

# HOW IN THE DESERT?

**Master Teacher:** Lynnette Clements

**Grade Level:** Grade 1

**Time Allotment:** 2 weeks at least

## **Overview:**

Children will learn about the desert, the plants, and animals of the desert and how they can live there.

## **Subject Matter:**

Science (Habitat of a desert)

Math (Graphing, Thermometer reading, Counting)

Language Arts (Research, Reading, real/fantasy, Writing)

## **Learning Objectives:**

The student will:

- depict through pictures and words reality from fantasy.
- create an information page about a desert animal or plant.
- match the picture to the word of various desert life.
- create a Gila monster with beads.
- assist with setting up and implementing a class science experiment
- research their animal using various reference materials- books, encyclopedias, and websites.
- use the computer to access information about their desert animal.
- chart and graph temperatures.

- read a thermometer.
- create a diorama to show their understanding of the desert life.

**Standards:** ([www.tea.state.tx.us/teks](http://www.tea.state.tx.us/teks))

Science 1.2 Scientific process: develop abilities necessary to do inquiry.

Science 1.6 Know that systems have parts and are composed of organisms, and objects.

Science 1.7B Identify and test ways that heat may cause change.

Science 1.9B Compare and give examples of the ways living organisms depend on each other for their basic needs.

Language 1.1 Speak to an audience for a different purpose, and occasion

Language 1.3 D Present dramatic interpretation of experiences, stories, poems, and plays

Language 1.4 Communicate clearly by putting thoughts into spoken words.

Language 1.10 Read for different purposes in a varied sources.

Languages 1.11 Develop vocabulary by discussing the meanings of words.

Language 1.11B Develop vocabulary by listening and discussing both familiar and conceptually challenging selections read aloud.

Language 1.12 Make and explain inferences from texts, and similarities and differences.

Language 1.14 C Distinguish fiction from nonfiction, including fact and fantasy

Language 1.15 B Use pictures, prints, and people to gather information

Language 1.15 E Recognize and use parts of a book to locate information

Language 1.18 Write for a variety of purposes.

Social Studies 1.4 Geography: understand the relative location of places.

Social Studies 1.5 Geography: Understand the purpose of a map and globe.

Social Studies 1.6A Identify and describe the physical characteristics of places

Math 1.3A Model and create addition and subtraction problems

Math 1.8 A Recognize and record temperatures

Math 1.10 Draw conclusions and answer questions using information organized in real-object graphs, pictographs, and bar-type graphs.

### **Media Components:**

#### **Videos:**

-American Deserts: What is a Desert? #101

Life in the Desert #10

#### **Websites:**

Sonoran Desert Naturalist

<http://members.aol.com/Melasoma>

Wonderful pictures and information about the Sonoran desert

There are several links off of this site about this desert

Merriam-Webster Online

[www.m-w.com](http://www.m-w.com)

Children can look up words on the net.

Desert USA

<http://www.desertusa.com>

Wonderful site for lots of information on desert, such as the people, animals, plants, etc.

## Student Research Resources

<http://www.geocities.com>

Great site for students in which to research. It has maps, resources, and games.

## Arizona Guide

<http://www.arizonaguide.com>

Has a neat site just for KIDS. Has coloring pages of the various animals, and plants of the desert.

## Materials:

VCR/TV

Desert Animal and Plant pictures (I cut mine out of old magazines and laminated them)

A Terrarium

Rocks, Dirt, Pebbles, Sand

Cactus / variety of plants that need water to survive.

Heat lamp/Thermometer

Coffee Filter/Water

Blow dryer

Straw

Construction paper strips (one for each child-cut to about 1" thickness)

Tape

Beads to make Gila monster

Beans or something to count with

Create little books out of construction paper, and newsprint paper. (These should have at least 6 pages in them. There should be space at the top for them to draw their pictures.)

Books about the desert from your school library.

One copy of the Gila monster picture/student

One science board (stiff poster board) /student

Water soluble markers

## Prep for Teachers:

Step 1. Pre-view Video. Cue the tape and prepare yourself for the lesson.

Step 2. Create a learning board about the desert using the animals/ plants that you chose to learn about.

Step 3. Gather your materials that you need for your terrarium.

Step 4. Create picture cards for your students. Laminate them.

### **Introductory Activity:**

Step 1. The teacher brings in a cactus, and "brainstorms" with the children asking them " What do you know about a cactus? Where they might find a cactus? What does a desert look like? What grows in the desert? Are there any other things can live in the desert?" Remind children about the definition of living, verses non-living. Now, the teacher has the children draw a picture of a desert, reminding them about what they had just discussed. When the children have finished drawing, the teacher collects the pictures, and focuses the children on a video.

Step 2. **Focus for Media Interaction:** "In this desert video, you are to look closely and see what kinds of things can grow or live in the desert. We are going to watch the video the first time, all the way through."

Step 3. \*Teacher runs the video, and stops the video at key times, which are depicted below.

#### **VIDEO:**

##### **American Desert- What is a Desert?**

Step 1 First "brainstorm" about what they think a desert is?  
Next start the video at the beginning and ask them to be ready to answer questions.  
Pause after they tell of some differences of the desert.

Step 2 Name a few words that they said the desert was. (Cold, mountainous, full of life, beautiful) See if you had these words written down during your brainstorm  
Start the video again. Stop on the snow. What do you see in the desert?  
Continue video until it talks about

Step 3 What happens when it rains in the desert? It pours.  
Continue video and stop the video after it asks, "What makes a desert a desert?  
(It's dryness.)

Step 4 "Can you name a dry place? Listen and see if you can tell where in the United States it is the driest?" Continue video, and stop after it says, "Death Valley, CA."

Step 5 Tell your students that there are 4 major deserts in the United States. Let's see if we can catch the names of them. Play video.  
(Chihuahuan, Sonoran, Mohave, and Great Basin)

Step 6 Rewind the video and let's see if we can see what are some things that are unique to that desert. Play video, and stop after every segment that talks about that particular desert.

**Chihuahuan-** is a high desert and grows creosote bush, and soap tree Yucca

Then freeze on each picture that follows that deserts' segment and see if the class can name that animal.

**Sonoran-**More plants and animals than any other desert, and grows saguaro, Palo Verde, and ocotillo.

Freeze on the animal pictures that follow and names them.

**Mojave-** Driest desert- Joshua trees and in some places nothing. Name the driest place ,(Death Valley, CA.) It is located in this desert.

Freeze on the animals, and try to name them.

**Great Basin-** Coldest desert, and has low shrubs, and grasses and no trees. What provides the water for this desert? Snow.

Freeze on the animals again. Freeze and ask question.

Step 7 Listen and tell what is the most precious thing in the desert? (Water)

Stop the video, and discuss all that you have discovered.

Step 8 Use the globe, and the map to show location of the deserts. Also use the websites noted to show beautiful pictures of the desert.

Step 9 **Focus for Media Interaction:** "We will watch the video again this time without sound. This time, when you see something that lives or grows in the desert, raise your hand. I will pause the video and you can show us, what you have discovered." Teacher will allow student to touch the screen, and trace the animal

or plant they have discovered. The student will try to recall the name, and can ask a friend for assistance.

Step 10 Use the 2<sup>nd</sup> video- American Desert- Life in the Desert #102 to review and look for animals and plants in the desert.

Step 11 Teacher: Rewinds the video, and quickly goes through the video, pausing on various animals, and plants, and asking their names.

Step 12 Teacher: " Now, we will divide into groups of four. Each group will receive a series of desert animal pictures and words to match together. When you think that your group is finished, raise your saguaro for checking. " Teacher writes the word saguaro on the board, and checks each group as they finish.

### **Learning Activities:**

#### **Activity 1:**

Step 1 Teacher: "Since we will be studying these plants, and animals for the next couple of weeks, let's take these animals and plants and create a dictionary of words, and pictures."

Step 2 Each student will have a little booklet to draw and label the plants and animals.

#### **Activity 2:**

Step 1 Teacher will create a learning board using the same plants and animals that the children have in their booklets. Using this board, the children will label the plants and animals together as a class as a review.

Step 2 Next, Teacher will read to the class the story: *Gila Monster Meets You At The Airport*, by Marjorie Sharmat, Piffin Books, 1980.

Step 3 Teacher will be discussing reality from fantasy, and relate it to the story. " Is a Gila monster real?" " What does a Gila monster look like?" " Could a Gila monster meet you at the airport?"

Step 4 Given a picture of a Gila monster, the children will give it texture by using beads and glue. They will be creating his scale pattern on his body.

Step 5 Next, the children will write about the Gila monster using their level of writing skills.

Step 6 When all children have finished, have the children read to the class what they wrote.

Step 7 Have the children decide whether what they wrote is real or fantasy. Hang the pictures up on a bulletin board, which is divided into Reality/Fantasy.

### **Activity 3:**

Step 1 Introduce the Scientific Experiment, and how to create a science board.

Step 2 Explain that we will be doing an experiment on why can't all plants live in the desert. Teacher will set up a desert terrarium in front of the class. Teacher will discuss the dirt on the bottom, then the rocks, then the pebbles, last the sand. As you place the layers, have the children touch the various soils. Explain about erosion: the wearing away of layers of rock by the wind, rain, and other elements.

Step 3 Next, talk about how a plant stands. A plant uses a root to hold itself deep in the soil, and a stem to stand in the air. A cactus has a root system that doesn't go deep in the soil. Using a coffee filter, lay the filter on top of the soil layers. Explain that this is what the cactus roots are like.

Step 4 Now, take a blow dryer and gently blow the filter. Explain that this is what the roots will do in the driest part of the season, but during the rain, the roots soak up water and hold onto the soil. Wet the coffee filter in the terrarium, and blow the filter again.

Step 5 Now, lift the filter and notice that the soil under the filter is almost dry. The saguaro will soak up all of the water with in an area. The saguaro soaks up the water like a straw. (You can equate this to them holding a straw in their drink and traveling with the drink to their mouth. You may want to do this with your class.)

Step 6 You may also want to do this neat idea: Take a strip of construction paper. Give each child a piece. Have them create a 3-D circle with it. Tape it, and fill it with beans, or something in which they may count. Write down the number of beans.

Now, take the same strip and fold the strip into one-inch squares, over/under. It should look like an accordion. Next, place the beans inside. Watch as the beans push and expand the sides, in order to hold more. This is the same way a cactus expands its' sides to let in more water. Did it hold the same amount of beans as the round version?

**Step 7** Now, gently place various cacti, in one side of the terrarium, in the other side place plants that like cooler weather, and need water. (Pansies, corn, grass to name just a few. Use items that your children can relate to.) Water all the plants. Place a heat lamp on top of the terrarium explaining that cactus like the heat and sun. Also, place a thermometer on the inside, where they can read the temperature daily.

**Step 8** Have the children make a prediction/hypothesis on what they think might take place in the terrarium. Post their hypothesis on the science board.

**Step 9** Every day the children will look at the terrarium and note the temperature, which the class will chart. Also, they will look at the soil for moisture, look at the plants for life. In about a week, the cactus will still be living and the other plants should be dead or dying.

#### **Activity 4:**

At this time, start to fill in the missing parts to the experiment on your science board: Scientific Method, Introduction, Hypothesis, Problem, Procedure, Materials, Data, Results, Conclusion, and Application. Discuss as you fill out the board.

#### **Activity 5:**

Each child will choose one animal or plant to write a short report about. They will be required to use at least one book, one reference material such as an encyclopedia, and one computer website information. They will gather their reference materials. They will be assisted into organization of format. They will be assisted as needed in sentence structure. They will create a page of information with a picture of their selection. We, as a class will collect the papers into a book, and read it to our class. We will use this book as a reference book for our culminating activity

### **Culminating Activity:**

Each child will create a diorama of a desert, using the information that they have learned over the past two weeks. They may use the class book, their reports, the experiment, the video, and a web site. The diorama must include at least one animal, one plant to create a true picture of a desert.

### **Cross Curricular Activity:**

#### **SOCIAL STUDIES:**

You can use this during Native American week, and talk about how people might survive in the desert.

#### **MATH:**

You will count beans, you will measure temperature, and you will talk about weather and climate. You will create charts.

#### **LANGUAGE:**

You will read, write and create sentences about the desert.

### **Community Connections:**

Visit one of the following locations to observe plants and animals that might live in the desert:

Botanical Gardens of Corpus Christi  
8545 S. Staples, Corpus Christi, TX 78413  
361-852-7875

Gill Landscape Nursery 2810 Airline  
Corpus Christi, TX 78414  
361-992-9674

Turners Gardenland 6503 SPID  
Corpus Christi, TX 78412  
361-991-9002

Fox Nursery 5902 S. Staples  
Corpus Christi, TX 78414  
361-992-6928

Corpus Christi Museum of Natural History- their landscaping is xeroscaped.  
Texas A&M-Corpus Christi

Texas A&M-Kingsville

Kingsville, TX-Cactus Festival - call their Chamber of Commerce or visit their website

**Student Materials:**

Research Paper guide

Gila Monster Page

Scientific Experiment words

## MY RESEARCH GUIDE

The name of my animal/plant is\_\_\_\_\_.

It lives in the \_\_\_\_\_.

It needs \_\_\_\_\_ and \_\_\_\_\_ to live.

It looks like \_\_\_\_\_.

It is \_\_\_\_\_ color.

It eats\_\_\_\_\_.

It likes to \_\_\_\_\_.

Describe something that is unique or special about your animal/plant.

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Where did you get your information?\_\_\_\_\_

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Draw a picture of your animal/plant.

# **SCIENTIFIC EXPERIMENT**

Introduction

Materials

Problem

Procedure

Hypothesis

Data

Results

Conclusion

Application

# Gila Monster



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