



SABINO CANYON VOLUNTEER NATURALISTS

KINDERGARTEN PROGRAM

Dear Kindergarten Teacher:

Whether you are new to our Sabino Canyon Field trips or a regular who has brought kindergarten children to our program over the years, we would like to take this opportunity to provide a little background to our program, and explain how our program connects to your district science, life science, and reading/comprehension standards.

The Sabino Canyon Kindergarten Program was developed 12 years ago. Approximately 21,000 Kindergarten students had a Sabino Canyon field trip in those twelve years. The program has introduced young people to the desert in which they live and promote an interest in the environment.

We conduct Kindergarten field trips three days a week, on Tuesday, Wednesday and Thursday, each field trip lasting 2 hours. We begin the visit with a short puppet program which introduces the children to some Sabino Canyon animals and the terms we will be using, and explain how to be safe while enjoying their Sabino Canyon experience. After the puppet presentation, each group of children (maximum of 10 per group) is assigned to a Naturalist, with whom they will spend the rest of the visit. The four activities: Nature Walk, Geology, Mystery Box, and Predator/Prey are explained in detail on the following four pages along with relevant education standards for science, life science, and reading/comprehension.

If you are interested in learning more about our program please visit our website to review the kindergarten teacher materials at: www.scvntucson.org

If you wish to bring your young students on a field trip please call the SCVN scheduling line at (520)751-4766

Picture courtesy of Bill Kaufman





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PUPPET SHOW/TRANSPIRATION EXPERIMENT

PURPOSE: The Puppet show introduces the children to some Sabino Canyon animals and the terms used by the naturalists and explains how to be safe while enjoying their Sabino Canyon experience; The transpiration experiment discusses how, in the desert, animals find water from shrubs, grasses and trees. The experiment proves to the students that water exists in leaves.

STANDARDS:

Strand 1 Inquiry Process

Concept 1 Observations, Questions & Hypotheses – Observe, ask questions, and make predictions.

PO1. Observe common objects using multiple senses.

PO2. Ask questions based on experiences with objects, organisms, and events in the environment. (See M00-S2C1-01)

PO3. Predict results of an investigation based on life, physical, and earth and space sciences.

Concept 2 Scientific Testing (Investigating & Modeling – Participate in planning and conducting investigations, and recording data.

PO2. Participate in guided investigations in life, physical, earth and space sciences.

Concept 3 Analysis & Conclusions – Organize & analyze data; compare to predictions.

PO1. Organize (e.g. compare, classify, and sequence) objects, organisms, and events according to various characteristics. (See M00-S4C4-03)

Concept 4 Communication – Communicate results of investigations.

PO1. Communicate observations with pictographs, pictures, models, and/or words. (M00-S2C1-02)

PO2. Communicate with other groups to describe the results of an investigation. (LS-R3 & LS-R5)

Strand 4 Life Science

Concept 1 Characteristics of Organisms - Understand that basic structures in plants and animals serve a function.

PO1. Distinguish between living and non-living things.

PO3. Identify the five senses and their related body parts: • sight – eyes; • hearing – ears; • smell – nose; • taste – tongue; • touch – skin.



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Concept 3: Organisms & Environments – Understand the relationships among the various organisms and their environment.

PO1. Identify some plants and animals that exist in the local environment.

PO2. Identify that plants & animals need the following to grow and survive: • food • water • air • space.

Strand 5 Physical Science

Concept 2 Position and motion of objects – Understand spatial relationships and the way objects move.

PO1. Describe spatial relationships (i.e., above, below, next to, right, middle, center) of objects. (See M00-S4C1-02 & 3SS-R1-01)

MYSTERY BOX

PURPOSE: To introduce adaptations common to predators, or prey with skulls and skins from animals that inhabit Sabino Canyon. Children guess what they are and discuss them.

STANDARDS:

Strand 4: Life Science

Concept 1: Characteristics of Organisms - Understand that basic structures in plants and animals serve a function.

PO1. Distinguish between living things and nonliving things.

PO2. Name the following human body parts:

• head • shoulders • arms • elbows • wrists • hands • fingers • legs • hips • knees • ankles • feet
• heels • toes (See 1CH-R3-01)

PO3. Identify the five senses and their related body parts: • sight – eyes • hearing – ears • smell – nose • taste – tongue • touch – skin



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GEOLOGY

PURPOSE: To introduce rocks, minerals, and sand and how each differs, and to demonstrate the role of water in forming Sabino Canyon. The students are introduced to some of the minerals found in Sabino Canyon and a demonstration of erosion and canyon formation, in which the children create "rainstorms" on an artificial mountain.

STANDARDS:

Strand 6: Earth and Space Science

Concept 1: Properties of Earth Materials - Identify the basic properties of earth materials.

PO1. Identify rocks, soil, and water as basic Earth materials.

PO2. Compare physical properties (e.g., color, texture, capacity to retain water) of basic Earth materials.

PO3. Classify a variety of objects as being natural or man-made.

PO4. Identify ways some natural or man-made materials can be reused or recycled (e.g., efficient use of paper, recycle aluminum cans).

Concept 3: Energy and Magnetism - Instigate different forms of energy.

PO1. Investigate how applied forces (push and pull) can make things move.

PO2. Investigate how forces can make things move without another thing touching them (e.g., magnets, static electricity).

PO3. Sort materials according to whether they are or are not attracted by a magnet.

PO4. Identify familiar everyday uses of magnets (e.g., in toys, cabinet locks, decoration).

PREDATOR/PREY

PURPOSE: To re-enforce the concept of protective coloration and its importance in the predator/prey relationship. The children play a predator/prey game to demonstrate the importance of protective coloration in animal survival. Prior to the game, camouflage and predator/prey relationships are discussed.

STANDARDS:

Strand 1 Inquiry Process

Concept 3: Analysis and Conclusions - Organize and analyze data; compare to predictions.

PO1. Organize (e.g., compare, classify, and sequence) objects, organisms, and events according to various characteristics. (See M00-S4C4-01 and M00-S4C4-03)



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PO2. Compare objects according to their measurable characteristics (e.g., longer/shorter, lighter/heavier). (See M00-S4C4-01)

Concept 4: Communication - Communicate results of investigations.

PO1. Communicate observations with pictographs, pictures, models, and/or words. (See M00-S2C1-02)

PO2. Communicate with other groups to describe the results of an investigation. (See LS-R3 and LS-R5)

NATURE WALK

PURPOSE: To re-enforce concepts: habitat, predator, prey, and camouflage. The children take a short walk along a desert trail during which they use a checklist to identify some Sabino Canyon animals (Life-sized color pictures) which are camouflaged in their natural habitats; for living in the desert, food sources and anything interesting discovered along the trail may also be discussed; Upon returning to the Ramada, the children may play a habitat game.

STANDARDS:

Strand 4: Life Sciences

Concept 3: Organisms and Environments - Understand the relationships among various organisms and their environment.

PO1. Identify some plants and animals that exist in the local environment.

PO2. Identify that plants and animals need the following to grow and survive: • food • water • air • space

PO3. Describe changes observed in a small system (e.g., ant farm, plant terrarium, and aquarium).

SUGGESTED PICTURE BOOKS

The extensive reading list provided to teachers, including both fiction and non-fiction books about the desert, provide opportunities to practice the following AZ State Reading Standards.

Strand 2: Comprehending Literary Text

Concept 1: Elements of Literature - Identify, analyze, and apply knowledge of the structures and elements of literature.

PO1. Participate (e.g., react, speculate, join in, read along) when predictably patterned selections of fiction and poetry are read aloud.



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PO2. Identify elements of a story, including characters, setting, and key events.

PO3. Retell or re-enact a story, placing the events in the correct sequence.

PO4. Determine whether a literary selection, that is heard, is realistic or fantasy.

Strand 3: Comprehending Informational Text

Concept 1: Expository Text - Identify, analyze, and apply knowledge of the purpose, structures, and elements of expository text.

PO 1. Identify the purpose for reading expository text.

PO 2. Restate facts from listening to expository text.

PO 3. Respond appropriately to questions based on facts in expository text, heard or read.



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