

Life Cycle Unit Introduction

Overview Students will collect seeds and create a diagram of a plant's life cycle using their seed.

Lesson Planner

Time Required	1 hour
Key Concepts/Terms	Life Cycle, Seed, Seedling, Adult
Prerequisites	<ul style="list-style-type: none">• Knowledge of expectations for outdoor classroom conduct.• Knowledge of plant parts
Setting	<ul style="list-style-type: none">• 10-minute field study outside• Remainder of lesson inside

Standards

MDSC 1st Grade Science

3.B.2.c. Describe some parts of plants and describe what they do for the plant.

3.C.2.a. Examine a variety of living things and their offspring and describe what each parent and offspring looks like.

Objectives

The students will collect plant seeds outside in order to create a diagram of a plant's life cycle.

Materials Required

- Art supplies (paper, coloring utensils, glue)
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Background Information

Students have just finished studying plant parts. The next chapter on life cycles begins with animals' life cycles. However, in order to tie into plant parts, we will begin with an outdoor lesson that will introduce plants' life cycles first.

Normally, lessons begin inside. However, for this lesson, the students will begin the lesson immediately following recess, so the lesson will begin outside.

Procedure

Follow the steps in the table below to conduct the activity. **Sentences in bold are suggestions for what teachers might say to students.** *Items in italics are possible teacher answers to questions.*

Phase	Step	Action
Engage	1	<p><u>Ten Minute Exercise</u>: Introduction to concept maps/outdoor learning.</p> <p>If students are unfamiliar with concept maps and/or using the schoolyard as a classroom, begin by creating a concept map together as a class to go over rules and expectations for learning outside.</p> <p>As you go through the concept map, think aloud for how you are choosing where to draw your bubbles to connect different concepts on the map. For instance,</p> <p>“I am going to write the idea first and then put a bubble around it to make sure my bubble isn’t too big or too small for my information.”</p> <p>Or</p> <p>“I am going to connect this idea to that one instead of the main topic since they are related.”</p> <p>Or</p> <p>“That’s a good idea! Where would you connect that idea on our concept map?”</p> <p>Have in mind some expectations for outdoor learning specific to your schoolyard that you want to be sure students include. For instance,</p> <ul style="list-style-type: none"> • <i>Regular school rules still apply (respect each other, listen to the speaker, follow directions, etc.)</i> • <i>No yelling, screaming, tapping on/waving into windows that will disrupt class learning inside the school building.</i> • <i>“Look, learn, and let go” when you see insects.</i>

	2	<p><u>Plant Personification (from PLT) (5 minutes)</u></p> <p>Are trees alive? How do you know? How are trees born? Do they die?</p> <p>Imitate my movements as we enact the life cycle of a tree.</p> <ol style="list-style-type: none"> 1. Curl up in a tight ball – you’re a seed. 2. Uncurl and kneel – you’ve sprouted. 3. Stick up one arm (fist clenched) – you’ve grown a branch. 4. Stick up the other arm – you’ve grown another branch. 5. Wiggle your fingers – you grow lots of leaves. 6. Stand up (feet together) – you grow tall. 7. Spread feet apart – you spread out lots of roots. 8. Wiggle your toes – you grow lots of little roots (rootlets). 9. Start scratching all over – you’re attached by insects and fungi. 10. Make a loud noise (kchhhhh!) – you get hit by lightning and lose a limb. 11. Smile and sigh (ahhhhh!) – you become a home for wildlife in your old age. 12. Make a hammering noise (knock, knock, knock) and vibrate – woodpeckers peck into your dead wood. 13. Make a creaking sound and fall down – you blow down in a storm. 14. Stick up one arm – a new seed sprouts from your rotting wood. 15. Shake your hand – seeds are released from the young, growing tree.
Explore	3	<p><u>Find a seed (5 minutes)</u></p> <p>Have students each find one seed to bring inside.</p>

Explain	4	<p><u>Plants' Life Cycle (15 minutes)</u></p> <p>Once back in the classroom, diagram for students the life cycle of a plant. Begin with a seed. Next comes a seedling with roots and a stem. Then comes the adult plant. The adult plant creates new seeds from which new seedlings may grow.</p> <p>Read Lesson 4 on pages 98-99 with students.</p>
Elaborate	5	<p><u>Students' Diagrams (15 minutes)</u></p> <p>Have students use their seeds they collected to create a life cycle diagram.</p> <p>Students may use a template or they may create one on their own.</p>
Evaluate	6	<p>How accurate are students' diagrams? Do they get the stages correct? Do they use correct vocabulary?</p>

Vocabulary Understanding of the following terms is required in this activity.

Term	Definition
Life Cycle	The changes that take place as a plant or an animal grows and changes.
Seed	The part of the plant that will grow into an adult plant.
Seedling	A very young plant.
Adult	A mature plant.

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