Introduction
Unit Introduction

Title:
The Desert

Grade Level:
Fourth Grade

Target group:
Mainstream class with integrated ELLs

Source of Reading Materials:
*Used during lessons (others used as additional reading material for independent practice)


Source of Lessons:
Fourth grade team, EC Stevens School, Wallingford, CT

Learning Goals:
I want my students to know about the unique characteristics of desert regions.
I want my students to know about desert plant and animal life and its survival.
I want my students to be able to observe and verify a concept organizer for the study of a desert unit.

You need to add standards and activities to your unit for the future.

February 2006
Unit Overview

I selected the topic of the desert regions as an integrated thematic unit of study for this project because of my previous teaching experience in the fourth grade. The unit meets the fourth grades Social Studies curriculum criteria of studying regions. The teachers in this grade level wanted modifications for their mixed abilities students coming from a variety of language backgrounds. I felt that this particular unit would have many applications for the children to experience.

The goal of this unit is to present the students in a fourth grade class with opportunities to explore learning about places different from our community, while familiarizing them with the unique characteristics of the desert as they exist throughout the world. To achieve this goal, the fourth grade teachers have created an integrated unit in which they employ several different parts of the curriculum. Four different subject areas have been specifically addressed in this unit (social studies, language arts, science and math). Instruction is focused on cross-content language development. In this case, links are made between science, social studies and literature. The duration of the unit is approximately 3 weeks. Prior to this unit, the children study the polar regions of the world. After the study of the desert region, they begin another integrated thematic unit on the rain forest.

From this unit, I have chosen one lesson from each subject area. I chose these specific lessons because of the reading materials included within the lesson. Once of my focuses will be to reinforce the students before, during and after reading strategies. During the planned activities, students will practice such skills as: the inquiry process, observations, predictions, description, comparing and contrasting, note taking, communicating and problem solving. Students will have the opportunity to work in pairs, groups and individually. This arrangement will provide a helping hand for those less skilled students and the occasion for all students to practice the art of cooperation.
Learning Events:

Lesson 1: Desert Region Vocabulary/KWL
1. Students complete a Desert Anticipation guide (listening, speaking, thinking, shared reading)
2. Brainstorm present knowledge of Desert (listening, speaking, personal experience, thinking)
3. Brainstorm what they want to learn about Deserts (listening, speaking, thinking)
4. Name key desert vocabulary (speaking, listening, reading)
5. Graphic organizer vocabulary predicting sorting activity (speaking, listening, reading, writing, thinking)

Lesson 2: Living in a Desert Region – Non-fiction textbook
1. Taking notes using an outline (listening, speaking)
2. Shared reading (listening, speaking)
3. Cooperative learning reading group (speaking, listening, reading, thinking)
4. Graphic organizer vocabulary verification sorting activity (speaking, listening, reading, writing)
5. Vocabulary extension activity (speaking, listening, writing)

Lesson 3: Desert Animal Adaptations and Habitants – Desert Discoveries trade book
1. Shared reading (listening, speaking,)
2. Cooperative learning reading group (listening, speaking, reading, thinking)
3. Desert animal data cards (speaking, reading, writing, thinking)
4. Sharing of animal data cards (speaking, reading)
5. Writing about one animal

Lesson 4: Desert cactus plant adaptation – Cactus Hotel
1. Shared reading (listening, speaking,)
2. Cooperative learning reading group (listening, speaking, reading, thinking)
3. Cactus data sheet (speaking, reading, writing, thinking)
4. Sharing of cactus data sheet (speaking, reading)

Lesson 5: Desert Survival - Language Arts: guided reading: Lost in the Devil’s Desert
1. Understanding similes
2. Shared reading (listening, speaking,)
3. Cooperative learning reading group (listening, speaking, reading, thinking)
4. Story discussion of characters, events (listening, speaking, and thinking)
5. Writing description of characters – webbing (writing, speaking)
6. Writing characters, events - story map (writing, speaking)
7. Written prediction of next event (writing, speaking)

Content goals are based on the TESOL ESL Standards mentioned on the next page to acquire and understand concepts and language used in the mainstream classroom.
TESOL’s ESL Standards for Pre-K-12 Students

Goal 1.1
- To share and request information
- To engage in conversations

Goal 1.2
- To interact in, through, and with spoken and written English for personal expression and enjoyment

Goal 1.3
- To explore alternative ways of saying things
- To seek support and feedback from others
- To practice new language
- To use context to construct meaning

Goal 2.1
- To follow oral and written directions
- To participate in class, group and pair discussions
- To ask and answer questions
- To request information and assistance
- To explain actions

Goal 2.2
- To compare and contrast information
- To gather information
- To retell information
- To respond to the work of peers
- To select, connect and explain information
- To represent information visually and interpret information presented visually
- To hypothesize and predict
- To understand and produce technical vocabulary and text features according to content areas

Goal 2.3
- To apply basic reading comprehension skills
- To actively connect new information to what was previously learned
- To use context to construct meaning
- To use note taking to record important information
- To imitate the behaviors of native English speakers to complete tasks
- To recognize the need for and seeking assistance appropriately from peers, specialists, community members.
## Desert Objectives and Goals

<table>
<thead>
<tr>
<th>DESERT UNIT</th>
<th>LESSON 1</th>
<th>LESSON 2</th>
<th>LESSON 3</th>
<th>LESSON 4</th>
<th>LESSON 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>Desert vocabulary: habitant features, climate and plant life</td>
<td>Desert trade booknote taking outline, observing vocabulary</td>
<td>Desert animal adaptation and habitants</td>
<td>Physical changes of the saguaro cactus, cactus plant adaptations</td>
<td>Human desert survival, events, characters, similes</td>
</tr>
<tr>
<td>TESOL Goal 1, Standard 1.2.3. Goal 2, Standard 1.2.3</td>
<td><strong>TESOL Goal 1, Standard 1.2.3. Goal 2, Standard 1.2.3</strong></td>
<td><strong>TESOL Goal 1, Standard 1.2.3. Goal 2, Standard 1.2.3</strong></td>
<td><strong>TESOL Goal 1, Standard 1.2.3. Goal 2, Standard 1.2.3</strong></td>
<td><strong>TESOL Goal 1, Standard 1.2.3. Goal 2, Standard 1.2.3</strong></td>
<td><strong>TESOL Goal 1, Standard 1.2.3. Goal 2, Standard 1.2.3</strong></td>
</tr>
<tr>
<td>CLACF 1.1.a, 1.3.a, d,e</td>
<td><strong>CLACF 1.1.a, 1.3.a, d,e</strong></td>
<td><strong>CLACF 1.1.a, 1.3.a, d,e</strong></td>
<td><strong>CLACF 1.1.a, 1.3.a, d,e</strong></td>
<td><strong>CLACF 1.1.a, 1.3.a, d,e</strong></td>
<td><strong>CLACF 1.1.a, 1.3.a, d,e</strong></td>
</tr>
<tr>
<td>Language</td>
<td>Point to picture draw a picture/label picture pictures cards with label answer yes, no</td>
<td>Listening, pointing, following tracking, Modified text, outline *See below</td>
<td>Listening, point to picture, draw a picture/label picture animal picture cards with words</td>
<td>Draw a picture/label picture Cactus picture with age and height</td>
<td>Point to picture Draw a picture/label picture of events</td>
</tr>
<tr>
<td>A</td>
<td>Give an oral description / formulaic sentence fill in modified portion of graphic organizer</td>
<td>Modified text, outline small group cooperative learning reading groups – listening, reading, speaking * See below</td>
<td>Modified animal data card, small group cooperative learning reading groups – listening, reading, speaking</td>
<td>Modified cactus data sheet, small group cooperative learning reading groups</td>
<td>Give an oral description/formulaic sentence Fill in modified character web, story map</td>
</tr>
<tr>
<td>B</td>
<td>Complete graphic organizer</td>
<td>Small group cooperative learning reading groups – listening, reading, speaking *See below</td>
<td>Small group cooperative learning reading groups</td>
<td>Fill in cactus data sheet, small group cooperative learning reading groups</td>
<td>Complete character web, story map</td>
</tr>
<tr>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*If possible, all reading will be done in advance of class with ESL specialist, or volunteer. Then, the reading in class will become a repeated reading of material for ELL students.
* If possible, dictionaries are available in native language and bilingual texts are available.
Lesson 1
| **Goals and Objectives**  
| **Lesson 1 – Characteristics of the desert** |

<table>
<thead>
<tr>
<th><strong>LANGUAGE</strong></th>
<th><strong>CONTENT</strong></th>
<th><strong>LEARNING STRATEGIES</strong></th>
</tr>
</thead>
</table>
| **Knowledge** | • Spoken ideas can be printed in writing.  
• Spanish Vocabulary: cacto, desierto, temperature, montañas, dunas, arena, hacer frío, hacer calor  
• English Vocabulary: cactus, desert, temperature, mountains, saguaro, dunes, hot, cold, oasis | • Desert habitant features  
• Desert climate  
• Desert plant life | • Know how to answer an anticipation guide  
• Know how to use a graphic organizer |
| **Skills** | • Give an oral description of the desert  
• Orally state prior knowledge about desert (K-W-L)  
• Ask questions about the desert (K-W-L)  
• Read and recite desert vocabulary  
• Complete graphic organizer | • Describe what they know & want to know using KWL  
• Name habitant feature, climate, and plant life of desert  
• Describe 3 main topics using a descriptive web | • Apply previous knowledge using KWL  
• Apply vocabulary using a graphic organizer  
• Predict the meaning of new terms by relating them to known concepts/class discussion |
| **Attitudes/ Awareness** | Awareness of environments other than their own. | |
# Functional/Notional chart

**Lesson #1: Characteristics of the desert**

<table>
<thead>
<tr>
<th>Function</th>
<th>Situation</th>
<th>Formulae</th>
<th>Grammar</th>
<th>Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State</strong></td>
<td>Prior knowledge about the desert (K)WL</td>
<td>Deserts are ______. There is an ______. There are some ______. There is ______. There are ______.</td>
<td>adjectives</td>
<td>large, hot, cold</td>
</tr>
<tr>
<td><strong>Ask</strong></td>
<td>Questions about the desert</td>
<td>Are deserts _____? Yes they ______.</td>
<td>nouns</td>
<td>oasis, sand, dunes, cactus, plants, mountains</td>
</tr>
<tr>
<td><strong>Identify</strong></td>
<td>Vocabulary words (graphic organizer)</td>
<td>A ______ is a plant. The ______ is a desert.</td>
<td>Model &quot;are&quot; Present simple Question words</td>
<td>saguaro, Gobi, Sahara,</td>
</tr>
<tr>
<td><strong>Name</strong></td>
<td>desert classification</td>
<td>The largest desert is the ______? The largest cold desert is the ______?</td>
<td>Present tense nouns</td>
<td>cacto, desierto, montanas, dunas, arena, hacer frio, hacer calor</td>
</tr>
</tbody>
</table>
Lesson 1 - Revised

Title: Characteristics of the Desert

Content Objectives:
The students will:
- know particular desert climate terms
- Know particular desert landforms
- Identify desert plant life and its survival
- Name the largest desert.
- Name the largest cold desert

Language Objectives:
- All students will review and participate in a class overhead anticipation guide
- All students will describe what they know and want to know about the desert
- All student will recognize, discuss, write, and define vocabulary
- Most students will orally express preconceptions about the desert
- Most students will write desert vocabulary onto a graphic organizer
- Most students will predict the meaning of new terms by relating them to known concepts/ class discussion.
- Some student will draw a picture of what they want to know about the desert
- Some students will have desert vocabulary pictures on index cards with matching term

Lesson Time: 55 minutes
Materials: small desert model, overhead projector, overhead copy of desert anticipation guide and graphic organizer, student copies of graphic organizer, vocabulary/ picture desert cards.

Warm-up and/or Review- Whole Group/ activating prior knowledge

1. Write the following objective on the white board: Today we are going to learn about climate, land forms, and plant life that are important to a desert region. Begin the lesson by having the children observe a small model of the desert. Ask the students to notice the sand, cut out pictures of desert plants, animals, and features of the desert model. Tell them that they will begin a unit on the study of the desert region. Show the students the pictures of vocabulary cards to activate prior knowledge.

2. Begin KWL chart with students. Students are asked to share what they presently know of the world’s deserts. Students are asked questions about plant life, animals and climate of the desert. B- Students will draw a picture. I- Students will use formulaic sentences to generate ideas (I know that deserts are ______). Fill out the Known column as students comment on the pictures and small model of the desert.

3. Place an anticipation guide on the overhead and read the statements to the class. Ask the students to think about how they would respond to the questions on the guide. Explain that the questions could be either true or false. Discuss the vocabulary words agree, disagree and statement. Emphasize to the children that they should think about the responses that they choose, because they will be asked to explain them. Students are asked to turn to their think-pair-share partner to discuss each statement and decide whether they agree or disagree with the statement. The overhead is on incase they need to refer to it.
4. Discuss each statement as a group. Teacher reads each statement, and then asks the students to raise their hands if they agree with it. Next, ask for volunteers to tell why they yes/agree or no/disagree. To sum up the main points of the discussion, ask the students to summarize what facts we need to look for when we begin to read through the pages of our Social Studies textbook. For example, some children might believe that deserts are only located in hot places. Review the pre-reading anticipatory guide chart to check the before reading predictions, and to clarify any further misconceptions.

5. Teacher fills out *Want-to-know* column of **KWL**. Ask students what they want to know about deserts. Record their responses in the *Want-to-know* column of the chart.

**Present new information and check for comprehension**

Before reading: Introduction of content vocabulary for the textbook

1. Teacher shows the pictures of the desert vocabulary words to the class. Teacher reads the desert vocabulary words to the children (dunes, oasis, temperature, cactus, saguaro, drought, evaporation, Sahara, Gobi desert). Students write the words in their desert notebooks (using temporary spelling, or native language). The teacher asks for students to call the words back to her as she says the word, and writes each one on the chalkboard using the correct spelling. **B**- students will have practice time repeating the words, as well as hearing the words.

2. Students are asked to share their definitions for each word. **B**- students will have pictures on index cards with matching term.

3. Teacher repeats back the correct definition (A cactus is a plant, The Sahara is the largest desert in the world) to the class slowly, uses gestures, repeating the names, pointing to the vocabulary visuals with labels. Students record the information in their notebooks.

**Practice – provide opportunities to practice new knowledge**

1. Teacher places the graphic organizer on the overhead. Teacher identifies and discusses the major concepts listed on the organizer. Discuss with the students why and how the concepts or topics are arranged in this order. Review the names of the new vocabulary listed at the bottom of the organizer. Tell the children that they will have a chance to predict where the words go in the organizer.

2. Pass out an organizer worksheet to each child. **B**- students will use all of the matching desert vocabulary cards. **I**- students will have a modified organizer. The students will work in their cooperative learning groups to complete this assignment. Allow the children time to predict and write where each new vocabulary word would fit on the organizer.

**Evaluate**

As a group, predict and fill in the classroom overhead. Children may come up and write in their predictions.
Narrative Lesson 1

For my first modification in lesson one, I would use an anticipation guide to introduce the topic of desert regions. There are several reasons why I chose to use a guide. First, an anticipation guide is an instructional technique designed to activate prior knowledge of the subject. The guide enables students to predict what the text will be about and helps to build student interest. Students enjoy filling out predictions prior to the reading of materials. Then, because of the pupil diversity within classrooms, I felt that some students might have misconceptions about certain desert features. So, I chose to use this activity to help them identify any misconceptions.

To create an anticipation guide, the teacher identifies the major concepts for the topic. Next, he/she creates four concept statements that might touch on the students’ misconception or involve areas in which students have partial knowledge, and arrange them on the paper in the order of how these concepts appear in the text. By listing the debatable topic statements on paper, the teacher is able to provide a way for those students with incorrect information to verbalize their responses. ELL students may have trouble with the guide’s heading words “agreement” or “disagreement” therefore, I would review the statements from the guide for clarification and write the words “yes” under “agree” and “no” under “disagree”. Finally, this guide will give all students a purpose for reading, since they could compare their answers with what the author wrote to correct and clarify their ideas.

For my next adaptation, I thought the ELL students needed to see several concrete desert objects, so I added a small desert model. Then, I provided several pictures for the vocabulary words with appropriate labels in English and Spanish. In addition, I chose to model the desert vocabulary to engage the ELL learners in speaking the word, reading the word, writing the word and thinking about the word’s meaning.

Another adaptation that was used, that was not used in the original was the use of a graphic organizer. I chose the organizer as a modification because it is helpful when introducing new vocabulary of a textbook. The organizer provides a diagram for the students to view visually which helps them to see the interrelationship among certain words. It helps children form another mental connection because it shows how the new words are related to each other. The students can, also, use the CD-ROM Inspiration on the computer to create their own graphic organizers.

Finally, I added two more literacy learning experiences for whole-group lessons and small-group activities. I incorporated think-pair-share (turn and talk) minidiscussions during whole-group lessons. During this time, students could express to a partner what they thought about a particular question, word, and/or what they wondered about. During the practice phase of the lesson, I chose to use cooperative learning groups. This learning situation encourages students to pose their own questions and confusions about the vocabulary to their group members. The teacher needs to select the children when forming these groups. He/She would select students for grouping who can work together (preferably ELL students of different abilities). ELL students have expressed that being in groups with their friends who do not” talk to fast” or use hard words enables them to feel comfortable when interacting.
Directions: Read each statement below carefully. Check either “agree” or “disagree” to show what you think. Do this both before and after reading the text pages 122-130. You should be able to defend your answers.

### Prereading

<table>
<thead>
<tr>
<th>Yes/Agree</th>
<th>No/Disagree</th>
<th>Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1. Sometimes a desert does not receive any rain for a year or more.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. People may live on an oasis.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Deserts may have both hot and cold temperatures.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. There are also deserts located in cold lands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Desert plants hold or store water.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. You can see mountains in the desert.</td>
</tr>
</tbody>
</table>

### Postreading

<table>
<thead>
<tr>
<th>Yes/Agree</th>
<th>No/Disagree</th>
<th>Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1. Sometimes a desert does not receive any rain for a year or more.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. People may live on an oasis.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Deserts may have both hot and cold temperatures.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. There are also deserts located in cold lands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Desert plants hold or store water.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. You can see mountains in the desert.</td>
</tr>
</tbody>
</table>
temperature

sand

saguaro cactus

mountains

cold
arena

saguaro cacto

montañas

temperatura

hacer frío
<table>
<thead>
<tr>
<th>dunas</th>
<th>cacto</th>
<th>desierto</th>
</tr>
</thead>
</table>

hacer calor
Land Features

Deserts

Climate

Plant Life

cactus

little rainfall

dunes

[sun]

temperature

oasis

[Sahara]

[store water]

[sand]

[hot]

[thick stems]

[mountains]

[evaporation]

[Gobi desert]

[Asia]

[cold]

[survival]

[Asia]

[two words stay together]
Land Features
- sand
  - dunes
- mountains

Deserts
- Climate
  - little rainfall
    - draught
      - evaporation
        - oasis
  - temperature
    - hot
    - cold
      - Gobi desert
      - Sahara
      - Africa
      - Asia

Plant Life
- cactus
  - saguaro
    - thick stems
    - stores water
  - survival
Lesson 2
Goals and Objectives
Lesson 2 – Characteristics of the desert

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>CONTENT</th>
<th>LEARNING STRATEGIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Spoken ideas can be printed</td>
<td>• Desert habitant features</td>
<td>• Know how to use an outline</td>
</tr>
<tr>
<td>in writing.</td>
<td>• Desert climate</td>
<td>• Know how to use a T-note</td>
</tr>
<tr>
<td>• Spanish Vocabulary: cacto,</td>
<td>• Desert plant life</td>
<td>outline</td>
</tr>
<tr>
<td>desierto, temperature, montanas,</td>
<td>• Take notes using an outline</td>
<td>• Collaboration in a group-</td>
</tr>
<tr>
<td>dunas, arena, hacer frio, hacer</td>
<td></td>
<td>helping a peer</td>
</tr>
<tr>
<td>calor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• English Vocabulary: cactus,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>desert, temperature, mountains,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>saguaro, dunes, hot, cold, oasis,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sahara, Gobi, climate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Take notes on the Desert using</td>
<td>• Describe what they have learned</td>
<td>• Apply learned knowledge using</td>
</tr>
<tr>
<td>an outline</td>
<td>using KWL</td>
<td>KWL</td>
</tr>
<tr>
<td>• Read desert content and recite</td>
<td>• Identify 3 main ideas from a</td>
<td>• Apply what they learn to a T-</td>
</tr>
<tr>
<td>desert terms</td>
<td>Non-fiction test</td>
<td>note outline for main idea and</td>
</tr>
<tr>
<td>• Complete T-notes outline</td>
<td>• Identify 3 supporting details for</td>
<td>details</td>
</tr>
<tr>
<td>• Orally state knowledge learned</td>
<td>a main idea from a Non-fiction</td>
<td>• Apply learned knowledge using a</td>
</tr>
<tr>
<td>about desert (K-W-L)</td>
<td>text.</td>
<td>graphic organizer</td>
</tr>
<tr>
<td>Attitudes/</td>
<td></td>
<td>• Apply learned knowledge using an</td>
</tr>
<tr>
<td>Awareness</td>
<td></td>
<td>anticipation guide</td>
</tr>
<tr>
<td>Be aware of the steps to</td>
<td>Awareness of environments other</td>
<td></td>
</tr>
<tr>
<td>outlining</td>
<td>their own.</td>
<td></td>
</tr>
</tbody>
</table>
## Functional/Notional chart

**Lesson #2: Characteristics of the Desert – part two**

<table>
<thead>
<tr>
<th>Function</th>
<th>Situation</th>
<th>Formulae</th>
<th>Grammar</th>
<th>Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>Knowledge learned about the desert KW(L)</td>
<td>Deserts are ______. The saguaro is a ______. The Gobi is a ______. People live on an ______.</td>
<td>adjectives</td>
<td>large hot, cold plant, cactus, desert oasis,</td>
</tr>
<tr>
<td>Describe</td>
<td>The desert habitat</td>
<td>The desert has ___. The land has ___. The climate is ___.</td>
<td>plural noun</td>
<td>dunes plants, mountains hot, cold cacto, desierto, montanas, dunas, arena, hacer frio, hacer calor</td>
</tr>
<tr>
<td>Compose</td>
<td>T- Outline</td>
<td>Desert plants have ____ stems. Desert plants ____ water.</td>
<td>adjective verb</td>
<td>thick, bushy store</td>
</tr>
<tr>
<td>Read</td>
<td>Main Idea/Outline</td>
<td>The World’s largest desert is the ___.</td>
<td>noun</td>
<td>Sahara</td>
</tr>
</tbody>
</table>

FLA 518
Lesson 2 – Revised

Title: Characteristics of the Desert – part two

Content Objectives:
*The student will:*
  - Examine a new section of their Social Studies textbook on deserts and relate the topics to the graphic organizer
  - Read the selection with a partner or small group to verify their predictions
  - Discuss and verify the correct placement of the terms to the known concept
  - Know how to take notes using an outline

Language Objectives:
  - All students will survey a new section of their textbook and relate the topics to the graphic organizer
  - All students will review an example of note taking modeled on the overhead.
  - All students will describe what they have learned about the desert
  - Most students will read the textbook selection with a partner or small group.
  - Most students will take notes using a T-note taking outline
  - Some students will read a modified textbook selection with a partner or small group.
  - Some students will use a modified T-note taking outline as a listening guide to the textbook.
  - Some students will draw a picture of what they have learned about the desert.

Lesson Time: 60 minutes

Materials: Student copies of textbook *Living in a Desert Region*, modified copy of textbook, T-note taking overhead, T-note taking student copies, modified T-note outline, small white boards, erasers and dry erase markers.

Warm-up and/or Review – Whole Group/activating prior knowledge
1. Teacher will review the overhead organizer from the previous lesson that the class predicted for the vocabulary content words.
2. Pass out text books and modified texts to the students.

Present new information and check for comprehension-

Before reading: The teacher models the survey technique of the textbook to enable the students to get an overview of the chapter selection.

1. Teacher will “text walk” the mini chapter with the students. Teacher will point out certain features of the text. Direct the students to ask themselves how the headings connect to one another. Point out other text features such as: labels, pictures, graphs, and bold print. Teacher reads a heading in the chapter and tells the students to ask themselves what they already know about the topic. Students can share some of their answers.

2. Write the following objective on the board: **Today we are going to learn how to take notes from our textbook as we read about the desert. Taking notes is a good strategy to use when you are reading non-fiction material, and reading your notes is a good way to remember the information.**

8.
3. Teacher explains that most text books contain a variety of information: main ideas, details, vocabulary words, examples, and general information. Refer to the T-note taking overhead, and explain how the main ideas are placed on the left side of the line and details on the right. Discuss how any unfamiliar vocabulary words are placed on the center line with definitions on the right side of the line.

4. Ask students to recall three topics from the text. Guide their responses by referring to the graphic organizer topics: land features, climate, and plant life. On the overhead begin modeling the note taking skills. Teacher refers to the first main idea and writes desert climate underneath. Teacher asks students to recall what details could be written on the right. Teacher fills in words for details of the desert climate. Explain how details will go next to the numerals. Teacher explains how each numeral needs details to support the main idea.

5. **Beg-Students** will refer to the filled in graphic organizer. They will also use a modified out line as a listening guide to fill in appropriate vocabulary words as teacher reads and models note-taking. **I-Students** will use a modified text to help them fill in the note taking outline.

**Practice – provide opportunities to practice new knowledge**

1. Teacher directs the class to get together with their reading partners and small cooperative learning groups. The class will continue to take notes on the remaining two topics. Teacher reminds the class to check their organizers as they read to verify their vocabulary predictions.

2. Teacher or Resource teacher will read the textbook to the small cooperative group with **B-Students** and **I-Students**. **I-Students** can read along with their modified text. The **B-Student** has the graphic organizer and modified T-note to follow as a listening guide. Teacher passes out small white boards, erasers, and markers to the group.

3. As the teacher reads, the group discusses the main idea of the two remaining sections to outline. Teacher writes the main idea onto a small white board and directs the **B-Students** students to write the main idea onto their small white boards. Teacher and students discuss the words. Teacher models speaking and writing the three details. Teacher directs the children to speak and write three details for each main idea to help strengthen vocabulary and their comprehension. **B-Students** can refer to their vocabulary picture index cards. Teacher provides index cards for **B-Students** to draw and write new vocabulary words.

**Evaluate**

As a group, the teacher will review the **pre-reading anticipatory guide overhead** and the **graphic organizer** to check the students before reading predictions. Students are asked to share their outlines for the two remaining main ideas. Students are asked to share what they have learned as they read about the world’s deserts. Students are asked questions about plant life, animals and climate of the desert. **B-Students** will draw a picture. **I-Students** will use formulaic sentences to generate ideas (I learned that deserts are ____). Teacher fills out the **Learn** column of the **KWL** chart.
Narrative Lesson 2

Lesson two is an additional lesson plan created from the first original lesson. I felt it necessary to create an additional lesson to accomplish all of the objectives that I had in mind for the students. In lesson one, I added a pre-reading anticipatory guide overhead and the graphic organizer to help ELL students understand the content they were about to study. The textbook used for that lesson could be difficult to read for many students because of the concept density typically found in expository text material. These text adaptations seemed necessary prior to the reading of the textbook. For this lesson, I have included two more text adaptations to help ELL students. One adaptation is using text previewing, and the other modification is decrease reading.

Before the textbook reading, I would use the previewing or survey technique to enable the students to get an overview of the reading selection. By scanning certain text features, the students are encouraged to activate their prior knowledge about the topic, previously introduced by the organizer. The teacher can point out certain features of the text, and direct the students to ask themselves how the headings connect to one another. The teacher also points out other text features such as: labels, pictures, graphs, and bold print.

For my next modification, I chose to adapt the textbook by decreasing the amount of text to be read. My adaptations included highlighting key concepts and omitting unnecessary or distracting parts of the text. I am adjusting the amount of reading material for the I-Student, but I am still expecting the I-Student to work hard on the assignment. This adjustment does not make the reading assignment an impossible task to complete.

Another adaptation that was used, that was not used in the original was the introduction of notetaking. It seemed logical to introduce this study strategy at this time. Notetaking has a real purpose, because taking notes from texts and from lectures is expected in all schools. When students take notes, they process that information and script it in their own way. Taking notes is a good way to process text, and reading notes is a good way to remember text. The specific notetaking strategy that I will be using in this lesson is called T-notes.

Finally, I used my last adaptation during the practice phase of the lesson with the small cooperative reading group of B-Students and I-Students. I added small white boards, erasers, and markers to be used during the groups reading time. During this time, the group reads and discusses the main idea of the two remaining sections to outline. The B-Student has the graphic organizer and modified T-note to follow as a listening guide, while the I-Student uses the modified text. The teacher and students are involved in making sense of the text. Through active involvement, the ELL students can begin to develop ways of making sense of the text. The students are able to practice talking, reading, and writing with the assistance of others. At this time, the B-Student may also need help for clarifications. This small group time, helps students feel comfortable to ask for help when confusions arise. The I-Student can offer suggestions and share ideas.
Deserts of the World

There are places in the world where almost no rain falls. These places are called **deserts**. Deserts are dry places on the earth with little plant or animal life.

Some deserts are in the middle of continents. Some deserts are on or near coasts. In some parts of the world deserts cover a large part of the continent.

Desert Climate

Sometimes a desert does not receive any rain for a year or more. This is called a **drought**. Droughts happen often in deserts.

When it does rain in a desert, the land is so hard and dry that little water can soak in. After it rains the air and sun quickly dry up the water. This is called **evaporation**. Deserts have few rivers or streams on the surface. Some water is underground. People dig wells to reach this water. Water wells and springs form an **oasis**. An **oasis** is a place in the desert where plants grow because of the water. People live on an **oasis** because there is water, plants and trees.
A desert can have both hot and cold temperatures. Most deserts are very hot. There are also deserts in cold lands. The biggest cold desert is the Gobi in Asia. There are often snowstorms. Short summers in the Gobi can be very hot.

The Sahara is on the continent of Africa. It is the largest desert in the world. The Sahara can be very hot. The Sahara has more than 100 oases. Deserts do have some mountains. The Sahara has three groups of mountains. The Sahara has large areas of sand too. Sometimes the sand forms dunes. A dune is a hill of sand made by wind. Some dunes are 600 feet high.

**Desert Plants**

Since there is little rain in the desert, the plants must hold or store water. When it does rain, the plants soak up water. The cactus plant has thick stems that hold water. They have thorns instead of leaves. There are many kinds of cactus plants. The saguaro cactus stores water in thick stems. The plants grow quickly when it rains. Many live to be many years old.

2.
<table>
<thead>
<tr>
<th>Main Ideas</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main idea</td>
<td>1. Detail</td>
</tr>
<tr>
<td></td>
<td>2. Detail</td>
</tr>
<tr>
<td></td>
<td>3. Detail</td>
</tr>
<tr>
<td>Main idea</td>
<td>1. Detail</td>
</tr>
<tr>
<td></td>
<td>2. Detail</td>
</tr>
<tr>
<td></td>
<td>3. Detail</td>
</tr>
<tr>
<td>Main idea</td>
<td>1. Detail</td>
</tr>
<tr>
<td></td>
<td>2. Detail</td>
</tr>
<tr>
<td></td>
<td>3. Detail</td>
</tr>
</tbody>
</table>

New vocabulary definitions

Examples and illustrations
<table>
<thead>
<tr>
<th>Main Ideas</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main idea Desert Climate</td>
<td>1. Detail temperature is hot and cold</td>
</tr>
<tr>
<td></td>
<td>2. Detail little rainfall causes drought -evaporation</td>
</tr>
<tr>
<td></td>
<td>3. Detail Oasis</td>
</tr>
<tr>
<td>Main idea Desert Plants</td>
<td>1. Detail bushy/thick stems stores water</td>
</tr>
<tr>
<td></td>
<td>2. Detail saguaro is one kind of plant</td>
</tr>
<tr>
<td></td>
<td>3. Detail cactus</td>
</tr>
<tr>
<td>Main idea World’s Largest Desert</td>
<td>1. Detail Sahara in Africa</td>
</tr>
<tr>
<td></td>
<td>2. Detail Sahara is as large as U.S</td>
</tr>
<tr>
<td></td>
<td>3. Detail Gobi is the biggest cold desert</td>
</tr>
</tbody>
</table>

New vocabulary definitions

Examples and illustrations
Lesson 3
### Goals and Objectives
#### Lesson 3 – Desert Animal Adaptations and Habitats

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>CONTENT</th>
<th>LEARNING STRATEGIES</th>
</tr>
</thead>
</table>
| **Knowledge** | • Vocabulary: coyote, jackrabbit, tortoise, quail, spotted skunk, bighorn sheep, kangaroo rat, scorpion, snake, tarantula, bat, Gila monster, road runner, mammal, reptile, backbone, fur, scales, herbivore, carnivore | • Desert animal types  
• Desert animal characteristics  
• Habitats in which various animals live.  
• Collaboration in a group-helping a peer  
• Group items by classifying into categories  
• Know how to use graphic concept map |
| **Skills** | • Read desert animal content  
• Recite desert animal names and characteristics  
• Orally state the type of a desert animal  
• Describe adaptations of a specific desert animal for a game  
• Complete animal adaptation sheet  
• Use the words herbivore or carnivore correctly in context.  
• Record desert animal information  
• Complete written animal report | • Describe what they know about animals using (K)WL  
• Name desert animals  
• Explain different animal characteristics  
• Classify desert animals as herbivore or carnivore  
• Name the habitat related to the animal.  
• Draw animal characteristics  
• Utilize animal information to create hands-on activity (game) to engage and interact with language  
• Associate Visuals/Realia with label to learn vocabulary  
• Gesturing to express more than one way of language |
| **Attitudes/Awareness** | Interest in learning about different animal characteristics and habitats they are part of |
## Functional/Notional chart

**Lesson #3: Desert Animal Adaptations and Habitats**

<table>
<thead>
<tr>
<th>Function</th>
<th>Situation</th>
<th>Formulae</th>
<th>Grammar</th>
<th>Vocabulary</th>
</tr>
</thead>
</table>
| Describe   | Desert animal habitat                  | Spotted skunks live in ____  
Coyotes live in ____  
Kangaroo rats sleep in ____ | Prepositions of place                                                   | tunnels, dens  
underground burrows.                   |
| Record     | information about animal for game      | It has ____  
It has ____ | adjectives                            | fur, scales,  
feathers, horns                             |
| Identify   | animal type                            | ____ are reptiles.  
____ are mammals. | plural nouns                         | snakes, coyotes,  
jackrabbits, road runners, Gila monsters |
|           | animal food                            | Jackrabbits ____ grass.  
Roadrunners ____ insects | verbs                           | eat                                  |
| Classify   | desert animal adaptation sheet         | The Kangaroo rat is ____  
The snake is ____  
The tortoise is a ____  
The coyote is a ____ | present tense nouns                   | warm-blooded  
cold-blooded  
herbivore, carnivore                     |
Lesson 3 – Revised

Title: Desert Animal Adaptations and Habitats

Content Objectives:

The student will:

- Define the five major types of animals found in the desert
- Observe the completed Animals of the Desert chart listing the characteristics of each type of animal.
- Categorize and classify desert animals
- Identify five major characteristics of a specific animal (animal type, skin covering, habitat, foods, and warm or cold blooded.
- Compile information about a specific animal
- Demonstrate understanding of animal characteristics as described
- Examine a desert animal tradebook
- Name several desert animals
- Predict whether certain animals are carnivorous or herbivorous
- Verify their predictions by researching animal eating habits

Language Objectives:

- All students will survey a new tradebook describing desert animals
- All students will review a completed Animals of the Desert chart modeled on the overhead.
- All students will describe what they know about the desert animals
- Most students will read the tradebook selection with a partner or small group.
- Most students will discuss a noun concept map
- Some students will use present tense accurately to describe the five characteristics (It lives…; it eats….)
- Some students will use new vocabulary words to complete an animal frame
- Some students will respond to the question words “Which” and “What” (What does the snake eat? Which animals eat plants?)
- Some students will draw a picture of what they know about the desert animals.

Lesson Time: 60 minutes

Materials: Student copies of the tradebook Cactus Hotel, modified animal frame, Animals of the Desert overhead, noun concept map, modified concept map, Animal Adaptation sheet overhead and student copies, large index cards, box, realia- rock, herbivore and carnivore picture cards.

Warm-up and/or Review – Whole Group/ activating prior knowledge

1. Begin by asking the students what they (K)now about desert animals. Teacher uses the same repeating speaking technique as in lesson one for the ELL students.

2. Review the Animals of the Desert chart overhead listing the characteristics of each type of animal. Talk about animal skin coverings and body part. Talk about “backbone” by having students touch their own backbone. Explain (talking slowly) the concept of “warm-blooded/cold-blooded by showing students how a small rock gets warm if you put
it under a lamp and cold if you put it in cold water. Ask students if a baby puppy eats dog food or drinks milk from its mother. Explain “live birth by contrasting it with “hatched from an egg.” Ask students, “Do dogs lay eggs? Are Puppies alive?” This type of questioning and repeating will benefit both B and I Students. Discuss the words “meat” and “plants.” Discuss the words herbivore and carnivore. Display a card with the word herbivore/plant and appropriate picture and another card for carnivore. Ask questions to give a complete sentence response using the vocabulary of meat and plants (What does a cow eat? What does a lion eat?).

Present new information and check for comprehension-

1. Write the following objective on the board: Today you will complete an animal adaptation sheet describing five major characteristics of a specific animal. Then, you will use the information from this sheet to write a description card providing five “clues” about the animal. We will use these description cards to create a desert animal game!

2. Pass out the Desert Discoveries tradebook to the children. Tell the children they will be hearing a story that describes the behavior (actions) of thirteen different desert animals during a day in the desert. Read the introductory page as the children follow along with their books. “Picture walk” the rest of the short tradebook pointing to pictures showing different times and temperatures in the desert on each page. Ask the children to examine the pictures on the right side of each page. Then read the bold highlighted summary sentence that asks you to find a specific animal. Have students predict whether certain animals are carnivorous or herbivorous. Ask students to point to the animal that has fur. Teacher and students repeat the word fur and the animal name. Students points to the animal that has scales repeating the names and describing words. Have students point to the mammals in the book and show what attributes mammals have. ELL students will respond using formulaic sentences. (The snake has scales. The snake is a reptile). (The kangaroo rat is warm-blooded. The kangaroo rat eats seeds).

As you review each page, review the names of the various animals, animal type, skin covering, habitat, foods and prey. Teacher completes the reading of the text.

3. Place a copy of the Animal Adaptation sheet on the overhead and review the contents. Tell the students to open the Desert Discoveries tradebook and turn to the page about the desert snake. Read the page together. Model filling in the animal type, skin covering, habitat, foods and prey. B-Students will have a modified sheet, as well as a word concept map. Remind the students to also check their copy of Animals of the Desert for characteristics.

4. Pass out blank description cards to students. Write the following words on the board: animal type, habitat, foods and prey, most noticeable characteristic. Students will write these words on their cards.

14. FLA 518
Students are to provide five clues about the animal. The class creates a description card together.
Teacher writes the clues on the board.
1. Animal type: Mammal
2. Habitat: It lives on the plain in Africa.
3. Foods: It is a herbivore.
4. Color(s): It is gray.
5. Most noticeable characteristic: It has a trunk.

**Practice – provide opportunities to practice new knowledge**

1. In pairs, students are assigned the name of an animal. The pairs may work in their small cooperative groups. Teacher moves from group to group. While the students are filling in their data cards, review the word map with the small group. Write the word reptile into the key term box and snake into the example box. Point to the animal category box and read *A reptile is a snake. A reptile is an animal.* Practice filling in the rest of the map. **B-Students** are provided with a frame for their animal. Provide index cards for the **B-Student** to draw and write new vocabulary words. The new animal vocabulary words will be added to the desert word wall. When the students finish the Animal Adaptation sheet and their description cards, they can begin to play the animal guessing game.

2. **The game:** Students are placed into five teams. Each team has a “clue-reader” an “answer-giver,” a “score-keeper,” and a “facilitator,” whose job it is to call on teams that are ready to make a guess. All description cards are placed in a box. The “facilitator” watches the teams to look for the first hand that is raised and to call on the “answer-giver” for that team. The “answer-givers” representing the teams can make a guess at any time by raising their hands and being called on by the “facilitator.”

3. If a student can give the correct answer after the first clue, they receive five points. They will get four points for giving the correct answer after the second clue, three points after the third clue, two points after the fourth clue, and one point after the fifth. If students guess incorrectly, they must subtract points from their total (one point if they guess incorrectly after one clue, two points after two clues, etc.) The point –keeper keeps track of all the points earned for the team.

**Evaluate**
The teacher can assess students’ performance informally as the game takes place.
The students will write a one page report on their animal.
Narrative Lesson 3

For lesson three, the original lesson plan was modified in ways that would be more meaningful for students. To promote comprehension I included language practice opportunities in listening, speaking, reading and writing.

In the warm-up, I would review the overhead animal characteristic chart by demonstrating the body parts of certain animals. Then to explain the two words *warm-blooded* and *cold-blooded*, I provided an object (realia) for demonstration and explained the concept by the use of contrast. To increase understanding, I added scaffolding to the instruction by naming animals that the students could relate to as I explained the concept of "live birth" and "hatch from eggs."

During the reading of the tradebook, I pointed out text features that I thought might be confusing to the ELL students (temperature and time changes). I had the students predict whether certain animals are carnivorous or herbivorous. The lessons key vocabulary was emphasized and then presented in context. I also had the ELL students point to the animals and their characteristics. ELL students were encouraged to respond using formulaic sentences (The snake has scales. The snake is a reptile).

For my next two modifications, I changed the original animal data sheet, and included an animal game. The original data sheet was to be completed by using the tradebook and other textbooks describing desert animals. I changed the data sheet to fit the contents of the tradebook, because I wanted the students to have time to create and play the animal game. I've also added a frame to fit the text for the ELL students to write about the different animal. The game will help many students to remember the desert animal terms. As they play this game, the students will enjoy the competition, and relaxed atmosphere. The game will become part of the desert learning center. This activity will allow the children to practice saying the names and use the language to describe the various animals.

During the practice phase of the lesson, I continue to use the small cooperative reading group of B-Students and I-Students. To support the reading, I have included a graphic concept map for nouns. Supported reading can help the ELL students understand new definitions. The map contains a simple definition, a categorical description of the word, some key attributes of the word, and some examples that will aid understanding. While the students are filling in their Animal Adaptation sheet, I can review the word map with the small group. The categorical description would complete the sentence "A (key term) is a (category)." A key attribute completes the sentence "A (Key term) has (does) a (attribute)." The teacher will provide index cards for the B-Student to draw and write new vocabulary words. The new animal vocabulary words will be added to the desert word wall.
**Animals of the Desert**

Many types of animals live in the desert. List the characteristics of each type of animal in boxes below.

**Mammals**
- Warm Blooded
- Babies Are Born Alive
- Nurse Their Young (Babies)
- Have a Backbone (Vertebrates)
  - Usually Have Hair

**Reptiles**
- Cold Blooded
- Hatch From Eggs
- Have a Backbone (Vertebrates)
  - Usually Have Scaly Skin

**Amphibians**
- Cold Blooded
- Have Backbones (Vertebrates)
- Hatch From Eggs
- Lives 1\textsuperscript{st} Half of Life In Water and The 2\textsuperscript{nd} Half on Land
  - Scaleless Skin

**Birds**
- Warm Blooded
- Have Backbones (Vertebrates)
- Hatch From Eggs
- Have Feathers and Wings

**Insects**
- Have 3 Main Body Parts
- No Backbones (Invertebrates)
- Have Exoskeleton (Hard Covering)
- Usually Have Six Legs and 2 Pairs of Wings
The snake is a reptile.
It has scales and eats prey.

The kangaroo rat is a mammal.
It has fur and eats seeds.
Animal Adaptation sheet

1. Describe the animal's physical appearance.

Draw a picture of the animal.

2. Describe the animal's habitat.
3. What kinds of food does the animal eat? Is the animal an herbivore or carnivore?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

4. List some interesting facts about this animal.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Name your animal type.

________________________________________________________________________
Reptiles are cold-blooded, usually egg-laying animals with backbones and scaly skin.

**Definition**

**Category**
- animal

**Key Term**
- reptile

**Characteristics/Attributes**
- is cold-blooded
- lays eggs (usually)
- has backbone
- has scaly skin

**Is a(n)**
- snake
The snake sleeps in the shade.

The roadrunner runs fast.
The lizard lies in the hot sun.

The tarantula walks slowly.
Lesson 4
Goals and Objectives
Lesson 4 – Desert cactus plant adaptation

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>CONTENT</th>
<th>LEARNING STRATEGIES</th>
</tr>
</thead>
</table>
| **Knowledge** | Improve student academic language through description of the saguaro cactus lifecycle  
**English Vocabulary:**  
- Saguaro, cactus, plant, thorns, spines, feet, years, habitat, Gila woodpecker, white-winged dove, elf owl, scorpion | Saguaro cactus desert plant  
Saguaro cactus life cycle  
Animal habitats found in the saguaro | Collaboration in a group-helping a peer – turn and talk  
Know how to use graphic concept map |
| **Skills** | Read and recite cactus line graph  
Read desert plant content  
Orally state the saguaro stage of life characteristics.  
Record cactus data information  
Describe adaptations of saguaro during a specific life stage  
Complete timeline life cycle  
Complete saguaro plant model | Read desert plant information  
Name cactus life cycle stages  
Describe the saguaro plant and its life cycle  
Create a timeline showing saguaro’s stages of life  
Draw a picture of a stage of life  
Make a model of a saguaro cactus | Predict the meaning of new terms by relating them to known concepts/class discussion  
Apply learned knowledge to make a saguaro cactus  
Apply what they learn to create a timeline  
Associate Visuals/Realia with label to learn vocabulary  
Gesturing to express more than one way of language. |
<p>| <strong>Attitudes/Awareness</strong> | Awareness of changes that occur over time to plants. |</p>
<table>
<thead>
<tr>
<th>Function</th>
<th>Situation</th>
<th>Formulae</th>
<th>Grammar</th>
<th>Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>Prior knowledge about desert plants</td>
<td>A saguaro is a ____. A ____ is a plant.</td>
<td>Present tense nouns</td>
<td>cactus, plant saguaro</td>
</tr>
<tr>
<td>Describe</td>
<td>Making cactus model</td>
<td>The saguaro has a ____ trunk. The saguaro has ____ spines.</td>
<td>adjective</td>
<td>tall, thick, green</td>
</tr>
<tr>
<td>Name</td>
<td>Animal habitat</td>
<td>The ____ lives in the cactus.</td>
<td>nouns</td>
<td>Gila woodpecker, white-winged dove, elf owl, scorpion</td>
</tr>
<tr>
<td>Identify</td>
<td>Plant stages specific to the life cycle</td>
<td>The saguaro ____ water. An elf owl ____ in the cactus. It ____ seeds. A Gila woodpecker ____ in the cactus.</td>
<td>verb</td>
<td>stores, lives, eats, sleeps,</td>
</tr>
<tr>
<td>Tell</td>
<td>A classmate what one’s cactus will look like</td>
<td>I’m going to do ____. My plant will have ____.</td>
<td>future tenses</td>
<td></td>
</tr>
<tr>
<td>Inquire</td>
<td>What a classmate’s cactus will look like</td>
<td>How will your animal look? What adaptations will it have?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advise</td>
<td>Help a classmate complete the cactus Model.</td>
<td>Could you do ____?</td>
<td>Conditional</td>
<td></td>
</tr>
<tr>
<td>Ask</td>
<td>Questions about saguaro life cycle</td>
<td>What Animals live in the saguaro? When the saguaro is 50 years old it is 10 feet tall.</td>
<td>Model &quot;What&quot;, &quot;When&quot; Question words</td>
<td></td>
</tr>
</tbody>
</table>
Lesson 4 – Revised

Title: Desert cactus plant adaptation

Content Objectives:

The student will:

- Participate in a reading of the story “Cactus Hotel”
- Discuss a line graph to predict cactus’ height at a variety of ages.
- Identify the characteristics associated with the various stages of a saguaro cactus development and lifecycle.
- List the characteristics associated with the various stages of a saguaro cactus development and lifecycle on a data sheet.
- Draw a timeline of a saguaro cactus lifecycle.
- Examine a desert plant tradebook.
- Verify their predictions of cactus’ height at a variety of ages.
- Make a model saguaro cactus for each age.

Language Objectives:

- All students will survey a new tradebook describing the saguaro cactus.
- All students will review a line graph to predict cactus’ height.
- All students will describe what they know about the saguaro cactus.
- Most students will read the tradebook selection with a partner or small group.
- Most students will discuss and predict cactus’ height.
- Some students will draw a picture to predict what they know about saguaro height.
- Some students will use new vocabulary words to complete a plant frame.
- Some students will respond to the question words “What” and “When” (What animals live in the saguaro? When the saguaro is 50 years old it is 10 feet tall).

Lesson Time: 60 minutes

Materials: Student copies of tradebook “Cactus Hotel”, Cactus Hotel Data Sheet, pictures depicting stages of development, cactus plant, Cactus line graph overhead, modified plant frame, noun concept map, Saguaro Timeline sheet, pieces of roll-type bulletin board paper cut in lengths of about 8 feet.

Warm-up and/or Review – Whole Group/ activating prior knowledge

1. Remind students of yesterday’s lesson on desert plants. Survey students on the plants they learned about and steer questioning towards cacti. Show the real cactus plant to the class and discuss what they know about cacti. Then ask someone to recall the name of the cactus mentioned in the first desert lesson. Introduce “Cactus Hotel” and ask students to turn and talk to their partners to make predictions about the book. Discuss the predictions with the class.

2. Pass out the “Cactus Hotel Data Sheet” and inform the students that they will be recording information about the life of a Saguaro Cactus at various stages of development. Show pictures of development by demonstrating a babies’ growth through adulthood (realia).
Present new information and check for comprehension-

1. Write the following objective on the board: **Today you will create a timeline showing the average saguaro cactus’ lifecycle. Then, you will create a cactus showing a particular stage of its life.**

2. Read the tradebook orally to the class and stop to record (Cactus Hotel Data Sheet) information pertaining to the first stage of life. Discuss the information with the class. Place the line graph on the overhead and ask the class to make a prediction of height for the next stage. Repeat this practice of recording and predicting until you have completed all of the stages in the book.

3. Inform students that they will be creating a timeline depicting the average saguaro cactus’ lifecycle. Review the example of the timeline of events used during the last reading of a novel. Students are assigned a stage of development for their cactus.

**Practice – provide opportunities to practice new knowledge**

1. The pairs may work in their small cooperative groups. Teacher moves from group to group. Students use the information from the Cactus Hotel data sheet to complete the timeline. When the students finish the timeline, they can begin building their saguaro. Have students, working in small groups make their saguaro. Give each group a piece of roll-type bulletin board paper cut in lengths of about 8 feet. Assign each group a stage of development from seedling to small cacti to one that is dependent upon a “nurse plant.” The groups will need to decide which animals are in or on their saguaro, make the appropriate nesting places and animals, and add them to the cactus. Remind students to include what other animals live in the cactus, the physical changes the cactus makes, and any adaptations the cactus makes. Instruct the students to refer to their books for the appropriate stage of development.

2. While the students are completing their timeline, review the word map with the small group. Write the word **saguaro** into the key term box and **cactus** into the example box. Point to the plant category box and read **A saguaro is a cactus. A saguaro is a plant.** Practice filling in the rest of the map. **B-Students** are provided with a frame for their plant life cycle. Provide index cards for the **B-Student** to draw and write new vocabulary words. The new plant vocabulary words will be added to the desert word wall. **B-Students and I Students** practice the new content vocabulary words as they inquire, advise and ask questions about the saguaro model.

**Evaluate-**
The class can share their cactus work with other classes, and present the story of the saguaro cactus.

---

20. FLA 518
Narrative Lesson 4

For lesson four, I used several modifications to assist all levels of language learning. In the warm-up, I continued to use think-pair-share (turn and talk) mini-discussions throughout the whole-group session. During this time, students could express to a partner what they thought about a particular question, word, and/or what they wondered about. Then, the teacher shows pictures of a life cycle development by demonstrating a baby’s growth through adulthood. I thought all students could make a personal connection and better understand the concept of growth and developmental stages. Teacher also brings in a real cactus plant (realia).

For the original lesson, the fourth grade teachers suggested removing the scaling of the cactus size. They suggested adding the line graph to make predictions for the cactus size. The line graph will allow the students to visually see the height progression. The predictions add a purpose to the reading. I also included the timeline as a modification for the students to complete at the end of the reading. The timeline will allow the students to visually see each lifecycle experience as it relates to the other events.

To promote comprehension, I included language practice opportunities in speaking, reading and writing. The teacher will continue to use the small cooperative reading group of B-Students and I-Students. To support the reading, I have included a word map for the ELL student to review in the small group. The teacher writes the word saguaro into the key term box and cactus into the example box. Point to the plant category box and read A saguaro is a cactus. A saguaro is a plant. Teacher fills in the rest of the map. B-Students are provided with a completed timeline for their plant life cycle. They can follow this timeline as the teacher reads from the tradebook. B-Students are given a plant frame to practice reading and draw a picture. Index cards for the B-Student to draw and write new vocabulary words. The new plant vocabulary words will be added to the desert word wall.

For my last modification, I have the students make model saguaro “Highrises.” The students will have time to discuss the vocabulary involved, as well as, work cooperatively to figure out the assignment. I also thought the students could share their cactus work with other classes, and present the story of the saguaro cactus.
Saguaro Timeline

height

Seed 10 years 20 years 25 years 50 years 55 years 60 years 100 years 150 years

age
## Cactus Hotel

<table>
<thead>
<tr>
<th>Age</th>
<th>Height</th>
<th>Description</th>
<th>Scaled Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 yrs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 yrs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 yrs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 yrs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55 yrs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 yrs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 yrs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150 yrs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200 yrs.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The saguaro cactus is 50 years old.
The saguaro cactus is 10 feet tall.
A Gila woodpecker lives in the cactus.

The saguaro cactus is 60 years old.
The saguaro cactus is 18 feet tall.
A white-winged dove lives in the cactus.
An elf owl lives in the cactus.
The saguaro cactus is a large desert plant with a tall trunk, spines and thorns that stores water.
Lesson 5
### Goals and Objectives

#### Lesson 5 – Desert Survival - Language Arts

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>CONTENT</th>
<th>LEARNING STRATEGIES</th>
</tr>
</thead>
</table>
| **Knowledge** | • Desert survival skills  
• Character study  
• Figurative language/similes | • Collaboration in a group-helping a peer  
• To incorporate learning strategies that might be used in other academic areas. |
| • English Vocabulary: main character, setting, rickety, bush, simile, sage brush, antique, popcorn ball  
• To comprehend the novel and discuss with class. | |
| **Skills** | • Draw picture of chapter simile  
• Name characters and setting  
• Write sentences to predict meaning  
• Discuss connection with main character | • Associate Visuals/Realia with label to learn vocabulary  
• Gesturing to express more than one way of language.  
• Use context clues to aid comprehension  
• Use of personal connection to main character |
| • Use context clues for comprehension  
• Ask questions for clarification  
• Read and recite chapter vocabulary  
• Summarize the chapter  
• Predict the next chapter  
• Orally state the character and setting | |
| **Attitudes/Awareness** | I can predict the meanings of words. | Awareness of knowing that previous knowledge helps build understanding |
| The value of vocabulary in aiding comprehension | | |

---

- FLA 518
### Functional/Notional chart

#### Lesson #5: Desert Survival - Language Arts

<table>
<thead>
<tr>
<th>Function</th>
<th>Situation</th>
<th>Formulae</th>
<th>Grammar</th>
<th>Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discuss</td>
<td>Main character</td>
<td>The main character is ____ is the main character. ____ is the great-grandmother.</td>
<td>Present tense noun</td>
<td>Kevin</td>
</tr>
<tr>
<td></td>
<td>Supporting character</td>
<td></td>
<td>Subject pronoun</td>
<td>He, She</td>
</tr>
<tr>
<td>Name</td>
<td>character</td>
<td>Her name is ____ The setting is ____</td>
<td>Present tense noun</td>
<td>Gram, Spriggs</td>
</tr>
<tr>
<td></td>
<td>setting</td>
<td></td>
<td></td>
<td>pillows, popcorn balls</td>
</tr>
<tr>
<td>Discuss</td>
<td>simile</td>
<td>The bushes look like ____ The bushes ____ like ____</td>
<td>nouns</td>
<td>rickety, antique</td>
</tr>
<tr>
<td>Identify</td>
<td>Vocabulary words/possible sentences</td>
<td>He climbed the ____ steps. I have an ____ toy. A ____ is a small scrub.</td>
<td>adjective</td>
<td></td>
</tr>
<tr>
<td>Ask</td>
<td>Questions to make personal connections to the story</td>
<td>How do you think Kevin felt when ____?</td>
<td>Model “How” Question word</td>
<td></td>
</tr>
</tbody>
</table>

---

13 - FLA 518
Lesson 5 – Revised

Title: Desert Survival – Language Arts

Content Objectives:
The student will:
  o Listen to a chapter in the story *Lost in the Devil’s Desert*
  o Recognize new vocabulary words.
  o Identify similes.
  o Review figurative language
  o Describe the setting and characters of the story
  o Compare their answers to other student responses
  o Summarize the first chapter
  o Predict the events of the next chapter

Language Objectives:
  o All students will describe what they have learned about desert life
  o All students will name words for figurative language
  o All students will write a one word summary of the chapter on their white boards
to share with the class
  o All students will write one word to describe the main character and share it with
the class
  o Most students will respond with describing words
  o Most students will discuss main character and setting
  o Some students will repeat names of characters and setting
  o Some students will draw a picture of what they know about similes, characters,
setting and predicting.

Lesson Time: 60 minutes

Materials: Student copies of *Lost in the Devil’s Desert*, teacher copy of *First Snow* by
Marie Louise Allen, popcorn-ball, cotton balls, small pillow, picture of a bush,
cantaloupe rind, modified text copy of *Lost in the Devil’s Desert*, small white boards,
erasers and dry erase markers.

Warm-up and/or Review – Whole Group/activating prior knowledge
1. Review the topics studied so far about desert life. Write the following words on
the board: sage brush, antique, irrigation, rickety and dry wash. Discuss the meanings
of the words, and have students write possible sentences in their journals. Students’
can turn and talk. **B-Students** can draw pictures of the words.

24. FLA 518
Present new information and check for comprehension- whole group
Before Reading:

1. Write the following objective on the board: **Today you will listen to a story about desert survival. We will read one chapter together and discuss the setting, characters and similes found in the story.**

2. Pass out copies of the book *Lost in the Devil’s Desert* to the children. **I-Students** can follow along with modified text. Students make predictions based on title and cover of book. Ask the students to think about how they could survive in the desert if they were lost. Teacher asks student if they have ever been lost.

3. Write the word *similes* on the board. Ask students to recall what they know about similes. Explain that poets and authors use words to paint pictures. Have students close their eyes while you read a short poem *First Snow* aloud by Marie Louise Allen.

   **First Snow**
   Snow makes whiteness where it falls.
   The bushes look like popcorn-balls.
   The places where I always play,
   Look like somewhere else today.

4. Ask to what does the poem compare the snow on the bushes? Show a picture of a bush and a real popcorn-ball. Brainstorm comparisons with students that could be used in the poem in place of “popcorn-balls.” Use realia such as small pillow, or cotton balls to help students understand the vocabulary and comparisons. Have them complete the sentence: The bushes look like ________________

   Tell the students to listen for similes and focus on the setting and characters as you read the first chapter of the book.

Practice – provide opportunities to practice new knowledge
During the Reading:
1. Begin reading the first chapter to the students. Stop at the focus vocabulary talked about in the warm-up. Review the written predictions.

2. Emphasize the description of setting and characters. Draw attention to the similes for Grams’s face and the porch. Draw a picture on the board to demonstrate *The porch sagged in the middle like a cantaloupe rind.* If possible, show a real cantaloupe rind. Use hand gesture to describe *sagged in the middle.* Have students copy both similes into their journals.
After the Reading:

3. Children gather into their cooperative groups. Ask the students to think of one word that would summarize the chapter. The students may turn and talk here. Ask them to write this one word on their white boards. Ask the children to hold up their written words. **B-Students** can draw a picture. Call on volunteers to read their words and to discuss why they chose that particular word. Repeat their responses slowly using gestures for ELL students. Follow the same procedure for describing the main character and setting of the story.

4. Teacher prompts students with questions to make personal connections with the character. “How do you think the character ______ felt when ______?” “How would you have acted if ______?”

5. Afterwards, the teacher asks the students in the ELL group “Who is the main character of the story?” **I-Student** answers “The main character is Kevin.” Teacher says to the **B-Student** “Who is the main character of the story? The main character is ______.” **B-Student** says “Kevin.” Teacher asks “What is Kevin’s great-grandmothers name in the story? **I-Student** answers “Her name is Gram.” Teacher answers that is correct. “Her name is Gram.” To **B-Student** teacher asks “What is Kevin’s great-grandmothers name in the story? Her name is ______?” The **B-Student** says “Her name is Gram.” Teacher responds, “Very Good.” “Her name is Gram.”

6. Students will write a prediction about the next chapter in their journals. **B-Students** will answer the question “What will happen to Kevin?” And draw a picture.

**Evaluate**
Individual responses to the setting, characters, predictions and summary of the chapter. Ask the students to draw a picture of the simile *Her face had as many lines as a fancy spider web.* Students volunteer to read their predictions of next chapter. Students read their possible sentences for the vocabulary words.
Narrative Lesson 5

For this lesson, the original lesson plan was modified in ways that would improve the comprehension of the reading material for the students. To promote comprehension I included possible sentences, turn and talk, visualization, one word predictions, and continue to use turn and talk in small groups.

During the warm-up, the teacher writes the difficult vocabulary words on the board to discuss the meanings of the words, and has students write possible sentences in their journals. To encourage learning opportunities, students' are directed to turn and talk to a partner. The teacher should encourage the students at reasonable intervals to turn to a peer and share what they are thinking. Then after a few minutes, she could ask for volunteers to share their ideas "revoked" by a peer. Another modification could be sharing in native language with a peer then have the most proficient ELL translate into English the ideas, confusions, and questions to the group. This arrangement involves active participation and the teacher sees what the ELL learners are thinking.

In the original lesson, the students are advised to listen for similes as the story is read. For this lesson, I focused more on explaining and describing the concept of similes. The teacher begins the discussion of figurative language with an easy simile that is very visual. The teacher reads a poem so the children can experience how authors use words to paint pictures. I also suggested using real objects (realia) or pictures for further visualization. Students use many words to describe the similes. They also illustrate the similes found in their novels.

During the reading of the tradebook, other modifications include the teacher emphasizing key words and using gestures to describe the setting and certain vocabulary. Teacher also points to the vocabulary words on the desert word wall as they are mentioned in the book.

For the after reading modifications, students continue to gather into their cooperative groups. Students have the chance to choose single words to describe their thoughts; this will appeal to everyone. Students love writing on their small white boards. I have used this comprehension check technique, and students like seeing the various written responses. They enjoy having the opportunity to see who has similar thoughts. Teacher repeats students' responses slowly using gestures for ELL students. During this time, there is a great deal of verbal sharing among the students. Their responses indicate how they understand the story, as well as, how they are enjoying it. Students of all ages get pleasure from being read to as a group. Teacher also prompts students with questions to make personal connections with the character.
Kevin and his parents drive into Spriggs, Utah

Kevin meets his great-grandmother.

Kevin and his father meet Barney at "Barney's Garage"

Kevin rummages through Barney's junk pile.

Gram fixes Kevin his last meal for awhile.

Barney gives Kevin tires and inner tubes for free.

Kevin climbs in the back of Barney's truck.

Barney gets assaulted and robbed by two escaped convicts.
Two escaped convicts steal Barney's truck.

Kevin hides under a piece of canvas in the back of the pick up truck.

Kevin is spotted by a convict and jumps out of the pick up truck.

Kevin walks in the dry wash looking for the tire tracks.

Kevin flattens himself against a rock to try and stay cool.

Kevin sucks a pebble to keep his mouth moist.

Kevin is caught in the middle of a sandstorm.
Kevin collects rocks in an attempt to catch the mornings dew.

Kevin spends the night in the desert, alone and scared.

Kevin finds a six pack of soda and is convinced he will survive his ordeal in the desert.
Checklists
## Grammar Checklist

<table>
<thead>
<tr>
<th>Grammar</th>
<th>Lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question words</td>
<td>1,4,5</td>
</tr>
<tr>
<td>Nouns</td>
<td>1,2,3,4,5</td>
</tr>
<tr>
<td>adjectives</td>
<td>1,2,3,4,5</td>
</tr>
<tr>
<td>Verbs</td>
<td>2,3,4,5</td>
</tr>
<tr>
<td>Subject pronoun</td>
<td>5</td>
</tr>
<tr>
<td>Conditional</td>
<td>4</td>
</tr>
<tr>
<td>Future tenses</td>
<td>4</td>
</tr>
<tr>
<td>Present tense nouns</td>
<td>1,2,3,4,5</td>
</tr>
<tr>
<td>Prepositions</td>
<td>3</td>
</tr>
<tr>
<td>Singular pronoun</td>
<td>3</td>
</tr>
<tr>
<td>Plural nouns</td>
<td>2,3</td>
</tr>
</tbody>
</table>

## Functions Checklist

<table>
<thead>
<tr>
<th>Language Function</th>
<th>Lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>1,2,4</td>
</tr>
<tr>
<td>Ask</td>
<td>1,4,5</td>
</tr>
<tr>
<td>Compose</td>
<td>2</td>
</tr>
<tr>
<td>Read</td>
<td>2</td>
</tr>
<tr>
<td>Identify</td>
<td>1,3,4,5</td>
</tr>
<tr>
<td>Record</td>
<td>3</td>
</tr>
<tr>
<td>Describe</td>
<td>2,3,4</td>
</tr>
<tr>
<td>Name</td>
<td>1,4,5</td>
</tr>
<tr>
<td>Classify</td>
<td>3</td>
</tr>
<tr>
<td>Tell</td>
<td>4</td>
</tr>
<tr>
<td>Inquire</td>
<td>4</td>
</tr>
<tr>
<td>Advise</td>
<td>4</td>
</tr>
<tr>
<td>Discuss</td>
<td>5</td>
</tr>
</tbody>
</table>
Sheltered ELL Strategies Checklist

<table>
<thead>
<tr>
<th>Sheltered Features</th>
<th>Present in Lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Contextualize Lesson</strong></td>
<td></td>
</tr>
<tr>
<td>1.a. Visuals (Realia, Manipulatives, Gestures)</td>
<td>1, 3, 4, 5</td>
</tr>
<tr>
<td>1.b. Model (Instructions, Processes)</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td>1.c. Activate Background Knowledge</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td><strong>2. Make Text Comprehensible</strong></td>
<td></td>
</tr>
<tr>
<td>2a. Graphic Organizers</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td>2b. Develop Vocabulary</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td>2c. Simplify Written Text</td>
<td>2, 3, 4, 5</td>
</tr>
<tr>
<td><strong>3. Make Talk Comprehensible</strong></td>
<td></td>
</tr>
<tr>
<td>3a. Graphic Organizers; Listening Guides (checklists, etc.) anticipation guide</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td>3b. Frame Main Ideas - write on board - list items</td>
<td>2, 3, 4</td>
</tr>
<tr>
<td>3c. Pace Teacher's Speech</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td><strong>4. Engage: Opportunities for Output</strong></td>
<td></td>
</tr>
<tr>
<td>4a. Teacher Questioning and Response Strategies; Instructional Conversations</td>
<td>1, 2, 3, 4, 5</td>
</tr>
<tr>
<td>4b. Small Group Work (including information gap activities)</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td>4c. Meaningful, real-life activities; Students as researchers</td>
<td>2, 3, 4</td>
</tr>
<tr>
<td><strong>5. Engage Appropriate Language Proficiency Levels</strong></td>
<td></td>
</tr>
<tr>
<td>5a. Use questions appropriate for language levels</td>
<td>2, 3, 4, 5</td>
</tr>
<tr>
<td>5b. Assign appropriate tasks for varying levels</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td><strong>6. Literacy/Academic Development</strong></td>
<td></td>
</tr>
<tr>
<td>6a. Allow use of L1 for planning and conceptualization</td>
<td>1, 2, 3, 4, 5</td>
</tr>
<tr>
<td>6b. Lots of real oral and written language</td>
<td>2, 3, 4</td>
</tr>
</tbody>
</table>

Adapted from the Sheltered Instruction Observation Protocol (SIOP)
Original Lessons
| **Subject:** Social Science | **Concept:** The Desert  
**Topic:** KWL – *Living in a Desert Region* | **Lesson:** 1 |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objectives:</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
- Students will list, using a KWL chart, their present knowledge of the world’s deserts.  
- Students will read a mini unit of their textbook - *Living in a Desert Region*, and further expand on their KWL chart. | |
| **Materials:** | Large sheet of paper for KWL chart, *The Earth and It's People*, Textbook | |

**Lesson Activities:**

**I. Introduction:**

- Students will be asked to share what they presently know of the world’s deserts.  
- Students will be asked thought provoking questions about the plant life, animals, and climate of the desert.

**II. Procedure:**

- Teacher transfers all ideas to KWL chart, while continuing to ask students about different characteristics of the desert.  
- Students read the mini unit *Living in a Desert Region*.  
- Students add new facts to their KWL chart and also add what they want to know about the desert.

**III. Closure:**

- Teacher and students review KWL chart.  
- Added to the KWL chart is information learned from the reading.
Desert Regions of the World

Think of what would happen to your town if it almost never rained. The grass would die. Trees and flowers would not grow. Your water supply would run out. The earth would become dry and cracked. People might move away.

There are places in the world where almost no rain falls. These places are called deserts (dez'arts). Deserts are dry places on the earth's surface with little plant or animal life. All deserts get less than 10 inches (25 cm) of rain a year. Average rainfall on the earth is 20 to 60 inches (51 to 152 cm) a year. Deserts are thirsty places, yet many people live in desert lands.

Locating Deserts on a World Map

Look at the map of deserts on this page. You can see deserts on every continent except one. What continent has no desert? Over what part of the earth is there no desert?

Some deserts are in the North and South America. Some deserts are in both parts of the world. Some deserts are in Africa. Which desert is in South America? Which desert is in Africa? Which desert is in Asia? Which desert is in Europe? Which desert is in Australia? Which is the Sahara Desert? Which desert is in South America? Which desert is in Australia? Which desert is in Antarctica? Which is the Great Sandy Desert?

In some parts of the world there are deserts covering a large part of the land. The desert in the United States is the Great Desert of the Southwest. The United States also has a desert in the West. The United States is in America. What continent is Australia? Australia is on the Pacific Ocean. Which continent is Australia on? Australia is on the southern part of Asia. What continent is Australia on? Australia is on the southern part of Asia. The desert in Australia is the Great Desert of the Southwest. Which continent is Australia on? Australia is on the southern part of Asia. Which continent is Australia on? Australia is on the southern part of Asia. Which continent is Australia on? Australia is on the southern part of Asia. Which continent is Australia on? Australia is on the southern part of Asia.

A Desert

A desert's climate is a hot, dry climate. Deserts do not receive any rain. A dry spell is called a drought. Droughts often in deserts.

Water in the Desert

When it does rain, it often is quick. The land is sometimes so dry that water can soak in. Some of the drops of water can stay on the surface. The water evaporates quickly. What is the land and water like in a desert?
desert? Over 30 countries are at least part desert.

Some deserts are in the middle of continents. Some are on or near coasts. Some are in both places. Look again at the map of deserts of the world on page 124. Which deserts are in the middle of a continent? Which deserts are on a coast? Which deserts are both on a coast and in the middle of a continent?

In some parts of the world deserts take up a large part of a continent. Much of Australia is a desert. This desert is the largest in the Southern Hemisphere.

The United States has a desert region too. It is in the southwestern part of the country. The map of grasslands and deserts on page 61 shows this desert. What states are part of this desert region?

**A Desert's Climate**

A desert's ecosystem is the result of a very dry climate. Sometimes a desert does not receive any rain for a year or more. This is called a drought (drount). Droughts happen often in deserts.

**Water in the Desert**

When it does rain a desert is easily flooded. The land is so hard and dry that little water can soak in. So the water runs across the surface. The running water can cut into the land and change it.

After it rains the air and sun quickly dry up the water. This is called evaporation (i vap' o rā' shən). Evaporation happens when water passes into the air as water vapor. Desert winds help evaporation too. There are few plateaus or mountains to block the wind.

Deserts have few rivers or streams on the surface. They do have some water underground. People dig wells to reach this water. Sometimes the water is close to the surface of the ground. Natural springs bring the water to the surface. A spring is water forced to the surface.

Wells and springs form an oasis (ō a'sis). An oasis is a place in the desert where plants grow because there is a water supply.

Many people may live on an oasis. It provides water, plants, and trees. These help in giving relief from the heat.

**The Temperature in a Desert**

A desert may have both hot and cold temperatures. Deserts heat and cool quickly because they are very dry. Dry air heats and cools faster than moist air. This is why temperatures in a desert can change so quickly. In most deserts, days are very hot. But there is no cloud cover to act like a blanket, so nights are cold.

Some deserts are hotter than others. Those near the equator receive more direct sunlight. They are hotter than deserts in other places. In the summer, temperatures
Desert Plants

Several kinds of plants are able to live in the desert. These plants are usually bushy. Since there is little rain, the plants must hold or store water. When it does rain, the plants soak up water.

Some plants store water in thick roots. Others store water in their leaves. The saguaro (sa gwär'ō) of Arizona and Mexico stores water in thick stems. A saguaro is one kind of desert plant called a cactus (kak'tos). Cactus plants have thick stems that hold water. They have thorns instead of leaves. The sharp thorns protect the cactus from animals that might eat them.

There are giant cacti (9 metric tons). The water in a cactus.

Desert plants grow in the desert. Some live there because the sun is hot or no water is available. Some live there because the soil is not good enough to grow other kinds of plants. Some live there because the water is too salty.

In the spring, cactus, flowers, and grasses bloom in the Arizona desert. How can the saguaro, pictured here, thrive in the Arizona desert?
There are many types of cactus plants. A giant cactus can weigh as much as 10 tons (.9 metric ton). Most of this weight is water. The water is stored in the thick stems of the cactus.

Desert plants grow quickly when it rains. Some are full grown in a few weeks. But plants grow very slowly in the dry periods. Some live to be many years old.

Some parts of deserts have no plants because the sun is too hot and there is little or no water. Here the sandy soil is not rich enough to grow plants. The picture of a desert on page 130 shows an area such as this.

Natural Resources in the Desert

Many minerals are found in deserts. Two important ones are phosphate (fos’fāt) and nitrate (nī’trāt). They are used to make fertilizer and soap. Fertilizers help things grow. Other resources found in deserts are oil, natural gas, diamonds, and copper.

Oil and natural gas are important to many countries. Natural gas is a source of energy found deep in the earth. Oil and natural gas are often found in areas that are mostly deserts.

Some of the best diamonds come from the Namib (nom’ib) Desert in southwest Africa. Copper comes from the Atacama (ā’tā kām’ā) Desert in northern Chile.

The World’s Largest Desert

Look at the map of deserts on page 124. You can see the Sahara (sā’hār’ə) is on the continent of Africa. It is the largest desert in the world. The Sahara is almost as large as the United States.

There is another desert in Africa. It is called the Kalahari (kal’ə hār’ē). It is much smaller than the Sahara. Look at the map of Africa. How many countries are part of the Kalahari? What are their names?

Arabic (ər’ə bik) is the language of a large group of people in North Africa and the Middle East. They are called Arabs. Arabs used the word Sahara to describe the desert in North Africa. The words Sahara and desert mean the same thing. That is why it is not correct to say Sahara desert.

Look at the map of Africa on the next page. You can see that the Sahara takes up one-third of Africa. It stretches 3,500 miles (5,600 km) from the Atlantic Ocean to the Red Sea. From north to south the Sahara covers 1,200 miles (1,920 km).

Because the Sahara is so vast, it is a part of many countries. Some of these countries, like Sudan (soo’ dan’), have more than just desert climates. Parts of Sudan get 40 inches (101 cm) of rain a year. Find Sudan on the map of Africa. List some other countries of northern Africa that are part of the Sahara.
<table>
<thead>
<tr>
<th>Subject: Social Science</th>
<th>Concept: The Desert</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Topic: Animals of the Desert</td>
</tr>
<tr>
<td></td>
<td>Lesson: 4</td>
</tr>
</tbody>
</table>

**Objectives:**
- Students define the five types of animals found in the desert.
- Students will identify three major characteristics of a specific animal.
- Students complete *Animals of the Desert* chart listing the characteristics of each type of animal.
- Students complete one animal data sheet for each type of animal.
- Students arrange desert animal data cards into appropriate animal type category and create a poster to display their work.
- Students will write a report on their animal.

**Materials:**

**Lesson Activities:**

**IV. Introduction:**
- Students will be asked if they know which kinds of animals live in the desert.
- Do they have any idea how these animals can survive in the hot, dry desert.

**V. Procedure:**
- The class will read and complete the *Animals of the Desert chart*.
- One animal data sheet will be modeled for the class after the reading.
- Students will read *Desert Discoveries* in their reading groups.
- Students may then work in groups to complete their animal data sheet.
- Inform the students that they will be categorizing the cards into their appropriate categories on a poster board.
- The student will write a one page report on their animal.

**VI. Closure:**
- The class will review the five types of desert animals.
- The students will be able to present their work and have it displayed.
How many rattles does the rattlesnake have at the end of its tail?
Most snakes come out in the evening when the air and land are warm, not hot. That's because they are cold-blooded. Their body temperature constantly adjusts to the air and the land surrounding them. Snakes are covered with scales that come in different colors, sizes, and patterns. These scales help them move across the desert. Snakes also use their strong muscles to push and pull themselves along. Many kinds of snakes live in the desert. All snakes are carnivores and swallow their prey whole. Most, including poisonous rattlesnakes, are shy and stay away from people.
Do you see the kangaroo rat leaping into the air?
The moon inches above the mountains, casting a pale light on the sand. Kangaroo rats hop around on their long back legs, holding their short front legs under their chins. Their tails help them balance when they jump. At night they gather seeds and stuff them in their fur-lined cheek pouches. These warm-blooded mammals take their food to storage rooms in their underground burrow system of tunnels and rooms. Instead of drinking water from little pools or streams, kangaroo rats make the water they need in their bodies from the food they eat.
ANIMAL ADAPTATION

1. Describe the animal’s physical appearance.

---

2. Describe the animal’s habitat.

---

In what parts of the world does the animal live?

---

Draw a picture of the animal.
3. What kinds of food does the animal eat, and what are the prey of this animal?

4. Describe the animal's social behavior.

5. Who and what are natural enemies (predators)?

6. Is your animal nocturnal or diurnal?
ANIMALS:
Desert Index File

ANIMAL:
WHERE IT CAN BE FOUND?

ADAPTATION TO DESERT HEAT

WHAT DOES IT EAT?

How does it find water?

Animal:
Where it can be found?

Adaptation to desert heat:

What does it eat?

How does it find water in the desert?

Animal:
Where can it be found?

Adaptation to the desert heat:

What does it eat?

How does it find water in the desert?
Animal:
Where can it be found?
Adaptation to the desert heat:
What does it eat?
How does it find water in the desert?

Animal:
Where can it be found?
Adaptation to the desert heat:
What does it eat?
How does it find water in the desert?
<table>
<thead>
<tr>
<th>Subject: Social Science</th>
<th>Concept: The Desert</th>
<th>Lesson 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic: Cactus Hotel</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Objectives:**
* Students will summarize the book *Cactus Hotel* after reading.
* Students will be able to explain the importance of the saguaro cactus to the animals of the desert.
* Students will create, scaled down versions of a saguaro cactus at different phases of its life.
* Students will orally present their findings and creations to an audience.

**Materials:**
*Cactus Hotel*, by Brenda Z. Guiberson. index cards. roll paper

**Lesson Activities:**

I. Introduction:
* Have class make a prediction on the subject of the story, *Cactus Hotel*.
* Explain to the class that because the desert is so barren, nothing is ever wasted, and desert dwellers make many adaptations.

II. Procedure:
* The teacher will read *Cactus Hotel* to the class.
* After reading the story, the class will review the book, and list the “age” of the saguaro cactus, and the corresponding height.
* The class will then scale the cactus to ¼ th its size and the cactus will be divided to nine pairs of students.
* Two students will be responsible to summarize the cactus at a particular age and height. This will be transferred to an index card.
* Students will be sure to include what other animals live in the cactus, the physical changes the cactus makes, and also point out any adaptations the cactus makes.
* Each pair of students will create a scaled down replica of the cactus.

III Conclusion:
* The class will share their work with other classes, and present the story of the saguaro cactus.
After fifty years the cactus stands ten feet tall and looks straight and strong beside the old paloverde. For the very first time, brilliant white-and-yellow flowers appear at the top of the cactus. Every spring from now on, the flowers will open for
When there is no rain, the cactus uses up the water it has stored inside and looks thin. The paloverde loses its tiny leaves. But there is always some shade for the cactus below. After twenty-five years, the cactus is two feet tall. A jackrabbit cools off beside it and gnaws on the green pulp. But when a coyote moves in the distance, the jackrabbit disappears into a nearby hole.
| **Subject:** | Language Arts |
| **Title:** | Lost in the Devil's Desert |
| **Chapters:** | 1-2 |
| **Lesson:** | 1 |

### Objectives:
* Students will recognize new vocabulary words.
* Students will identify similes.
* Students will be able to describe the setting of Spriggs, and characters.

### Materials:
- teacher copy, *Lost in the Devil's Desert*, chapter activity sheet

### Lesson Activities:
Teacher will read Ch. 1 and Ch. 2 to the class.

#### I. Introduction:
* Students make predictions based on title and cover of book.
* Teacher asks students if they have ever been lost.
* Teacher also stresses the desert theme and use of new vocabulary.

#### II. Before Reading:
* Instruct students to listen for new vocabulary words that might be desert related.
* Advise students to listen for similes and to focus on the setting and characters.

#### III. During Reading:
* Vocabulary: sagebrush, antique, irrigation, rickety penitentiary, dry wash
* Listen for similes for Gram's face and the porch.
* Listen for descriptions of setting and characters.

#### IV. After Reading:
* Predictions of next chapter.
* Review vocabulary words.
* Discuss setting and characters.
* Discuss why Kevin is in Spriggs.

#### V. Chapter Activity:
Students will complete a chapter activity sheet.
seat. He smiled at Mom, because he was kidding me—
Dad had his own watch.

“Fourteen-fifteen,” I answered. That means a quar-
ter after two.

“We’ll be in Spriggs pretty soon,” Dad said. Spriggs,
Utah, is where my great-grandmother lives. Since the
town lies on the route to Nellis, we were planning to
spend three days visiting Gram, as Dad calls her.
Looking in the rearview mirror so that our eyes met,
he said, “I think you’re going to enjoy Spriggs, Kevin.
You haven’t seen it since you were too little to remem-
ber. The town is . . . ‘anachronism’ is the best word I
can think of: That means something that belongs to a
different time. Spriggs is pretty much the way it was
sixty years ago, when your great-grandfather worked
in the silver mine.”

“Is it desert all around Spriggs,” I asked, “like this
stuff we’re driving through?”

“Spriggs has trees and grass, and a few gardens from
irrigation,” he answered, “but yes, it’s set in the middle
of desert just like this.”

I glanced again at the flat sand outside, then said,
“Dad, you could stay alive in the Utah desert easier
than in the Middle East, couldn’t you? I mean, look,
there are some plants growing out there.”

“Around here . . . without water . . . mmmm, you
might survive for twenty-four hours.”

“No more desert talk, Bill. Please,” Mom said to
Dad. Dad and I had been talking a lot about desert
survival during the three-day drive, and it was starting
to get to Mom. She’s a good military wife—I’ve heard
Dad say that lots of times—but I guess enough was
enough.

Dad’s a career officer in the Marines, so he’s been
away a lot. I always missed him when he was gone,
but before this I never worried about him too much.
Maybe it’s because I’m older now—almost twelve—but
lately I’ve started to realize that my dad could get
killed doing the job he does.

Dad was quiet until the car rounded a curve in the
highway, then he announced, “Here it is, Kevin.
Spriggs, Utah.”

“This is Spriggs?” I asked. “Wow, what a dump!”

We’d started our drive to Spriggs from the Oregon
cost. Dad was on leave, and he’d wanted a short va-
cation among some trees and ocean after all that train-
ing in the Mojave Desert. The difference between that
beautiful ocean scenery and Spriggs was . . . well, like
the difference between a fancy aquarium and a
chicken coop.

On the main street of Spriggs, almost every other
house was leaning sideways, ready to fall over. Some
of them had fallen over—the narrow lots were full of
bricks, boards, and broken glass.

“Why does Gram stay here?” I asked.

“It’s home to her,” Dad told me. “Gram has lived in
Spriggs since she was a bride. It wasn’t so shabby
then; it was a busy mining town until the silver ran
out.”

We turned on a short side street and parked in front