedling</b>. A seedling usually has a thin stem and at least two leaves.” <ul style="list-style-type: none"> <li>&gt; Place the seedling felt piece on the picture next to the germination piece.</li> <li>&gt; “Notice that the seedling is taller than the germinated seed, and its roots are growing deeper into the soil.”</li> </ul> </li> <li>- “If you keep watering the plant and giving it sunlight, the seedling will grow a <b>bud</b>. A bud for a flower is a roundish piece that will eventually open up into a flower.” <ul style="list-style-type: none"> <li>&gt; Place the bud felt piece next to the seedling piece on the picture.</li> <li>&gt; Guide the student to notice the differences between the bud and the seedling.</li> </ul> </li> <li>- “Finally, after you give the bud more water and sunlight, it will grow until the bud opens up and becomes a <b>flower!</b>” <ul style="list-style-type: none"> <li>&gt; Place the flower felt piece next to the bud felt piece on the picture.</li> </ul> </li> </ul> </li> </ul> <p><b>Extension for Kindergarten level students and highflyers</b></p> <ul style="list-style-type: none"> <li>• These students will be shown (in addition to the felt pieces) how to label their work. The alterations for this activity would be as follows: <ul style="list-style-type: none"> <li>- Whenever a new term is defined, the student will be shown the appropriate card from the “Seed to Flower” card set (See Appendix B)</li> <li>- For example: “With the help of <b>water</b> and <b>sunlight</b>, the seed will <b>germinate</b>. When a seed germinates, it begins to put out roots.” <ul style="list-style-type: none"> <li>&gt; Place the germination felt piece on the picture next to the seed.</li> <li>&gt; Place the germination card underneath the germination felt piece.</li> </ul> </li> <li>- After these students are done with this part of the activity, they will label the <b>sun</b>, <b>soil</b>, and <b>water</b> with the appropriate labels (See Appendix C).</li> <li>&gt; Have these students attempt to read all the words as they label them (This should be done for the Seed to Flower cards as well as the sun, soil, and water labels.</li> </ul> </li> </ul>
<p><b>5-8 min</b></p>	<p><b>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)</b></p> <ul style="list-style-type: none"> <li>• Now that the student has had watched you model the activity, you can now allow the student to do this activity on their own. You can stay next to the student to guide them through it if need be.</li> <li>• <u>Look for:</u> <ul style="list-style-type: none"> <li>- The student understands the correct order in which the seed develops into a flower</li> <li>- The student understands that, to grow, a seed needs soil, water, and sunlight.</li> <li>- The student understands differences in characteristics for the different stages of a seed growing into a flower.</li> </ul> </li> </ul>
<p><b>2-5 min</b></p>	<p><b>Review (wrap up and transition to next activity):</b></p> <ul style="list-style-type: none"> <li>• For review of this activity, the students will sit with the teacher and go over this activity. The teacher will mainly watch how the student carries out this work (the teacher can also watch from a distance to see how the student carries out the activity).</li> <li>• The teacher will also ask guiding questions to ensure that the student understands the different criteria from the “Look for” section of the <i>Explore</i> part of this lesson plan. <ul style="list-style-type: none"> <li>- “Can you tell me about the different stages that a seed goes through as it grows into a flower? Which one comes first? Which one comes next? Etc.”</li> <li>- “How can you tell that this is a seedling (or other stage)?”</li> <li>- “What do you notice about the roots as the seed grows?”</li> </ul> </li> </ul>

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	<p>- "What do you need to do to make a seed grow? What things do you need?" - Etc.</p>
<p><b>Formative Assessment: (linked to objectives)</b> <b>Progress monitoring throughout lesson- clarifying questions, check- in strategies, etc.</b></p> <ul style="list-style-type: none"><li>• Formative assessment will be done during the lesson through observation.</li><li>• The teacher will be asking guiding questions throughout the lesson to ensure student understanding of the content.</li></ul> <p><b>Consideration for Back-up Plan:</b> I do not foresee that anyone will have to use a backup plan for this lesson. However, if any pieces are missing, the teacher could use the "Seed to Flower" cards instead of the felt pieces until new felt pieces can be made.</p>	<p><b>Summative Assessment (linked back to objectives)</b> <b>End of lesson:</b></p> <ul style="list-style-type: none"><li>• For a summative assessment, students will be observed to see if they understand the concepts and definitions. The teacher will be looking for:<ul style="list-style-type: none"><li>- The seed to flower felt pieces are in the correct order</li><li>- The sun and water felt pieces are displayed on the felt picture</li></ul></li><li>• For kindergarten level students and high-flyers, the following will be expected in addition to the previously stated criteria:<ul style="list-style-type: none"><li>- The appropriate cards for the stages of a seed becoming a flower are next to each corresponding stage for the felt pieces.</li><li>- Labels for the soil, water, and sunlight are displayed next to the corresponding felt pieces.</li></ul></li><li>• Students will be asked guiding questions at the end of the lesson to ensure understanding (See the <i>Review</i> section).</li></ul> <p><b>If applicable- overall unit, chapter, concept, etc.:</b></p>
<p><b>Reflection (What went well? What did the students learn? How do you know? What changes would you make?):</b></p>	

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Appendix A

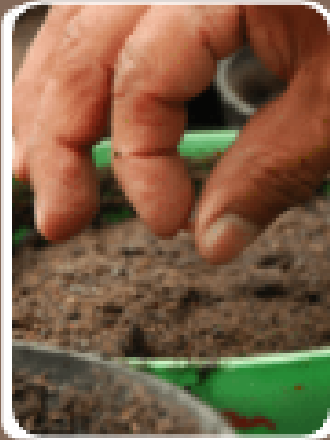
Seed to Flower Set



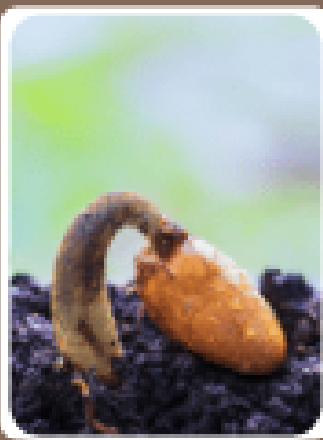
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Appendix B

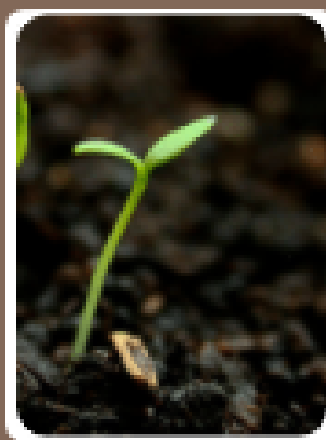
Seed to Flower Cards



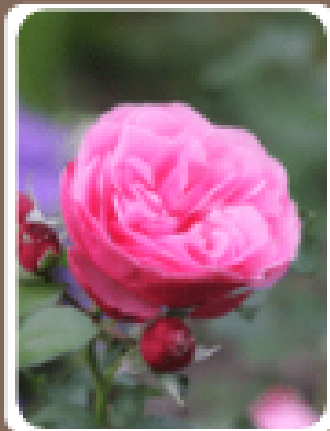
seed



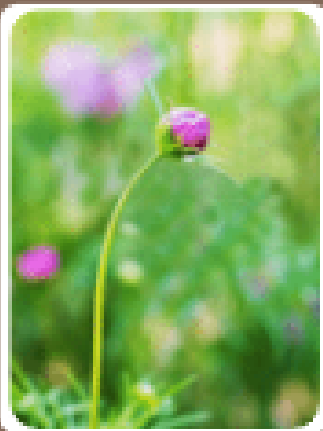
germination



seedling



flower



bud

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Appendix C

Water, Soil, and Sunlight Labels (Front and Back Sides)

soil



water



sunlight

