Pacifica's Mobile Nature & Horticulture Center

"Amazing Adaptations"
Kindergarten and First Grade Program Outline

Introduction: Learning about how living things have adapted to their environment is the theme for this unit. After the facilitator discusses the differences between plants and animals, simple investigations will be conducted to identify plant and animal parts using the senses. Students will discuss the basic concepts in plant and animal adaptations.

NATURE CENTER STATION OBJECTIVES:

1. To examine the five basic senses.
2. To learn about the major animal groups.
3. To discuss how animals are adapted to their environments.

ACTIVITIES:

1. Students will explore the characteristics of the major animal groups.
2. Students will discuss the special adaptations each animal group has acquired through evolution and reproduction: Example—differences in feet, fur & skin, mouths & beaks.

HORTICULTURE CENTER STATION OBJECTIVES:

1. To learn about the parts of a plant.
2. To discuss how plants and seeds are adapted to grow.
3. To learn about how to do data collection.

ACTIVITIES:

1. Students will discuss the parts of a plant and plant seeds for replanting at the Quartz Fire.
2. Students will plant seeds to be watered and observed in the classroom. They will draw the plants each week to document the growth observed.

3. Students will observe and discuss some of the ways animals have adapted with feathers and fur, with different kinds of feet and beaks.

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Connections to the Certificate of Initial Mastery (CIM) Standards:
Nature Center Objectives –

Unifying Concepts and Processes: Understand and apply major concepts and processes common to all sciences.

Common Curriculum Goal: Apply foundation concepts of change, cycle, cause, and effect, energy and matter, evolution, perception, and fundamental entities.

Content Standards: Use concepts and processes of – Evolution and equilibrium.
Leads to Benchmark at Grade 3:

1. Student will be able to identify examples of change over time.
2. Student will be able to describe how some things change and some things remain the same.

Common Curriculum Goal: Apply foundation concepts of change, cycle, cause and effect, energy and matter, evolution, perception, and fundamental entities.

Content Standards: Use concepts and processes of – Structure and Function.

1. Identify structures that serve different functions.

Physical Science: Understand structures and properties of matter and changes that occur in the physical world.

Common Curriculum Goal: MATTER – Understand structure and properties of matter.

Content Standards: Identify structures and properties of matter.
Leads to Benchmark at Grade 3:

1. Student will be able to describe objects according to their physical properties.

Life Science: Understand structures, functions, and interactions of living organisms and the environment.

Common Curriculum Goal: ORGANISMS – Understand the characteristics, structure, and functions of organisms.

Content Standards: Describe the characteristics, structure, and functions of organisms.
Leads to Benchmark at Grade 3:

1. Student will be able to classify organisms based on a variety of characteristics.

Horticulture Center Objectives –

Unifying Concepts and Processes: Understand and apply major concepts and processes common to all sciences.

Common Curriculum Goal: Apply foundation concepts of change, cycle, cause, and effect, energy and matter, evolution, perception, and fundamental entities.

Content Standards: Use concepts and processes of – Evolution and equilibrium.
Leads to Benchmark at Grade 3:

1. Student will be able to identify examples of change over time.

Common Curriculum Goal: Apply foundation concepts of change, cycle, cause and effect, energy and matter, evolution, perception, and fundamental entities.

Content Standards: Use concepts and processes of – Structure and Function.

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Physical Science: Understand structures and properties of matter and changes that occur in the physical world.

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Leads to Benchmark at Grade 3:

1. Student will be able to describe objects according to their physical properties.

Nature Center and Horticulture Center Objectives

Scientific Inquiry: Use interrelated processes to pose questions and investigate the physical and living world.

Common Curriculum Goal: Formulate and express scientific questions and hypotheses to be investigated.

Content Standard: Formulate and express scientific questions and hypotheses to be investigated.
Leads to Benchmark at Grade 3:

1. Ask questions and make predications that are based on observations and can be explored through simple investigations.
2. Ask questions about objects, and events in the world.
3. Identify questions that can be explored through scientific investigation.

Common Curriculum Goal: Design scientific investigations to address and explain questions and hypotheses.

Content Standard: Design scientific investigations to address or explain questions and hypotheses.
Leads to Benchmark at Grade 3:

1. Plan a simple investigation.

Common Curriculum Goal: Conduct procedures to collect, organize, and display scientific data.

Content Standard: Conduct procedures to collect, organize, and display scientific data.
Leads to Benchmark at Grade 3:

1. Collect data from an investigation.

Common Curriculum Goal: Analyze scientific information to develop and present conclusions.

Content Standard: Analyze scientific information to develop and present conclusions.
Leads to Benchmark at Grade 3:

1. Use the data collected from an investigation to explain the results.

Background Information: It is included in the front pocket of each grade level activity.

Pre-Visit Preparation:

1. Review the five basic senses that the animal groups have vs. humans.
2. Introduce or review the basic parts of plants (roots, stems, leaves, flowers, seeds) with your students prior to our visit.
3. Introduce the term "adaptation". Definition: A part of an animal or plant that makes it especially suited to live in its habitat.

Post-Activities:

1. There is information about several possible post-visit activities in the back pocket of each grade level's folder.

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