



The Desert

Denver Public Schools

In partnership with Metropolitan State College of Denver

El Alma de la Raza Project



The Desert

By Deborah J. Frances

Grades: Early Childhood Education/Kindergarten

Implementation Time
for Unit of Study: 1–2 weeks

Denver Public Schools

El Alma de la Raza Curriculum
and Teacher Training Program

Loyola A. Martinez, Project Director
Dan Villescas, Curriculum Development Specialist

The Desert

Unit Concepts

- What is a desert?
- Animals and plants of the desert
- Where are deserts located?
- Climate of the desert

Standards Addressed by This Unit

Visual Arts

Students know how to apply elements of art, principles of design, and sensory and expressive features of visual arts. (A2)

Reading and Writing

Students read and understand a variety of materials. (RW1)

Students apply thinking skills to their reading, writing, speaking, listening, and viewing. (RW4)

Participates in group discussions. (OL Kdg. 1–Pathways to Success)

Adds new words to vocabulary (OL PRE 7–Pathways to Success)

Listens to a story read aloud; responds to a read aloud story with questions/comments. (R PRE 1, 4–Pathways to Success)

Answers questions about read aloud story. (R ECE 12–Pathways to Success)

Science

Students know and understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment. (S3)

Geography

Students know how to use and construct maps and other geographic tools to locate and derive information about people, places, and environments. (G1)

Introduction

Our earth is made up of a variety of terrain, climates, plants, and animal life. The desert, a land area that is dry, is one such unique terrain. It holds a myriad of plants and animals. These animals and plants are able to survive in an environment that receives little moisture, since the desert may receive less than 10 inches of rain a year. Rain storms, although short and infrequent, can bring out the most beautiful plants and flowers. The weather can be either extremely hot or very cold. Gusty, warm winds often blow across this land. Well-known deserts are the Sahara, Mojave, Australian, Namib, Kalahari, Arabian, Sechura, and Sonoran. This unit will focus on the desert of the southwest, the Sonoran, which lies within Southern California, Arizona, and Mexico. Using a variety of literature, students will visit the desert and learn about its plants, animals, landscape, and climate.

Implementation Guidelines

This unit is recommended for use in Early Childhood and Kindergarten classrooms. It can be a supplement for units such as weather, earth/land, animals, insects, or plants. The unit can last a week to two weeks. It will give children a basic introduction to the desert land of the southwest.

Instructional Materials and Resources

The following books and video are required for implementing this unit:

Lesson 1	<i>The Desert Alphabet Book</i> by Jerry Pallotta, Illustrated by Mark Astrella
Lesson 2	<i>See How They Grow: Desert Animals</i> (video)
Lesson 3	<i>Agua Agua Agua</i> (Aesop’s Fable retold) by Pat Mora <i>Desert Dance</i> by Charolotte Armajo
Lesson 4	<i>The Tale of Rabbit and Coyote</i> by Tony Johnston and Tomie de Paola <i>The Legend of the Indian Paintbrush</i> retold by Tomie de Paola <i>The Desert Mermaid</i> by Alberto Blanco
Lesson 5	<i>Listen to the Desert</i> by Pat Mora
Unit Assessment	<i>The Desert is My Mother</i> by Pat Mora

Lesson Summary

Lesson 1	Welcome to the Desert 3 Through the story <i>The Desert Alphabet Book</i> , students will be introduced to the plants, animals, and landscape of the desert. Activities include group discussion, introduction to maps, and modeled writing.
Lesson 2	Animals of the Desert 5 Children will watch a video about desert animals, such as the tarantula, tortoise, gecko, and gerbil. Using information learned as clues, children will play “Who Am I?”
Lesson 3	Cacti of the Desert 8 After being introduced to different cacti, children will sequence the growth of the saguaro, the largest cactus in the world.
Lesson 4	Legends of the Desert 11 After listening to various legends, in particular, “why the coyote howls,” children will write a class legend about one of the desert animals and illustrate it for the classroom.
Lesson 5	Sand Portraits 13 The book <i>Listen to the Desert</i> will be the inspiration for sand portraits of the desert.

LESSON 1:

Welcome to the Desert

What will students be learning?

STANDARDS

Students read and understand a variety of materials. (RW1)

Students will participate in group discussions. (Pathways to Success–Oral Language, Kdg. 1)

Students will add new words to their vocabulary. (Pathways to Success–Oral Language, Pre 7)

Students will listen to a story read aloud; responds to a read aloud story with questions/ comments; answers questions to a story. (Pathways to Success–Reading PRE 1,4 and ECE 12)

Students know how to use and construct maps and other geographic tools to locate and derive information about people, places, and environments. (G1)

BENCHMARKS

Learners will listen to and understand a variety of materials.

Learners will understand that print is an important symbolic means of communication.

Learners will strategically attempt to figure out print.

Students will identify the characteristics and purposes of maps, globes, and other geographic tools.

OBJECTIVES

Students will be introduced to the desert, its environment, plant and animal life.

Students will be introduced to a map and the globe.

What will be done to help students learn this?

INSTRUCTIONAL STRATEGIES

Assess prior knowledge

Group discussions

Read aloud

Maps

Modeled writing

Charts

ACTIVITIES

Assess prior knowledge by asking the children “What is a desert?” Use chart paper to record their responses. Expand on children’s responses when appropriate. Introduce the globe and a map. Explain what they are used for and then show children the location of some of the famous deserts such as Mojave, Sahara, Australian, etc. Talk about the Sonoran in the southwest United States and Mexico (terrain, climate).

Read *The Desert Alphabet Book*, which explains desert animals and plants. As a group, discuss the book and answer questions. Review the map of the United States and point out the Sonoran Desert. Explain that this is the desert they will be “exploring.” Using chart paper, discuss the “rules” for exploring the desert (much similar to exploring in the mountains). Have children help with these also.

Safety Rules for Exploring the Desert:

- Always stay with a partner.
- Keep your hands and feet out of places where you can't see them.
- Bring and drink lots of water.
- Always carry a first aid kit.
- Always bring a flashlight and whistle.
- Wear sunscreen.
- Wear good sturdy shoes or boots.
- Dress in layers.
- Bring along healthy snacks.
- Don't stray far from your car or parents.

With the help of the children, give explanations as you go.

VOCABULARY

Desert — land that is dry and receives very little moisture

Map — representation of an area or part of an area

Globe — a round representation of the earth

Climate — the average condition of the weather in a certain place

Terrain — physical features of a piece of land

Mojave — desert area in the southwest U.S.

Sahara — desert in the northern part of the continent of Africa

Australian — area on the continent of Australia

Sonoran — desert in the southwest United States and Mexico

RESOURCE/MATERIALS

The Desert Alphabet Book by Jerry Pallotta

A map of the United States

Globe

Chart paper

Markers

ASSESSMENT

Review the chart with the children's prior knowledge to see what they already know and what areas can be expanded upon.

LESSON 2: Animals of the Desert

What will the students be learning?

STANDARDS

Students know and understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment. (S3)

Students will add new words to their vocabulary. (Pathways to Success–Oral Language, PRE 7)

BENCHMARKS

Students will be able to describe characteristics of certain plants and animals.

Students will be able to describe the term desert, its characteristics and structure.

OBJECTIVES

Students will become familiar with various animals of the desert.

What will be done to help students learn this?

INSTRUCTIONAL STRATEGIES

Video

Group discussion

Active learning/game

Chart

PRELIMINARY LESSON PREPARATION

Make copies of the “Who Am I” pictures and cut them apart. You will need enough to give each student one animal.

ACTIVITIES

Students will watch the video, *See How They Grow: Animals of the Desert*. List the names of the four animals in the video and have children share information about each. List additional names of creatures that live in the desert such as coyote, tarantulas, scorpions, black widows, road-runners, kit fox, and kangaroo rats.

Children will play a game of “Who Am I?” with the knowledge they gained from the video and the discussion. Make copies of the “Who Am I” sheet included in this lesson and cut apart the pictures. Make enough so that each child has one. Pin a picture on the back of each child. Let the children walk around and try to guess which animal they are by asking for clues from their classmates. Once everyone has solved who they are, gather together into animal groups.

VOCABULARY

Coyote — a small “wolf”

Tarantula — type of wolf spider

Scorpion — arachnid with a venomous sting

Black widow — poisonous spider that is black with a red hourglass on its back

Kangaroo rat — a rat that can taking flying leaps through the air

Kit fox — small, quick-moving fox with big ears

Road-runner — very fast bird that rarely flies, and make quick changes in direction

Gerbil — burrowing desert rodent (pets for classrooms!)

Gecko — nocturnal lizard

Tortoise — like a turtle, but a “dry” creature without webbed feet

RESOURCES/MATERIALS

See How They Grow: Desert Animals (video)

Chart paper

Markers

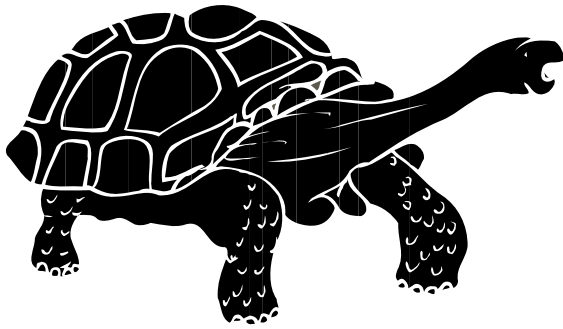
Pictures on poster board, pins

ASSESSMENT

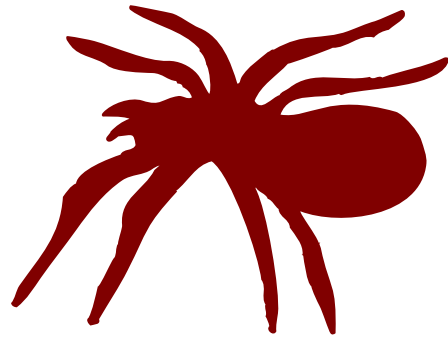
After the children are in their groups have them explain the clues that helped them solve their “identity.” Observe for knowledge learned.

“Who Am I”

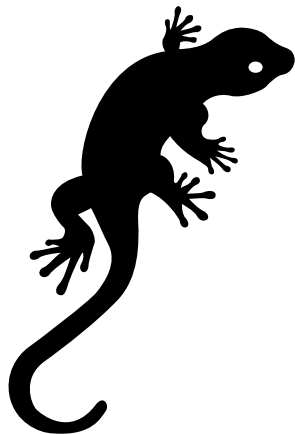
Teacher: Copy this page and cut apart. Pin an animal on the back of each student. Have students walk around and guess what animal they are by asking their classmates for clues.



Desert Tortoise



Tarantula



Gecko



Gerbil

LESSON 3: Cacti of the Desert

What will students be learning?

STANDARDS

Students know and understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment. (S3)

Students will add new words to their vocabulary. (Pathways to Success–Oral Language Pre 7)

BENCHMARK

Learners will identify characteristics of a certain plant (the cactus).

Learners will become familiar with new terminology.

OBJECTIVES

Students will gain knowledge about the cactus.

Students will be able to sequence the growth of a saguaro cactus.

What will be done to help students learn?

INSTRUCTIONAL STRATEGIES

Read aloud

Group discussion

Charting

Sequencing

PRELIMINARY LESSON PREPARATION

Make copies of the Saguaro Cactus Growth Cycle worksheet.

ACTIVITIES

Read *Agua, Agua, Agua*. How did the crow solve the dilemma of getting water to drink? Read the short story *Desert Dance*. Review the animals in the story. Point out all the plants on each page. Do they know what they are called? Share with students information about the various kinds of cactus (prickly pear, hedgehog, pincushion, cholla, organ pipe, barrel cactus, etc.). Share paintings of Carmen Lomas Garza, “Grandparents Cutting Cactus” and “Prickly Pear — A Little Piece of My Heart.” Draw samples of cacti on chart paper.

General information on cacti:

- cactus is found in dry areas;
- they need little moisture;
- their stems act like a sponge and soak up rain whenever possible;
- they are made of a plump stem and “arms” with a woody outer layer;
- more than one is called cacti;
- the areoles of a cactus are small pit-like areas that keep the heat out and moisture inside;

- cactus have spines or hair (they act like shades);
- animals don't eat them because of the spines; and
- they have short roots.

Share with the children information about the largest cactus in the world that is found in the Sonoran Desert — the saguaro (suh-war-o).

Information on the saguaro cactus:

- it takes many years for them to grow;
- some grow to be more than 250 years old;
- they can grow as big as 50 feet;
- the fruit of the saguaro is red and harvested in early summer (it makes delicious jelly);
- the saguaro flower is the state flower of Arizona;
- the saguaro will be almost 50 years old before it grows its first “arm”; and
- if a saguaro has two arms it is probably 100 to 150 years old.

Using the Saguaro Cactus Growth Cycle worksheet, children will sequence the growth of a saguaro. Go through the sequence with them prior to them doing the activity themselves.

VOCABULARY

Cactus — fleshy stump with spines that grows in dry, harsh areas

Prickly pear — a kind of cactus

Hedgehog — a kind of cactus

Cholla — a kind of cactus

Pincushion — variety of cactus

Organ pipe — variety of cactus

Barrel — a kind of cactus

Saguaro — the largest cactus of the world

RESOURCES/MATERIALS

Agua Agua Agua (Aesop's Fable retold) by Pat Mora

Desert Dance by Charlotte Armajo

Saguaro Cactus Growth Cycle worksheet

Chart paper


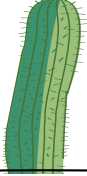
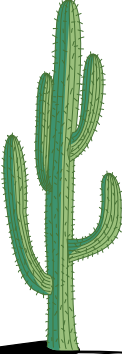
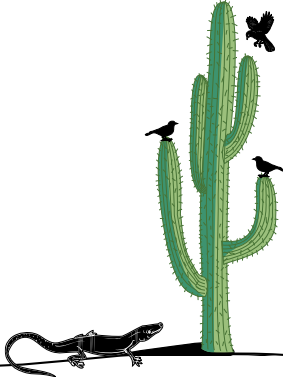
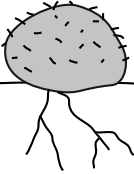
A Piece of My Heart: The Art of Carmen Lomas Garza (a collection of art)

ASSESSMENT

Check for knowledge after the students have sequenced the growth of a saguaro. Review the various cacti by drawing them on the chart paper and seeing if the children can match names.

Saguaro Cactus Growth Cycle

TEACHER: Make copies of this page and cut apart. Have students place the pieces into the proper sequence of the saguaro growth cycle.

 <p>The saguaro cactus starts as a black seed.</p>	 <p>The sprout grows into a stem.</p>
 <p>It takes many years for the stem and arms to grow.</p>	 <p>Animals and birds love the cactus.</p>
 <p>The seed becomes a sprout.</p>	

LESSON 4: Legends of the Desert

What will students be learning?

STANDARDS

Students will demonstrate an enjoyment of read aloud stories. (Pathways to Success-Reading PRE 6)

Students will speak in complete sentences; will include adjectives and adverbs in sentences. (Pathways to Success-Oral Language ECE 7,10)

Students read and understand a variety of materials. (RW1)

Students write and speak for a variety of purposes and audiences. (RW2)

Students write and speak using formal grammar, usage, sentence structure punctuation, capitalization, and spelling. (RW3)

BENCHMARKS

Learners experience quality literature in a variety of ways.

Learners will know that the print holds the message or story.

Learners read and write for “real” reasons.

Learners read and write experimenting and trying out new understandings.

Students will use writing to express creative ideas.

Learners incorporate vocabulary and concepts gleaned from books and other classroom learning experiences into their conversations and writing.

OBJECTIVES

Students will be introduced to legends and fables through literature.

Students will create their own “desert animal” legend.

What will be done to help students learn this?

INSTRUCTIONAL STRATEGIES

Read alouds

Group discussions

Group writing

PRELIMINARY LESSON PREPARATION

Cut chart paper into smaller squares (big book size).

ACTIVITIES

Read several stories such as *The Legend of the Indian Paintbrush* and *The Tale of Rabbit and Coyote*. Discuss what is a legend and a fable.

Children will choose an animal from the desert and begin a legend about this particular animal. Write their story on chart paper that has been cut into smaller squares (big book size). When their story is complete, let each child illustrate a page for the classroom.

VOCABULARY

Legend — a story coming down from the past

Fable — a legendary tale with supernatural happenings

RESOURCE/MATERIALS

The Legend of the Indian Paintbrush by Tomie de Paola

The Tale of Rabbit and Coyote by Tony Johnston and Tomie de Paola

Chart paper cut into squares the size of big books

Markers, crayons

ASSESSMENT

As the story is being written and illustrated check for knowledge that children understand that what is being done is a legend. Have children choose an animal and tell everyone a “legend” about that animal. Do this as a large group and let each child share.

LESSON 5: Sand Portraits

What will students be learning?

STANDARDS

Students recognize and use visual arts as a form of communication. (A1)

Students know and apply visual arts materials, tools, techniques, and processes. (A3)

Students read and understand a variety of materials. (RW1)

Students apply thinking skills to their reading, writing, speaking, listening, and viewing. (RW4)

Students know and understand the processes and interactions of Earth's systems and the structure and dynamics of earth and other objects in space. (S4)

BENCHMARKS

Students will listen and understand a variety of quality literature.

Students will identify ideas for works of art.

Students will understand that weather, climates, and land terrain differ around the earth.

OBJECTIVES

Students will become familiar with the environment of the desert.

Students will use the knowledge gained about the desert to create a desert "sand painting."

What will be done to help students learn this?

INSTRUCTIONAL STRATEGIES

Read aloud

Discussion

Hands-on activity

PRELIMINARY LESSON PREPARATION

Gather materials for the sand portrait. Purchase colored sand at a hobby store or make it by mixing powdered tempera paint with 3/4 cup of sand.

ACTIVITIES

Read *Listen to the Desert* by Pat Mora. Talk about the desert scenery and the descriptive phrases in the book about the desert. Discuss the environment of the desert — harsh, dry, sand, cactus, flowers, etc. What is the weather like in the desert?

Using white construction paper (white cardboard would be best), have children draw a scene of the desert with crayons. Using watered down glue, paint over the scene and sprinkle colored sand over the areas. Have a variety of colored sand available for them to use.

VOCABULARY

Environment — surrounding area and its make-up

Scenery — picturesque view

RESOURCES/MATERIALS

The Desert is My Mother by Pat Mora

Paper or cardboard for paintings

Colored sand

Water and glue mix

Paintbrushes

Crayons

ASSESSMENT

As part of the activity have children dictate a caption for their painting. This caption needs to be about the desert and relate to their painting. Check for knowledge.

UNIT ASSESSMENT

How will students demonstrate proficiency?

PERFORMANCE TASK

Read *Listen to the Desert* by Pat Mora.

Students will give information about the desert, plants, and animals. Chart answers and ask appropriate questions.

1. Describe what is a desert.
2. List and explain the animals of the desert.
3. List kinds and explain what is a cactus.
4. Explain what is a legend.
5. Describe weather of the desert.

SCORING RUBRIC

Use the rubric below to score answers to the above questions and compile a total score.

<u>Rubric Points</u>	<u>Description</u>
4	Exceeds correct answers in some way.
3	All answers are correct.
2	Some of answers are correct.
1	Seems to lack understanding.

Bibliography

Books

Theme Series: *Deserts*. Creative Teaching Press, Inc.: Cypress, CA, 1992.

Booklet of unit ideas for the study of the desert.

Armajo, Charlotte. *Desert Dance*. Scott, Foresman and Company: Glenview, IL (Printed in Mexico), 1994.

Story written in chant form about the desert animals “dancing” under the harvest moon.

De Paola, Tomie (story retold). *The Legend of the Indian Paintbrush*. Penguin Putnam Books for Young Readers: New York, 1996.

The legend of the Indian Paintbrush flower and how it came to be.

Garza, Carmen Lomas. *A Piece of My Heart: The Art of Carmen Lomas Garza*. The New Press: New York, 1991.

Book describes and displays the artwork of Carmen Lomas Garza.

Johnston, Tony and Tomie de Paola. *The Tale of Rabbit and Coyote*. Penguin Putnam Books for Young Readers: New York, 1998.

The story of a tricky rabbit and why the coyote howls.

Mora, Pat. *Agua Agua Agua* (Aesop’s Fable retold). Good Year Books, a division of Scott, Foresman and Company: Glenview, IL (Printed in Mexico), 1994.

Story of how a crow gets water to drink on a hot day on the desert.

Mora, Pat. *The Desert is My Mother*. Pinata Books, a division of Arte Publico Press: Houston, TX, 1994.

Story of how the desert cares and reacts like a mother to a child.

Mora, Pat. *Listen to the Desert*. Arte Publico Press: Houston, TX, 1994.

Story tells of the creatures of the desert and the sounds they bring to the desert.

Pallotta, Jerry. *The Desert Alphabet Book*. Charlesbridge Publishing: Watertown, MA, 1994.

The book covers every letter of the alphabet with a desert term and definition. Very appropriate for young children.

Video

See How They Grow: Desert Animals. Sony Wonder, Dolring Kindersley Vision: New York, 1996.

Video describes various animals of the desert-appropriate for young children.

About the Author

Deborah Francis received her Masters Degree in Curriculum and Instruction, specializing in creative arts, from Lesley College in Boston. Her Bachelor of Arts in Early Childhood Education (with an emphasis in language arts) is from the University of Northern Iowa.

Deborah has taught Early Childhood in the Denver Public Schools for the past 12 years. Previously she taught kindergarten and second grade, and was the director of a day care facility for the Department of Defense Mapping Agency in Glen Echo, Maryland.

She is employed in Denver Public Schools teaching Early Childhood in an inclusive setting, serving children with special needs.