Honors 499

Thesis

A Unit on Colorado for Hearing Impaired Students

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Jo Ann McCulley

Dr. Joan Studnicky
Supervising Professor
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Rationale

I am designing a thematic unit on Colorado as my Honors College thesis for many reasons. I considered writing a research paper on some other aspect of special education, but I had already completed this task in various special education courses and I felt such a project would not be challenging or useful to me in my future career. I have never completed a large-scale thematic unit and I feel this project will prove to be challenging as well as useful to me as I become a special educator.

Special education students learn best when information is presented within themes. Deaf students in particular, seem to learn vocabulary easier when they can connect the words to one another within an overall theme. Thematic instruction builds on deaf students' background knowledge which, in turn, helps to develop their poor language skills. Thus, creating a unit for deaf students is wonderful practice for what I will do everyday in my career. Such a unit is also quite useful because I can refer to and pull from the ideas in this unit later when I am teaching other students, deaf or hearing.

I value my honors college experience immensely and feel I have learned a great deal from the honors courses in which I have participated. These honors courses helped me develop and refine my creativity, individuality, and critical thinking skills, which will be beneficial to me in my future career. Through these honors classes I also learned the importance of working hard and accepting challenges, both of which are vital in the Special Education field. I feel I have utilized the lessons and skills I learned within the honors college in preparing this thesis, and I am striving to incorporate these same lessons and skills within this unit for my students to learn.
Introduction

I am preparing this thematic unit on Colorado for a particular group of students as they prepare to take a class trip to Colorado. The students are in the hearing impaired classroom in which I am doing my student teaching in the Spring of 1995. These students are planning to take a five day trip to Colorado in late May. They are planning to fly to Colorado then drive a van to see the beauty of Colorado and visit various tourist attractions.

This classroom contains ten hearing impaired students ranging in age from 5 to 13. The students are taught in three groups: a group of two kindergarden students, a group of five first and second graders, and a group of three fifth and sixth graders. The students have mild to profound hearing losses. With hearing aides, some of the students can hear normal conversation, while others can hear very little. In the classroom, all of the students use auditory trainers with which they can hear to some extent. The teacher uses total communication (signing and talking simultaneously) with signed exact English to communicate with most of the students. There is one teacher and three aides in the room at all times. For the purpose of my thesis, I am designing this unit specifically for the upperclass group. Activities in this unit can be adapted to various levels appropriate for younger students.
The three students in the “upper” group have varying degrees of hearing losses. One is profoundly deaf and can only hear sounds with his auditory trainer. The other two students have moderate losses and can hear normal conversation while using auditory trainers. For the benefit of all the students, I use Signed Exact English and talk at the same time with the group during all instruction. One student knows little sign and uses his voice only, while another only signs. This lack of communication made it quite difficult to plan any cooperative learning activities.

The students in the group read at a third to fourth grade level. I use parts of various informational trade books and create my own informational books to use as their instructional textbooks because I want to pick and choose the exact information I feel is important for the students to learn.

This unit on Colorado primarily focuses on information within the area of social studies. However, to create a thematic unit in which a central theme or particular content is taught through many disciplines, I am incorporating at least one other discipline into each lesson. Other areas, such as mathematics, writing, art, gym, English, and reading are all incorporated within the extension activities at the end of each lesson.

I am specifically designing this unit to prepare the students for their journey to Colorado. Although I am including a great deal of general
information about the state of Colorado, this unit also focuses on the places the students plan to visit in Colorado. I feel all of the information included in this unit is important for the students to comprehend before they going so they could fully enjoy and appreciate the trip. I want to give the students as much background knowledge as possible about Colorado and the places they will visit. I also feel the students need to learn about what they will see and do on their trip so I am incorporating information about the various activities and experiences they will enjoy during the trip.

As I prepare this unit, I want to include information the students will remember long after their trip has ended. I am including general information important for everyone to know, as well as specific facts about the places they will visit. My goals are to teach the students as much as possible about Colorado and the places they will see and to guide the students in identifying the uniqueness and beauty of Colorado before they actually visit the state. In addition, I hope to spark the students' interest in traveling and learning about the world around them.
Preface

The students have low vocabularies and language skills due to their hearing losses. Thus, vocabulary instruction is a vital part of the lessons in this unit. At the beginning of each lesson, I review the vocabulary from the previous lesson. This review includes asking the students to sign and/or spell the vocabulary words, explain or draw their meanings, and/or use the words correctly in a sentence. Each student chooses five cards from his word bank to quiz his peers. This review is an integral part of each lesson and, thus, is not written in each lesson’s procedure.

I chose particular words from each lesson to use as vocabulary words. These words are usually unfamiliar to the student and important within the lesson. After reviewing the previous vocabulary words, I introduce the new vocabulary words for the lesson. Each student has a word box (index card box) in which they will put all of the vocabulary words they learn throughout the unit. When new words are introduced at the beginning of a lesson, I sign and spell the words to the students. The students write each word down on one side of an index card. I explain, define, and use each word in example sentences. After learning the meaning of a word, the students write a definition in their own words on the back of the index card. The students may also choose to draw a picture of the meaning, list words with similar meanings, or write a
sentence correctly using the vocabulary word on the back of the card. The students can decide which method best helps them learn the meanings of each word. The students do this for all vocabulary words learned in each lesson. Making these cards during the introduction of new words is a basic part of each lesson and is not included in the written procedure to avoid repetition.

After completing their vocabulary cards for the lesson's new words, the students complete a vocabulary activity using the new words. I choose the vocabulary activity for each lesson. The chosen activity usually depends on the number of new words introduced in the lesson. I vary the vocabulary activities used with each lesson. A list and description of the vocabulary activities are in Appendix A.

I also chooses 10 vocabulary words each week to use as spelling words. On Mondays, I tell the students which words from the last week's vocabulary words will be on their spelling tests. I give a practice test on Thursday and a final spelling test on Friday. The students choose three spelling activities to complete during the week to prepare for the spelling test. (Appendix B) If the students are unsuccessful on their final spelling tests, I choose their preparatory spelling activities for them.

A Colorado fact folder is also compiled throughout this unit. Each student keeps a pocket folder with fact sheets for the topics discussed in
each lesson. I prepare a fact sheet which the students will complete
during the course of each lesson. The fact sheets may be semantic maps
of the lesson's important ideas, comprehension sheets, fill in the blank
statements, etc. Once completed, the fact sheets go into their fact folder.
The students may complete the fact sheets individually or as a group. The
sheets are not graded and I go over the the sheet during each lesson to
make sure it is completed correctly. The students can use their fact
folder to refresh their memories on past lessons and to prepare for tests.
The fact sheets serve as notes for each lesson which the students can
refer to at any time during the unit.

The students also write in a journal daily during free time. They can
write about the topics discussed that day or about their feelings toward
the topics and activities.
Content Map of Unit

I. Introduction

II. Geography
   a. Rocky Mountains
      1. Introduction
      2. Formation
   b. Plains
   c. Plateaus
   3. Plants & Animals
   4. Continental Divide
   5. Pikes Peak

III. History
   a. Anasazi Indians
   b. Ute Indians
   c. Early Settlers

IV. Places to Visit
   a. Garden of the Gods
   b. Sand Dunes
   c. Royal Gorge
   d. Cave of the Winds
Content: Introduction

Objective:
After given an introduction to Colorado, the students will be able to:
1. locate Colorado on a map, and
2. identify neighboring states on a map with 100% accuracy.

Materials:
3 “fact” folders (pocket folders)
pencil and paper
map of United States, not labeled
large classroom map of the United States, labeled
3 @ 4" X 6" index card boxes
4" X 6" index cards

Vocabulary:
neighboring
(Introduce the word and give examples)

Procedure:
1. The teacher reminds the students that they will be visiting Colorado in a few months.
2. The teacher explains that the class will start learning more about Colorado and the places they will visit.
3. “We will learn about the state of Colorado itself, and about certain places we will visit in Colorado. As we learn about Colorado, we can compare it to Indiana and Arizona, which we visited last year.”
4. The teacher points out Colorado on the map. The teacher asks students to come up and identify the states they know on the map.
5. The teacher identifies north, south, east, and west. The teacher identifies and locates the seven states that neighbor Colorado (Wyoming, Utah, Arkansas, New Mexico, Oklahoma, Kansas, and Nebraska). The teacher spells the states as she locates them. The students write them down on a piece of paper. Teacher explains that the students will fly from Indiana to Texas to Colorado.
6. The teacher reviews the states and their locations on the map. The teacher gives each student a small blank map of the United States. The students practice following directions as they identify Colorado and its neighboring states. “First label Colorado. Second color Colorado red.
Third, find Kansas and write the name on the state. Next, color the state that is West of Colorado.” The teacher continues in this manner until all of the neighboring states are labeled.

7. The students hold up their maps to see if they all match.

8. The students glue their maps to the front of their fact folders. The teacher explains the purpose of the pact folders. (to hold all the fact sheets about Colorado.)

Extension Activity:

1. The students decorate their word banks with markers and stickers.

Evaluation:

Were the students able to locate Colorado on a map and identify its neighboring states with 100% accuracy?
II. Geography

a. Rocky Mountains

1. Introduction
2. Formation
3. Plants & Animals
4. Continental Divide
5. Pikes Peak

b. Plains

c. Plateau
Content: Geography

Objective:
Given an explanation and presentation of the three geographical regions in Colorado, the students will
1. list two aspects of each region,
2. locate the areas on a map, and
3. draw and label the three areas on a blank map of Colorado with 100% accuracy independently.

Materials:
- topographical map of Colorado
- 3 pieces of white construction paper 12"x18"
- pencils and markers
- 3 copies of Colorado (Blades, 1993)

Vocabulary:
- Rocky Mountains*
- plateau*
- Great Plains*

Procedure:
1. The teacher will explain that the group will begin discussing the geography of Colorado. The teacher will show the topographical map and point out the three distinct geographical areas on the map. The teacher introduces the new vocabulary words and points them out on the map. (The students do not play any vocabulary activities with these words.)
2. The students will read page 8 in the Blades book. The students will look at the map on page 10 and locate the three geographical areas.
3. The teacher explains that the Great Plains is a large, flat area of dry land that goes from Canada to Texas. Few trees or rivers are found in the Great Plains. The teacher describes the Rocky Mountains as a chain or line of mountains that run north and south from Canada to New Mexico. The Mountains are very tall and have rivers, valleys, and lakes among them. The teacher describes the Colorado Plateau as a high area of land that is hard and rocky. The land looks like a high tabletop. There are many tall, flat hills that have steep sides.
4. The students compare and contrast the three areas of land.
5. The students locate the three areas of land in Colorado on a large map of the United States. The students draw the lines that divide the three areas of land on their large pieces of paper. This will be their working maps of Colorado. The students will label the three areas on their maps. The students will write a brief description of the three areas on the back of their maps. The students will work on their maps throughout the unit.
6. The teacher reviews the three areas of Colorado and asks each student to locate and describe one area on the topographical map of Colorado.
Extension Activities:

1. The students will write a one-page paper explaining which area of Colorado they would most like to live if they had a choice. The students will explain their choice thoroughly and draw a picture of their chosen area.

Evaluation:

Were the students able to list two aspects of each region, locate the areas on a map, and locate and draw the three areas on a blank Colorado map with 100% accuracy?
Content: Geography---Rocky Mountains---Introduction

Objective:
After a reading and discussion on the Rocky Mountains, the students will:
1. locate the Rocky Mountains on a map of the United States,
2. describe the climate in the Rocky Mountains, and
3. locate and draw the 5 mountain ranges in Colorado, with 85% accuracy independently.

Materials:
large map of United States
topographical map of Colorado.
3 K-W-L papers
pencil
3 large 12"x18" white construction paper
pictures:
   Winter in the Rockies
   Mother and Child Walking in the Colorado Rockies
   Beautiful Colorado, "Sheep Graze on Spring Pastureland"
   Skiers in the Colorado Rocky Mountains
3 copies of Colorado: America The Beautiful, (Kent, 1989)
3 fact sheets (semantic map)

Vocabulary:
   mountain range*
   peak
   precipitation*
   temperature*
   Front Range

Procedure:
1. The students review their fact sheets on the geographical areas of Colorado. Each student picks a region, such as the plains or Rocky Mountains. The student will point to the area on their own working maps of Colorado, describe the land, and explain how much of the state the area covers.
2. The teacher introduces the new vocabulary. The students match the vocabulary words with their pictures as quickly as possible. (See Appendix A)
3. The teacher passes out the K-W-L sheets to the students. The teacher explains that the students will write everything they already Know about the Rocky Mountains under the "K" column. They will then write what they Want to know under the "W" column. The students must write at least three thing in each column. (The teacher will write this on the board to clarify the meanings of the three letters.) After all students have finished, the teacher will ask the students to read one thing they wrote in each column. The teacher will discuss what the students have written.
4. The teacher points to the four large pictures of the Rocky Mountains which are posted near the students. The teacher explains that they will begin learning many things about the Rocky Mountains because they will spend most of their Colorado trip
in and near the Rocky Mountains.

5. The teacher asks the students what the Rocky Mountains are. The students should remember from the previous lesson that the Rocky Mountains are a chain or line of mountains that go North to South from Canada to New Mexico. The students point to the entire Rocky Mountains on a large map of the United States.

6. The teacher explains that the Rocky Mountains are made of many mountain ranges, or groups of mountains. “The mountain ranges look like lines of mountains on a map.” The teacher shows the students the mountains ranges on the topographical map of Colorado. The teacher points out the five mountain ranges in Colorado: the Front Range, Park Range, Sangre de Cristo Range, Sawatch Range and the San Juan Mountains. Each student takes a turn locating these ranges on the topographical map of Colorado.

7. The teacher explains that the mountains ranges are separated by four wide valleys. The teacher points out the valleys on the topographical map. “Colorado has some of the tallest mountains in the Rocky Mountains. The tallest mountain the whole Rocky Mountains is in Colorado. Mount Elbert in Colorado is over 14,400 feet tall.” The teacher points out Mount Elbert on the topographical map. The students read pages 12 and 13 in the Kent book. First they read silently to themselves, then take turns reading aloud.

8. The teacher explains that the students will spend most of their trip in the mountains of the Front Range. The teacher asks the students why they think this group of mountains is called the Front Range. The teacher discusses student responses then explains that it is the first or front row of mountains to rise up from the Great Plains.

9. The teacher explains that the weather in Colorado can be very different in the three geographical areas. There is more precipitation in the Rocky Mountains. “The clouds that are heavy with water cannot rise over the tall mountains. The clouds drop precipitation so they can rise up over the mountains. Some areas in the mountains get over 400 inches of precipitation in one year. Even though there is much precipitation in the Rocky Mountains, the sun shines almost 300 days of the year. The teacher also explains that the higher one goes in the mountains, the colder the temperature is. “It can snow all year on the mountains tops because the air is so cold and thin high in the mountains.”

10. The teacher will review the information discussed in the lesson. “What are mountain ranges? Where are the mountain ranges in Colorado? Where is the Front Range? What separates the mountain ranges? What is the weather like in the mountains?” The teacher checks to see if the students have completed their fact sheets for the lesson.

11. The students will find the Rocky Mountains on a large map of the United States. The students will identify at least two other states through which the mountains pass. After locating the Rocky Mountains, the student will locate the five Rocky Mountains Ranges in Colorado. The student will identify the Front Range on the map. Each student will draw the mountain ranges on their large Colorado maps and label The Front Range. Finally the student will describe the weather in the Colorado Rockies, including the temperature and amount of precipitation.

12. The teacher reviews the vocabulary and information discussed in the
lesson. The students read over their fact sheets then put them in their fact folder. The teacher explains that they will learn more about the Rocky Mountains, including how they were formed long ago.

13. The students write what they have learned today about the Rocky Mountains under the "L" column on their K-W-L sheets.

Extension Activity:
1. The students will make a mountain range. Each student will tape a soda can to a long sturdy board. The student will wrap newspaper, then paper mache around the can. Later, when the paper mache is dry, a thin layer of plaster of paris is painted on the mountain. The students can paint their mountains when they are dry with an acrylic paint. The students will add rivers, roads, cars, etc. to their mountains as they learn more about the Rocky Mountains.

Evaluation:
Were the students able to locate the Rocky Mountains on a map of the United States? Were the students able to describe the climate of the Rocky Mountains? Were the students able to locate and draw the five Rocky Mountain Ranges in Colorado?
Rocky Mountain Introduction Fact Sheet

- Rocky Mountains
  - Tallest Mountain
  - Weather
    - Temperature
    - Precipitation
  - Mountain Ranges
Content: Geography---Rocky Mountains---formation

Objective:
After reading and discussing teacher-made instructional material on the formation of the Rocky Mountains, the students will:

1. demonstrate and explain how the Rocky Mountains were formed, and
2. define glaciers and explain why they are important in the Rocky Mountains with 85% accuracy independently.

Materials:
3 copies of teacher made reading material
3 fact folder sheets
pictures of glaciers: Margerie Glacier, 1984
Lunch Creek
Muir Glaciers, 1986
Glaciers, 1968
large map of world

Vocabulary Words:
- glaciers*
- North America*
- Europe
- pressure
- volcano*
- continent*

Procedure:
1. The teacher reviews the mountain ranges in Colorado and the climate in the Rocky Mountains. Students read the “What I Learned” column of their K-W-L papers from the Rocky Mountain introduction lesson.
2. The teacher introduces the new vocabulary. Students play memory with the vocabulary words. (See Appendix A)
3. The teacher passes out the reading material and fact sheets for the students. The students read the material silently and then take turns reading it aloud.
4. The teacher and students discuss the material after the reading. The teacher asks the students questions to check for full understanding. “When were the Rocky Mountains formed? What kind of pressure created the Rocky Mountains? What happened to the land because of the pressure? How was the San Juan mountains built? What things have shaped the mountains over the years? What are glaciers? Why are they important to cities in and near the Rocky Mountains?” Students fill out the fact folder sheet during and after the discussion. The teacher makes sure they are all correct.
5. The students take turns asking each other questions about the material. Then, each student explains to the group how the Rocky Mountains were formed. They must demonstrate with their hands what happened to the land. (cracked, pressed together, and rose up)
6. The students will draw a diagram of how the Rocky Mountains were formed. They must label all the parts and must include North America and Europe. The students must then explain how the Rocky Mountains were formed using their diagrams. They will explain the process independently to one of the teachers in the room and must include the information discussed in class. The students must also describe what things continue to shape the mountains today. They must include glaciers and their importance in this explanation.

7. The teacher reviews the material introduced. The students take turns reading over their fact folder sheets, then put them in their fact folders.

**Extension Activity:**

1. After a quick review of verbs, the students will write a one-page story about what the United States would look like if the Rocky Mountains had never been formed. The students will use and underline at least 10 verbs in their story. They will draw a picture of how the United States and Colorado would look without the Rocky Mountains.

2. The teacher reviews place value with large numbers, including thousands, ten thousands, hundred thousands, millions, ten millions, and hundred millions. The teacher calls out several large numbers. Knowing that the Rocky Mountains were formed 70 million years ago, the students must tell whether or not the number is larger or smaller than 70 million. The teacher will also write large numbers on the board, point to certain digits in the number, and ask the students to identify the place value of that digit.
Content: Geography---Rocky Mountains---Plants and Animals

Objective:
After participating in a discussion on the plants and animals of the Rocky Mountains, the students will:
1. list three plants and three animals that grow in the Rocky Mountains,
2. define and draw the timberline on a mountain, and
3. describe bighorn sheep with 90% accuracy independently and in a group.

Materials:
charcoal picture of black bears, bighorn sheep, moose, elk, deer, and mountain goats.
pictures of various trees
3 fact folder sheets
pictures: “Tree Covered Valley in Rocky Mountain National Park”
“Mt. Abrams Overlooking Gold Mining Town”
“Mt. Hayden in san Juan Mountains at Autumn Sunrise”
“Bighorn Sheep”, 1982
3 copies of Colorado (Bledsoe, 1993)
guide book sheets, pencil
hat, small pieces of paper with animal and plant names on them

Vocabulary:
timberline*
bighorn sheep
slopes
shrubs
popular*

Procedure:
1. The students take turns explaining how the Rocky Mountains were formed. The teacher reviews the process.
2. The teacher introduces the new vocabulary. The students write questions using their vocabulary words.
3. The teacher passes out a Bledsoe book and fact sheet to each student. The students read pages 9 and 10 silently and then aloud. The Teacher shows more pictures of the animals introduced in the book
(bighorn sheep, deer, elk, moose, bears, mountain goats, and coyotes.) The teacher explains that some of the animals live in the valleys between the mountains while other animals live on the mountain slopes.

4. The teacher further describes the big horn sheep which are popular in the mountains. “The bighorn sheep have large horns that curl in a tight circle. They have a thin, gray coat of fur to keep them warm in the winter and cool in the summer. They can see behind themselves because they have eyes on the sides of their heads. They eat shrubs and grasses.”

5. The teacher asks the students why elephants or pigs cannot live in the mountains. The teacher discusses responses. (no fur to keep warm)

6. The teacher shows pictures of trees that grow in the mountains. These include pine, aspen, fir, and blue spruce. The teacher explains that the timberline is the highest point on the mountain where trees can grow. “Why do you think the trees cannot grow above this line?” The teacher discusses the responses. “The weather is too harsh above this line for the trees to grow. The trees cannot live with such cold air and so much snow all year. People can see where the trees stop growing on the mountains.” The teacher also explains that high on the mountains, small flowers grow close to the ground just above the timberline. “The rocky mountain columbine is a popular flower that grows in the mountains.” The teacher shows a picture of the rocky mountain columbine on page 20 in the Bledsoe book. “Why don't the flowers grow tall on the mountains?” The teacher discusses students' responses. (too cold, weather too harsh, etc.)

7. The teacher asks each student to name one plant and animal that lives in the Rocky Mountains. The teacher also checks to make sure the students have filled out their fact sheets correctly during the lesson. The students read over their fact sheets.

8. The students make a Rocky Mountain Plants and Animals Guide Book. Each student will pick from a hat two plants and two animals that live in the Rocky Mountains. (The plants are trees and flowers.) The students will research their plants and animals in the library. They will draw or copy a picture of the plants and animals and write out a guide sheet of information on each plant and animal they chose. The guide sheets will include information on what the animals look like, what they eat, where they live, etc. The plant guide sheets will describe what the plants look like and where they grow and why. Each student must also write a guide sheet for bighorn sheep. They must fill out the guide sheet without researching the animal. They must remember the information they learned in the lesson. The students will put their pages together to form one guide book of animals and plants.
9. As a group, the students must write a description and explanation of the timberline to use as a preface to their plant guide sheets. They must draw a mountain with trees on it to show where the timberline is on the mountain.

10. The teacher will explain that the students will learn more about the many rivers in the Rocky Mountains for the next lesson.

11. The students will write information on the plants and animals of the Rocky Mountains in the “what they have Learned” column of their K-w-L sheets.

Extension Activities:

1. The student will name three animals that cannot survive in the Rocky Mountains and explain why they cannot live in the mountains.

2. The students will read through the Rocky Mountain Plants and Animals Guide Book and compare and contrast the animals in the book (based on the information in the guide book) to animals with which they are more familiar, such as cows, dogs, etc.

Evaluation:

Were the students able to identify three plants and animals that live in the Rocky Mountains? Were the students able to define and draw the timberline on a mountain? Were the students able to describe bighorn sheep?
Objective:
After reading and discussing information from books and teacher-made reading material on the Continental Divide, the students will.
1. describe and explain the Continental Divide,
2. locate the Colorado and Arkansas Rivers on a map, and
3. explain what we will wear when we go river rafting and why with 90% accuracy independently.

Materials:
3 copies of teacher-made reading material on river rafting
3 copies of Colorado (Bledsoe, 1993)
3 brochures from Four Corners Rafting
world map

Vocabulary:
Continental Divide*
separates*
wet suit
life jacket*
rain coat
crests

Procedure:
1. The teacher reviews the plants and animals that live in the Rocky Mountains. The students take turns reading their descriptions of a plant or animal from their guide book sheets and the other students try to guess the plant or animal. The students review the vocabulary, including the timberline and bighorn sheep.
2. The teacher introduces the new vocabulary. The students play bingo with all of the vocabulary words from this lesson and the previous lesson on the plants and animals in the mountains.
3. The teacher passes out the book Colorado to each student along with a supplemental fact sheet. The students read page 11 in the book silently and then aloud. The teacher points out the map showing the Continental Divide on page 10. The students find the Continental Divide on the map and trace it with their finger. The students find the Continental Divide on the topographical map of Colorado and trace it with their fingers. The teacher and the students discuss the information read.
“Where is the Continental Divide? What does it separate?” The teacher explains that the Continental Divide starts in Alaska and goes to the bottom of South America. The teacher traces the Continental Divide on a world map.

4. The teacher asks the students to find the Colorado River on the map on page 10. “Which direction does it flow?” (west) “Which ocean does it flow towards?” (Pacific) The teacher asks the students to find the South Platte River and the Rio Grande River. The teacher asks the students which direction the rivers flow, on which slope the rivers start, and toward which ocean the rivers flow.

5. The teacher points out that many rivers start in Colorado along the Continental Divide. The teacher traces the Colorado and Arkansas Rivers on the map. “The Colorado and the Arkansas Rivers are two big rivers in Colorado. You learned about the Colorado River last year when you went to Arizona. We will visit the Arizona River this year in Colorado. Looking at the map, can you tell me toward which ocean the Arkansas River flows?” Teacher discusses responses. “Since the Arkansas River starts on the East side of the Continental Divide, it flows toward the Atlantic Ocean. We will go rafting on the Arkansas River.”

6. The teacher passes out the teacher-made reading material and rafting brochures to the students. The students read the teacher-made information silently to themselves then aloud. The teacher and students discuss the material read. “Where will we go rafting? What will we see in the water? What will we wear in the raft? Who will go with us in the raft? Why?” The teacher will show the students the picture of people rafting in the rafting brochures.

7. After the students fill in their fact sheets, the teacher checks the sheets for complete accuracy.

8. The students will draw the Continental Divide on their working maps of Colorado. They will also draw and label the Colorado and Arkansas Rivers. The students will describe the Continental Divide and explain its function. The students will also explain what they will do and wear when they go river rafting.

9. The teacher will tell the students about a famous mountain in the Rocky Mountains called Pikes Peak. “We will talk more about Pikes Peak in the next lesson.

Extension Activities:

1. The students will write a story about what would happen if they went out river rafting and the guide became sick and could not show them
what to do or where to go.

2. The students will Draw the Continental Divide along the tops of their plaster of paris Rocky Mountain Range. The students will paint and label the Arkansas and Colorado Rivers on the mountain range down from the Continental Divide. The students will explain which ocean the rivers flow toward and why.

Evaluation:

Were the students able to describe and explain the Continental Divide? Were the students able to locate the Colorado and arkansas Rivers? Were the students able to explain what they will wear when they go rafting and why?
Continental Divide / River Rafting Fact Sheet

Continental Divide
... separates the _____ into western and eastern slopes.
... runs along the _____ of the Rocky Mountains.

What we will wear? Who will go with us? Why?

River Rafting

Where? What will we see?
We will go rafting in the Arkansas River. We will use oars to paddle the raft along the river. The water may flow very quickly. We will see the white crests of the water. We will wear life jackets, wet suits, and rain coats. Our group will ride in two rafts. A guide will go rafting with us. This person will ride with us in the raft. He will know all about the Arkansas River. He will be an expert in rafting. He will know which way to go on the river so our raft will not hit anything. The guide will help us and show us where to go in the raft.
Content: Geography--Rocky Mountains--Pikes Peak

Objective:
After reading and discussing information on Pikes Peak, the students will:
1. draw a picture of Pikes Peak,
2. explain how Pikes Peak was discovered, and
3. identify and explain how they will go to the top of the mountain, and what they will see there with 90% accuracy independently.

Materials:
3 Cog Railway brochures
3 copies of Colorado In Words And Pictures (Fradin, 1980)
paper, pencil
picture: Colorado: Pikes Peak

Vocabulary:
explore*
captured*
Pikes Peak*
Zebulon Pike*
Cog railway

Procedure:
1. The students locate the Continental Divide and the Colorado and Arkansas Rivers on a map of Colorado. One student defines the Continental Divide. Another student explains where the two rivers flow and why. The last student explains where they will go rafting and what they will wear in the raft.
2. The teacher introduces the new vocabulary. The students play BINGO using all of the vocabulary words from the lessons on the Rocky Mountains.
3. The teacher shows the students large pictures of Pikes Peak. The students read page 10 in the Fradin book silently to themselves and then aloud. The teacher and students discuss the information in the text "Where was Zebulon Pike from? What was Zebulon Pike sent out to do? Who sent him? What did Zebulon Pike do when he saw the big mountain. What happened to Zebulon Pike and his men later? Why?" The group discusses the students' responses.
4. The teacher explains that Pikes Peak is one of the most famous mountains in the Rocky Mountains. "It is very tall and the slopes are very steep. It seems to stand alone in the Front Range. It is one of the first mountains you can see from the Great Plains." The teacher explains that the students will ride the Cog Railway to the top of Pikes Peak. The teacher gives each student a Cog Railway brochure. The students look at the pictures. The teacher notes that the top of the peak is covered with snow most of the year. The top is also flat. "When we get to the top of the mountain, we will get out of the railway and walk around on top."

5. The students will draw a "Polaroid picture" of Pike Peak. They must draw as accurate a picture as possible of the mountain. They must include the Cog Railway, snow, rocks, and the timberline. The students will write a caption beneath the picture that describes the ride up Pikes Peak and what one can see while at the top of Pikes Peak. The caption will also explain how Pikes Peak was discovered.

6. The teacher will make sure the students complete their fact sheets correctly.

7. The students read over their fact sheets in review.

8. The teacher explains that the group will next learn about the other geographical areas of Colorado.

**Extension Activities:**

1. The students act out on video tape their ride up Pikes Peak. They will have props and a set which shows the mountain and the railway going up it. The students will sign and talk as they act out a story of their day at Pikes Peak.

2. The students will pick one of the mountains in their plaster of paris mountain ranges to be Pikes Peak. They will label the mountain and make a small railway going up the mountain.

**Evaluation:**

Were the students able to draw Pikes Peak, explain how it was discovered, and identify and describe their trip up Pike Peak?
Pikes Peak Fact Sheet

Pikes Peak

...was discovered by ___________ ___________.

...is very steep and ___________.

... is in the ___________ Range.

...has snow on the ___________ all year.

... has a rocky, ___________ top.

The Cog Railway

...goes to the top of ___________ ___________.

...is an incline ___________.
Content: Geography---Plains

Objective:
After a discussion on the Great Plains in Colorado, the students will
1. draw a picture of the plains,
2. list two animals and plants that live in the plains, and
3. describe the climate in the plains
with 90% accuracy independently.

Materials:
fact sheet
3 copies of Colorado (Bledsoe, 1993)
map of the United States

Vocabulary:
survive
antelope
squirrels
jackrabbits
coyotes
badgers

Procedure:
1. The teacher reviews the three geographical areas of Colorado. Each student identifies an area in Colorado on the large map of the United States.
2. The teacher introduces the vocabulary related to the Great Plains. The students play “Word-In-A-Box” with the vocabulary words. (See Appendix A)
3. The teacher passes out the fact sheets and 3 copies of Colorado (Bledsoe, 1993). The students read page 12 in the book silently to themselves. Then, a volunteer reads the page aloud.
4. The teacher further discusses the information introduced in the book. “The land of the Great Plains in Colorado is smooth and flat. It is an open grassland. There are some hills that roll through the plains.” The teacher points out the pictures on page 12 and 9 in the book. “The Plains are hot, windy, and dry in the summer and cold in the winter. It is very windy in the plains because there are no mountains or large hills to slow down or block the blowing winds.”
5. The teacher explains there is very little water in the plains because only a few rivers flow through all of the Colorado Plains. “Not many people live in the plains. Why? (very little water) Eighty percent of the people in Colorado live at the edge of the plains where the plains and the Rocky Mountains meet. Why do you think so many people live here?” Teacher discusses responses.
6. The teacher explains that many plants and animals live in the Great Plains of Colorado. The students read page 16 in Colorado (Bledsoe, 1993) silently, then aloud. The teacher shows the pictures in the book of the animals and plants that live in the Great Plains. The teacher explains that these animals can survive in the dry plains without much water.
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7. The teacher checks to see if all the students have completed their fact sheets correctly during the lesson.

8. The students will write a letter to someone they know who has never seen the plains in Colorado. The students will draw and color an accurate picture of the plains. In their letter, the students will identify what the plains look like, describe the weather in the plains, and name at least two animals and plants that can live in the plains. The student will explain why these plants and animals can survive the hot, dry weather in the plains. After the students finish their letter and drawings, the teacher will mail the letters.

9. The teacher will review the vocabulary and information discussed in the lesson.

**Extension Activities:**

1. The students will draw two plants and two animals that live in the plains on their map showing the three geographical areas of Colorado.

2. The students will identify how many people live in each area of Colorado. Knowing that 3,300,000 people live in Colorado, the students will figure out how many people live in certain areas given the percentage of the population in each area.

**Evaluation:**

Were the students able to draw a picture of the Plains? Were the students able to list at least two plants and animals that live in the Plains? Were the students able to describe the climate in the Plains?
Colorado Plains Fact Sheet

Weather  Plants

Farms  Colorado Great Plains  Ranches

Land  Animals
Concept: Geography---Plains

Objective:
After reading about and discussing ranching and farming in the Colorado Plains, the students will compare and contrast ranches and farms in the Eastern Plains of Colorado independently.

Materials:
3 copies of *Colorado In Words and Pictures* (Fradin, 1980)
3 fact sheets
3 Venn Diagrams
paper, pencil
game board, die, markers,
vocabulary cards
pictures: *The Southwest Multiple Use of Water*
"Crops in the Desert"
"Land Without Water"

Vocabulary:
ranch
raise
irrigation
reservoirs
dams
release

Procedure:
1. The teacher reviews the vocabulary and information about the Plains. The students read copies of their letters they wrote about the plains in the previous lesson.
2. The teacher introduces the new vocabulary words. The students play memory with all of the vocabulary on the Colorado Plains. (See Appendix A)
3. The teacher passes out a copy of *Colorado In Words and Pictures* (Fradin, 1980) and a fact sheet to each student. The teacher introduces how farmers and ranchers live in the plains of Colorado. "Most of Colorado's farms and ranches are in the plains. Ranches are where people raise animals to sell later. These people are usually called cowboys. Most cowboys in the Colorado plains raise cattle, sheep, and horses."
4. The teacher explains that farmers grow food to sell. "Most farmers in the Colorado plains grow hay, wheat, corn, and potatoes." The teacher explains that just as cowboys must take care of their animals and give them food and water, farmers must take care of their crops and give them water, too. "How can crops grow in the dry, flat plains?" The teacher discusses responses.
5. The teacher introduces irrigation. The students read pages 20-22 in the Fradin book. The students read silently to themselves, then take turns reading aloud. The teacher discusses how irrigation is used to bring water from the Rocky Mountains to the farmlands. Teacher shows pictures depicting how irrigation brings water to dry
areas. “Why is there so much water in the mountains? (melting glaciers and more precipitation) Why is irrigation important? Why is raising beef cattle important?” The teacher and students discuss responses. “Farming and ranching are important in the Colorado plains. For many farmers and ranchers, the only money they get is from the food or animals they sell. Farming and ranching are their jobs.”

6. Students complete the rest of the fact sheet they began to fill out during the previous lesson on the plains. The teacher makes sure all fact sheets are completed correctly.

7. The students fill out a Venn Diagram comparing and contrasting ranching and farming in the Colorado plains. The diagram must include a brief description of what each job entails and why it is important. The students must find at least 3 similarities and 3 differences between ranchers and farmers.

8. The teacher reviews the vocabulary and information discussed in the lesson.

**Extension Activities:**

1. The students will write a one-page paper explaining whether they would rather be a farmer or a rancher if they had to choose between the two. The students must explain and defend their choice in a clear, accurate manner.

2. The students will play a game with the vocabulary and information discussed about the Colorado plains. The students will roll the die and move that number of spaces on the game board. If the student lands on a “C”, then he must pick a vocabulary card. He reads the word and explains what it means. When the student lands on a regular space, the teacher asks him a question about the plains. If the student answers correctly, he stays on his new space. If he is incorrect, he must move back to his original space. The student to reach the end of the game board first wins.

**Evaluation:**

Were the students able to compare and contrast ranching and farming in the Colorado Plains?
III. History

a. Anasazi Indians

b. Ute Indians

c. Early Settlers
Content: History---Anasazi Indians

Objective:
After reading and discussing teacher-made instructional material on the Anasazi Indians, the students will:
1. complete a semantic map on the information about Anasazi Indians discussed in the reading with 90% accuracy independently.

Materials:
teacher-made reading material (3 copies)
semantic map (3 copies)
brochures of the Manitou Springs Cliff Dwellings Museum
pictures: Cliff Palace: Mesa Verde National Park
Indian Cliff Dwellers

Vocabulary:
squash
cliff dwellings*
Mesa Verde*
enemies
drought
historical
Manitou Springs Cliff Dwellings Museum*
Anasazi Indians*

Procedure:
1. The teacher explains that the group will begin discussing the history of the people in Colorado. "The topics that will be discussed are related to the places we will visit in Colorado."
2. The teacher introduces the new vocabulary. The students play "Go-Fish" with the vocabulary words.
3. The students read the teacher-made instructional material silently to themselves then aloud taking turns. The teacher and students discuss the information read. The teacher shows the students pictures of various cliff dwellings. The students take turns picking a question word out of a hat, creating a question about the information read using that questions word, then asking a peer his own question. The group discusses the responses to each question. The teacher guides the question-making process to make sure the all the important information is covered in this comprehension activity.
4. The students do not fill out a fact sheet during this lesson because they will keep their books to use as a reference in their fact folders.
5. The students fill out a semantic map independently to check for full understanding of the material covered. The students cannot use their books to complete the map. On the back of their semantic maps, the students will draw a cliff dwelling that looks authentic according to the description in the text.
6. The teacher reviews the information discussed in the text and explains that
the students will next learn more about other Indians who lived in Colorado long after the Anasazi left.

**Extension Activities:**

1. The students will weave baskets like the Anasazi did long ago. The students will weave thick carpet yarn through the vertical supports around baskets made of reed or wicker. The students will weave the yarn tightly together just as the Anasazi did so they could carry food and water.

2. The students will read *The Legend of Bluebonnet* (de Paola, 1983). They will compare and contrast the characters in the story to the Anasazi Indians.

3. The students will go back in time and pretend they are Anasazi Indians. They will write in a journal what they do during an average day as an Anasazi Indian. Describing everything they do during the day, the students will begin when they wake up in the morning and end the journal entry when it is time to go to bed.

**Evaluation:**

Were the students able to complete the semantic map on Anasazi Indians with 90% accuracy independently?
Anasazi Indians

Native Americans (Indians) were the first people to live in North America. Some Indians lived in Colorado over 10,000 years ago. About 2,000 years ago, the Anasazi Indians lived in Colorado. "Anasazi" is a Navajo word meaning "the old ones". The Anasazi Indians grew corn, beans, and squash. Corn was the most important crop. The corn had black, red, and yellow kernels and the women were responsible for preparing it. The Anasazi also made fine baskets. These baskets could carry water and food and the Anasazi used them to cook their food. The Anasazi also made clothes and sandals from cacti. They made fine jewelry, pottery, and tools. They cooked and stored food in the pottery. Some of the Anasazi's tools and pottery have been found in the areas where they lived long ago.
The Anasazi Indians lived in Mesa Verde. Mesa Verde is in the Southwest corner of Colorado. These Indians built houses made from bricks of stone into the sides of the mesas. Mesas are landforms made of rock and shaped like high, flat tables. The Anasazi grew their crops on top of the mesa. The cliffs that hung over their stone homes protected the Anasazi Indians from the sun, wind, and their enemies. Anasazi houses were called cliff dwellings.

The cliff dwellings had T-shaped windows and no doors. The Anasazi entered their dwellings by climbing a ladder and going through the open roof. Many Anasazi lived in the cliff dwellings. More than 600 cliff dwellings have been found at Mesa Verde.

The weather at Mesa Verde was hot and dry in the summer. In the winter, the temperatures usually dropped below zero degrees Fahrenheit. The Anasazi depended on the rain so their crops could grow. It rained about 18 inches each year at Mesa Verde. This was just enough to grow corn and beans.