



ARIZONA-SONORA
**DESERT
MUSEUM**

A Walk in the Desert

A forty five minute science program
for students in kindergarten

To the Teacher:

Thank you for making the *A Walk in the Desert* program a part of your curriculum. During this exciting interactive educational program, students will act out animal behaviors, handle artifacts, and meet live Sonoran Desert animals!

This packet contains pre- and post- program information and activities along with a vocabulary list and suggested resources. These materials were developed to help you extend this class topic with both introductory and follow-up lessons. The pre-visit information will introduce students to some of the basic concepts presented in *A Walk in the Desert* and help prepare them for the program. We hope you'll find this information useful and easy to incorporate into your science curriculum. For more information about the Desert Museum and the Sonoran Desert, visit our website at www.desertmuseum.org.

We look forward to working with you and your students at your school.

Sincerely,
ASDM Center for Sonoran Desert Studies
Education Department

CLASS OBJECTIVES

Through the examination of live animals, artifacts and interactive demonstrations students will:

- Develop an understanding of the physical characteristics of a desert.
- Identify some common Sonoran Desert plants and animals.
- Determine the adaptations of specific desert plants and animals that enable them to live in the Sonoran Desert environment.
- Develop an appreciation for our desert and the creatures that inhabit it.
- Determine measures they can take to help conserve our desert ecosystem.

ARIZONA ACADEMIC STANDARDS IN SCIENCE CORRELATION

The Walk in the Desert program and supplemental activities correlate to these Arizona Academic Science Standards. See each activity for specific standards and performance objectives.

SC00-S1C3-01, SC01-S4C1-03, SC03-S4C4-01, SC00-S1C1-02, SC00-S4C3-02

Science Standards

Strand 1: Inquiry Process

- Concept 1: Observations, Questions, and Hypotheses
- Concept 2: Scientific Testing
- Concept 3: Analysis and Conclusions
- Concept 4: Communication

Strand 2: History and Nature of Science

- Concept 1: History of Science as a Human Endeavor
- Concept 2: Nature of Scientific Knowledge

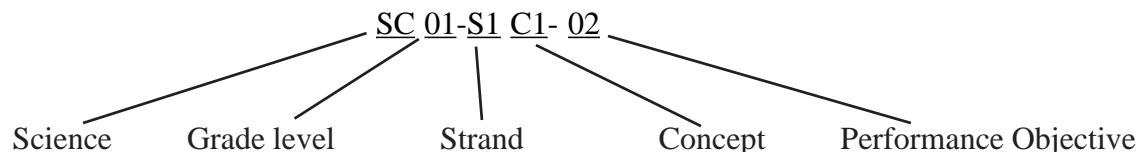
Strand 3: Science in Personal and Social Perspectives

- Concept 1: Changes in Environment
- Concept 2: Science and technology in Society
- Concept 3: Human Population Characteristics

Strand 4: Life Science

- Concept 1: Characteristics of Organisms
- Concept 2: Life Cycles
- Concept 3: Organisms and Environments
- Concept 4: Diversity, Adaptation and Behavior

The shorthand for each standard is read this way:



RESOURCES

Books:

- Albert, Richard E.: *Alejandro's Gift*. San Francisco, Chronicle Books, 1994.
- Cobb, Vicki. *This Place Is Dry*. New York: Walker, 1989.
- Skramstad. *Wildlife Southwest*. San Francisco: Chronicle Books, 1992.
- Urquhart, Jennifer C. and Barbara Gibson. *Creatures of the Desert World*. Washington, D.C.: National Geographic Society, 1987.
- Wiewandt, Thomas. *The Hidden Life of the Desert*. New York: Crown Publishers, 1990.
- Zoehfeld, Kathleen Weidner. *Cactus Café. A Story of the Sonoran Desert*. Norwalk, Ct: Soundprints, 1997.

VOCABULARY

Adaptation - Body features or behaviors that help a creature survive in its environment (i.e. an eagle has sharp talons that help it grab and hold its prey.)

Camouflage - An animal's color pattern that helps it blend in with its surroundings.

Desert - An area low in moisture for most of the year.

Evaporation - Changing from a liquid to a gas.

Habitat - The place in which an animal or plant lives that provides the food, water, shelter, and space needed for its survival.

Nocturnal - Active at night.

PRE-PROGRAM INFORMATION AND ACTIVITIES

Teacher Background Information: A LOOK AT THE SONORAN DESERT

This short reading provides you with some background information on the Sonoran Desert Region and an introduction to the topic of your outreach program.

ANIMAL ADAPTATIONS TO THE DESERT

This series of activities introduces students to desert aridity and the process of evaporation. Students learn how some desert animals are adapted to this dry, often hot, environment.

WHAT'S IN A HABITAT?

Introduce students to the elements of a habitat with a cut-and-paste activity sheet that focuses on animal homes.

POST-PROGRAM INFORMATION AND ACTIVITIES

DESERT ILLUSTRATION

After students participate in *A Walk in the Desert* Outreach Program, have them draw a Sonoran Desert scene, complete with some of the animals and plants they just learned about. Students can also draw, color, and cut out desert plants and animals and glue these on a large sheet of paper to create a class collage.

SONORAN DESERT PUPPETS AND MASKS

Using the enclosed templates, students make finger puppets and masks of desert animals. Discuss each animal's adaptations to the desert and for feeding. What does each eat? (Scorpions are nocturnal, feeding on insects and other small arthropods which are killed or subdued by venom injected through the stinger at the end of the "tail." The screech owl is nocturnal and eats insects and other invertebrates along with small mammals, such as mice. Mountain lions are predators, living in the mountain regions of the Sonoran Desert, eating primarily deer and other mammals.)

SONORAN DESERT ABC'S

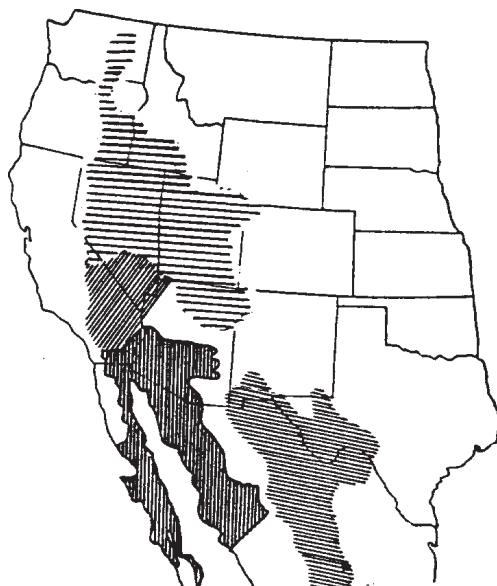
Students create alphabet cards that depict life in the Sonoran Desert.

IN THE SHADE OF THE SAGUARO





Students learn a song about common Sonoran Desert animals.

A LOOK AT THE SONORAN DESERT

Background Information for Teachers



Major North American Deserts

-  *Great Basin Desert*
-  *Mojave Desert*
-  *Sonoran Desert*
-  *Chihuahuan Desert*

The Arizona-Sonora Desert Museum is located in the Sonoran Desert. This desert is one of four that occur in North America. The other three are the Great Basin, Mojave and Chihuahuan deserts. Arizona is the only state in which all four deserts can be found.

What Is A Desert?

All deserts share a common factor – they are dry! Little rain falls in the desert, often less than 10 inches per year. The rain that does fall may come in sudden large bursts from a violent desert thunderstorm. Much of this water runs off the soil into washes or evaporates before it has a chance to soak into the ground. This leaves little water for plants and animals.

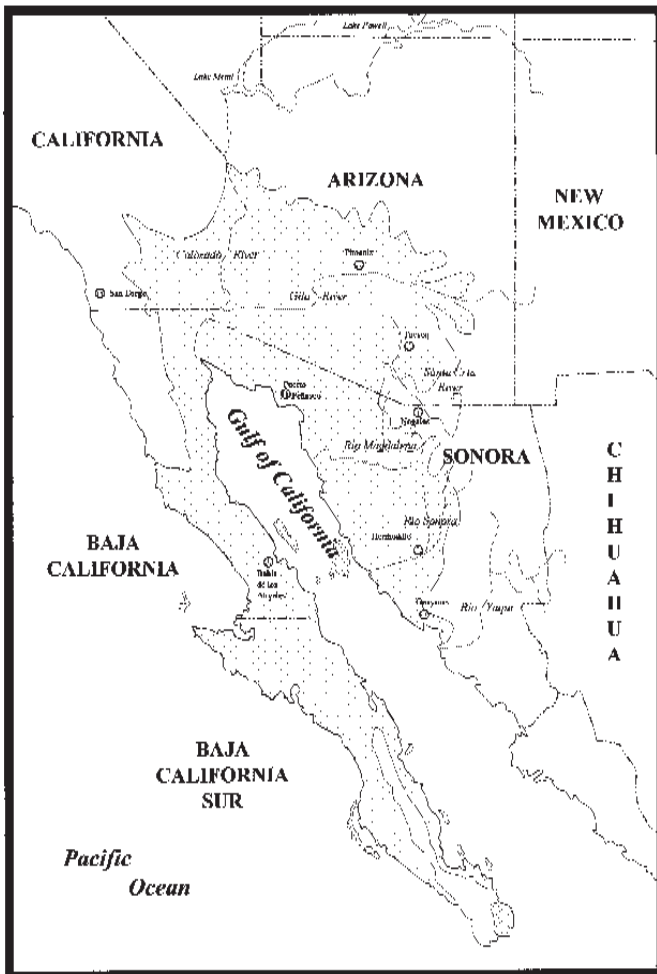
Other characteristics of deserts include windy conditions, intense sunlight, unpredictable and changing amounts of annual rainfall, and great differences between day and night temperatures (days may be hot, but nights may be much cooler).

The Sonoran Desert

The Sonoran Desert, for the most part, is a low, hot desert. Parts of this desert get less than 3 inches of rain a year! Winters are mild and summers are hot. Summertime temperatures may reach 120°F. Tucson and the area surrounding the Arizona-Sonora Desert Museum get an average of 11.4 inches of precipitation per year. Rainy seasons vary throughout the desert, but in our area, the rainy seasons usually come twice a year, in the late summer and winter.

The Sonoran Desert is quite lush when compared to other deserts of the world. It contains over 2,000 different species of flowering plants alone. *Columnar* cacti (such as saguaro and organ pipe) and *legume* trees (such as mesquite, palo verde, acacia) visually dominate the landscape.

The Arizona-Sonora Desert Museum is an excellent place to visit to learn more about the natural history of this fascinating region. The Desert Museum displays only the plants and animals of the Sonoran Desert Region. This region includes the desert itself and the non-desert communities found next to – or within – the desert. These other communities include riparian corridors (lush areas along streams), pine-topped mountain islands, and desert grasslands.



Desert Plants and Animals

There are many different kinds of plants and animals in the Sonoran Desert. Life thrives here because organisms are **adapted** to this environment. They have ways of surviving the lack of water and hot summer days. Many are so well adapted to the desert that they could not survive anywhere else!

In this outreach program, students will learn about climatic stresses of the desert environment, then take an imaginary “walk” in the desert to discover the adaptations of some common plants and animals we meet along the way.