

Grade 5 Life Science

Unit Lesson Plan

Grade: Grade 5

Strand: Life Sciences

Benchmarks:

- LS.1.A. Describe simple life cycles of plants and animals and the similarities and differences in their offsprings.
- LS.1.B. Categorize features as either inherited or learned e.g. flower colour, eye colour is inherited, language is learned.
- LS.1.C. Describe patterns of structures and functions of living things.
- LS.1.D. Describe relationships among various organisms in their own environments (predator- prey; parasite-host; food chains-food webs)

Lesson 1: Pollinator Garden

Lesson 2: Plant Cells

Lesson 3: Companion Planting

Lesson 4: Crop Rotations

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Lesson Plan	Pollinator Garden
Lesson Duration	
Reference	LS.1.A. Describe simple life cycles of plants and animals and the similarities and differences in their offsprings.

Objectives

To learn about native pollinators and their habitat needs, and collect the necessary information for creating such a habitat in your schoolyard.

Summary of Tasks

(1) Introduce the idea of a pollinator garden. Review the basic needs of wildlife; food source (host plants), water and nesting sites.

(2) Make time for several visits the School Garden for observation. Spend time making notes of which pollinators visit particular plants. How often? At what time of day? How do they move between plants?

(3) Research pollinator species native to the region. Choose a range of plant that can support greater biodiversity and maximize blooms throughout each season.

(4) Compile results of research from the students. Instruct students to create a plan for a pollinator garden that include a map of plants and season of blooms. Ask the questions: Why are native plants so important to our pollinators? Why is it important to include a variety of plants in our garden?

Materials

School Garden
Garden Journal

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Lesson Plan	Plant Cells
Lesson Duration	
Reference	LS.1.B. Categorize features as either inherited or learned e.g. flower colour, eye colour is inherited, language is learned.

Objectives

Inquire into the cellular structure of plants. What role do cells play in a plant?

Summary of Tasks

(1) Observe cell patterns in the garden - use a lettuce leaf to show the cells here.
Carefully peel the single cellular layer from a lettuce leaf. If materials are available, dissect and observe down to the cellular level using the microscope

(2) Drawings in journal of what they see on the microscopic level and what they see as the whole plant.

(3) Ask the question: Where else do they find similar patterns in the world around them? In their journal, describe/draw what they see under the microscope and other examples found in the environment. Ask the question: Why do we find these patterns repeated in the natural world?

Materials

Microscope and slides
Leaves

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Lesson Plan	Companion Planting
Lesson Duration	
Reference	LS.1.D. Describe relationships among various organisms in their own environments (predator- prey; parasite-host; food chains-food webs)

Objectives

To identify how and why plants relate to other plants. Explore benefits and competition.

Summary of Tasks

(1) Research companion planting and pest deterring plants.

(2) Draft a plan for a garden bed that maximizes plant productivity and minimizes pest pressure through companion planting. Also consider; aesthetics, usefulness, pollinator habitat. Ask the question: what can you interplant to maximize productivity and minimize pest pressure?

(3) Explain your plant choices and design to the class.

(2) As a class, identify several companions to test. Hypothesise what the effects will be when you plant them together versus if you plant them far apart. Put these plans into action. Conduct regular observations of the plants and pests, and record in Garden Journal. Track yield, disease/pests, health and growth, inputs and other relevant data.

(3) Analyze collected data to determine whether there was a positive, negative, or no effect upon the plants.

Materials

Garden seed/seedlings
Internet access for research
Garden Journal

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Lesson Plan	Crop Rotations
Lesson Duration	
Reference	LS.1.C. Describe patterns of structures and functions of living things.

Objectives

Understand the importance and function of crop rotations in a garden

Summary of Tasks

- (1) Research crop rotation in home gardens. Identify main plant families and their relationships to each other.
- (2) Create crop rotation plan for School Garden in Garden Journal. Present rotation plan with explanations to class.
- (3) Class can vote upon the best plan for implementation.

Materials

Garden Journal