

LANDFORMS ALL AROUND

Grade Level or Special Area: 2nd Grade

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Length of Unit: Seven lessons and a Culminating Activity over eleven days, approximately sixty minutes each

I. ABSTRACT

In this geography-based lesson on landforms, students will review the landforms studied in kindergarten and first grades as well as learn the new terms *coast*, *valley*, *prairie*, *desert*, and *oasis*. The main focus of this unit is the landforms. Through the development of Landform Dictionaries, an overlay map of the world and hands-on activities, students will develop an awareness of landforms worldwide and learn the key characteristics of the landforms new to second grade. Animal and plant life in these areas will be touched on only briefly through picture books as they are not the focus of the unit.

II. OVERVIEW

A. Concept Objectives

1. Students will begin to develop an awareness of landforms throughout the world.
2. Students will recognize the characteristics of specific landforms.
3. Students will understand the significance of the geographic location of specific landforms.
4. Students will begin to recognize the effects of weather on landforms.

B. Content from the *Core Knowledge Sequence*

1. History and Geography: World History and Geography: Geography
 - a. Spatial Sense (p. 47)
 - i. Understand that maps have keys or legends with symbols and their uses
 - ii. Find directions on a map: east, west, north, south
 - iii. Identify major oceans: Pacific, Atlantic, Indian, Arctic
 - iv. The seven continents: Asia, Europe, Africa, North America, South America, Antarctica, Australia
 - v. Locate: the Equator, Northern Hemisphere and Southern Hemisphere, North and South Poles
 - b. Geographical Terms and Features (p. 47)
 - i. coast, valley, prairie, desert, oasis
2. Geographical term: landform (not specifically included in the *Core Knowledge Sequence*)

C. Skill Objectives

1. Students will become familiar with the definitions of key geographic terms.
2. Students will create visual representations of selected geographic terms.
3. Students will identify and use map keys or legends.
4. Students will be able to use globes and maps.
5. Students will practice good penmanship on daily work.
6. Students will use games, songs and other pneumonic devices to reinforce learning.
7. Students will apply previous knowledge to classroom discussions.
8. Students will mark landforms on maps based on visual clues.
9. Students will mark landforms on maps following geographic references such as direction, continent, or hemisphere.

10. Students will identify the areas near the Equator as being hot and those near the poles as being cold.
11. Students will look for visual information while listening to a picture book.
12. Students will be responsible for their own materials.
13. Students will participate in oral reviews of material covered in class.
14. Students will put single words into alphabetical order.

III. BACKGROUND KNOWLEDGE

- A. For Teachers
 1. Teacher Background Information found in Appendix A
 2. Landforms of the World website: <http://www.geocities.com/monte7dco/>
- B. For Students
 1. Rivers, lakes, and mountains: what they are and how they are represented on maps and globes (p. 11, Kindergarten)
 2. Maps and globes: what they represent, how we use them (p. 11, Kindergarten)
 3. Locate the Atlantic and Pacific Oceans. (p. 11, Kindergarten)
 4. Locate the North and South Poles. (p. 11, Kindergarten)
 5. Identify and locate the seven continents on a map and globe: Asia, Europe, Africa, North America, South America, Antarctica, Australia (p. 11, Kindergarten)
 6. Geographical terms: peninsula, harbor, bay, island (p. 27, First Grade)
 7. Understand that maps have keys or legends with symbols and their uses. (p. 27, First Grade)
 8. Find directions on a map: east, west, north, south. (p. 27, First Grade)
 9. Identify major oceans: Pacific, Atlantic, Indian, Arctic. (p. 27, First Grade)
 10. Locate: the Equator, Northern Hemisphere, Southern Hemisphere, North and South Poles. (p.27, First Grade)

IV. RESOURCES

- A. Grassby, Donna *A Seaside Alphabet* (used in Lesson Three)
- B. Johnson, Rebecca L. *A Walk in the Prairie* (used in Lesson Five)
- C. Hambleton, Tom *Nature's Creations songbirds: prairie* (CD used in Lesson Five)
- D. Fowler, Allan *It Could Still Be a Desert* (used in Lesson Six)

V. LESSONS

Lesson One: Introduction and Review (approximately sixty minutes)

- A. *Daily Objectives*
 1. Concept Objective(s)
 - a. Students will begin to develop an awareness of landforms throughout the world.
 - b. Students will recognize the characteristics of specific landforms.
 2. Lesson Content
 - a. Geographical term: landform (not specifically included in the *Core Knowledge Sequence*)
 - b. Review of Kindergarten terms: *rivers, lakes, mountains* (p. 11)
 - c. Understand that maps have keys or legends with symbols and their uses (p. 47)
 3. Skill Objective(s)
 - a. Students will become familiar with the definitions of key geographic terms.
 - b. Students will create visual representations of selected geographic terms.

- c. Students will identify and use map keys or legends.
- d. Students will be able to use globes and maps.
- e. Students will practice using good penmanship on daily work.
- f. Students will apply previous knowledge to classroom discussions.
- g. Students will be responsible for their own materials.

B. *Materials*

- 1. Globe, for use throughout the unit
- 2. World map, for use throughout the unit
- 3. Map of the United States, for use throughout the unit
- 4. Overhead projector, for use throughout the unit
- 5. Terms *landform*, *river*, *lake*, *mountain* and definitions on transparencies, Appendixes S, T, U, and V
- 6. Lined paper, four sheets per student
- 7. Folder or 12" X 18" construction paper folded in half
- 8. White drawing paper cut to 4" X 6" pieces, four sheets per student
- 9. Glue sticks
- 10. Colored pencils, map colors
- 11. Dictionary Checklist, Appendix B, for use throughout the unit

C. *Key Vocabulary*

- 1. Landform—a natural feature of a land surface
- 2. River—a large natural stream of fresh water that flows into a lake or an ocean
- 3. Lake—a large body of fresh water surrounded by land
- 4. Mountain—a very high piece of land

D. *Procedures/Activities*

- 1. Tell students that they are beginning a geography unit focusing on landforms. Ask if anyone has heard the terms landform before or can guess what it might mean. Allow everyone an opportunity to speculate on the meaning of this new term. Introduce the definition of the term using the overhead projector and transparency. Read term out loud together.
- 2. Tell students that they will be creating a landform dictionary during this unit. Each page will feature the word, the definition of the word, and a drawing to further explain the meaning. Explain that each sheet will be stored in a folder when it is completed, and that the dictionary will be put together at the end of the unit.
- 3. Pass out lined paper, drawing paper, glue sticks and folders.
- 4. Ask students to copy neatly and correctly the word *landform* on the top line of their paper. Tell them to put the definition on the next line and to use as much space as necessary as long as they use their best handwriting and copy the spelling correctly.
- 5. When most of the students have finished writing move on to the drawing segment. Tell students that they will be able to keep working on their writing if they are not done but that first they should listen to the directions for the next part. (This allows the rest of the class to go on if one or two students need extra time.)
- 6. Re-read the definition for *landform* and help students to brainstorm things they might draw to represent a landform. Tell students that for this word it could be any landform they might think of. It may be helpful to lead students to think of landforms in their area because they will be most familiar with those. (For example, my students have a great view of the mountains.) Instruct students to leave out details that will “cover up” the landform such as people, cars, and animals. Students may color the drawing and glue it beneath the definition as

they finish or you may choose to have them save the coloring for free time later in the day.

7. Tell students you will be reviewing three landforms from previous years in school. Repeat the procedure in step six for each of the other three terms: *river*, *lake*, *mountain*, using a new sheet of lined and drawing paper for each term. These are common terms and are a review from Kindergarten but some students may need an oral review as well. You may decide to do this based on your knowledge of your students and their abilities or experiences. As you discuss each of these terms ask students how they are represented on a map or globe. (This is a review from Kindergarten.) Point them out on the maps and/or globe as a review. Use classroom maps to find each of these landforms either as a class or by calling on individual students to point them out. Allow time for students to finish this activity before going on.
 8. When students have finished the first four pages of their dictionary have them put the work into their folders, put their names on their folders and place them in a specific location where they will be each day. A basket, bin, crate or rack would be ideal.
 9. In this activity students will need close access to maps. Divide students into groups and make sure each group has one map to work with. Point out the map key or legend on a map. Ask if anyone remembers what it is called. Review with students the use of a key or legend through questions and answers. Examples may include: What kind of information can we find on this map key? If I was looking for the capital of my state what symbol would I search for? What does the dot and dash line on this map represent? What is the blue line of this map representing? (Questions and answers will vary according to your map selection.)
 10. Tell students that tomorrow they will begin to learn a song about landforms so they will practice humming the tune today. Help the students to hum the tune from *Are You Sleeping?* at least two times through.
- E. *Assessment/Evaluation*
1. Look at student's first four dictionary pages to check for correct wording and spelling. Check to make sure that their drawings correctly represent the landform they are attached to. Use the checklist (Appendix B) to record your observations. Return student work to their individual folders and the folders to their storage space.

Lesson Two: Review Day Two (approximately sixty minutes)

A. *Daily Objectives*

1. Concept Objective(s)
 - a. Students will begin to develop an awareness of landforms throughout the world.
 - b. Students will recognize the characteristics of specific landforms.
2. Lesson Content
 - a. Review of first grade geographical terms: *peninsula*, *harbor*, *bay*, *island* (p. 27)
 - b. Term: landform (not specifically included in the *Core Knowledge Sequence*)
3. Skill Objective(s)
 - a. Students will become familiar with the definitions of key geographic terms.
 - b. Students will create visual representations of selected geographic terms.

- c. Students will be able to use globes and maps.
- d. Students will practice good penmanship on daily work.
- e. Students will use games, songs and other pneumatic devices to reinforce learning.
- f. Students will apply previous knowledge to classroom discussions.
- g. Students will be responsible for their own materials.
- h. Students will participate in oral reviews of material covered in class.

B. *Materials*

- 1. Globe
- 2. World map
- 3. Map of the United States
- 4. Overhead projector
- 5. Terms *peninsula, harbor, bay, island* and definitions on transparencies, Appendixes W, X, Y, and Z
- 6. Lined paper, four sheets per student
- 7. White drawing paper cut to 4" X 6" pieces, four sheets per student
- 8. Glue sticks
- 9. Colored pencils, map colors
- 10. *The Landform Song*, Appendix C, on a transparency, to be used throughout unit
- 11. Dictionary page checklist, Appendix B, from previous lesson

D. *Key Vocabulary*

- 1. Peninsula—a piece of land that sticks out from a larger land mass and is almost completely surrounded by water
- 2. Harbor—a sheltered place on the coast of a sea or lake
- 3. Bay—a portion of the ocean that is partly enclosed by land
- 4. Island—a piece of land surrounded by water

D. *Procedures/Activities*

- 1. Pass out lined paper, drawing paper and glue sticks. Have students get their folders from the previous lesson. Review the term *landform* by asking students to volunteer a definition without looking in their folders. After a satisfactory (based on the definition given yesterday) definition has been given, tell students that they will be reviewing four more landforms from previous years.
- 2. Introduce the word *peninsula* by showing only the term. Discuss what the term might mean, looking for student recall. Use the map of the United States to demonstrate this term as Florida is a typical and well know visual identifier. Following the procedure of the previous day display the definition and have students copy it neatly and correctly on their lined paper. Students will then draw an example of a peninsula. Some students may choose to draw Florida; however any drawing that meets the criteria of a peninsula is acceptable.
- 3. After most students complete a dictionary page move on to the next page, always letting students know that they will have time to finish their work after listening to the new word and participating in the discussion.
- 4. Following the established procedure introduce the next three words in turn. Map examples for each word are up to your discretion. Good examples on the U.S. map might be: harbor—New York Harbor, bay—Hudson Bay, island—Hawaiian Islands.
- 5. After the students have completed their four dictionary pages they should put them into their folders and return the folders.
- 6. As an oral review and practice in map skills call on individual students to give an oral definition, or show on one of the maps, the landforms covered in the last two days. Since there are seven terms that may be found on a map at this point

- (fourteen questions), you may need to repeat a few words so that all students get a chance to participate.
7. Remind students of the tune they practiced humming in the last lesson. Display the transparency of *The Landform Song* (Appendix C) with only the first verse showing. Read the words to the students once then sing the verse through at least twice.
 8. Tell students that tomorrow (next lesson) they will be introduced to a new landform term.
- E. *Assessment/Evaluation*
1. Using the dictionary checklist (Appendix B) continue to review the student's work daily for accuracy, spelling and visual representation.

Lesson Three: Coasts (two days approximately sixty minutes each)

- A. *Daily Objectives*
1. Concept Objective(s)
 - a. Students will begin to develop an awareness of landforms throughout the world.
 - b. Students will recognize the characteristics of specific landforms.
 - c. Students will understand the significance of the geographic location of specific landforms.
 - d. Students will begin to recognize the effects of weather on landforms.
 2. Lesson Content
 - a. Geographical term: coast (p. 47)
 - b. Find directions on a map: east, west, north, south (p. 47)
 - c. The seven continents: Asia, Europe, Africa, North America, South America, Antarctica, Australia (p. 47)
 - d. Identify major oceans: Pacific, Atlantic, Indian, Arctic (p. 47)
 - e. Locate: the Equator, North and South Poles (p. 47)
 - f. Understand that maps have keys or legends with symbols and their uses (p. 47)
 - g. Term: landform (not specifically included in the *Core Knowledge Sequence*)
 3. Skill Objective(s)
 - a. Students will become familiar with the definitions of key geographic terms.
 - b. Students will create visual representations of selected geographic terms.
 - c. Students will identify and use map keys or legends.
 - d. Students will be able to use maps and globes.
 - e. Students will practice good penmanship on daily work.
 - f. Students will use games, songs and other pneumatic devices to reinforce learning.
 - g. Students will apply previous knowledge to classroom discussions.
 - h. Students will mark landforms on maps based on visual clues.
 - i. Students will mark landforms on maps following geographic references such as direction, continent, or hemisphere.
 - j. Students will identify the areas near the Equator as being hot, and those near the poles as being cold.
 - k. Students will look for visual information while listening to a picture book.
 - l. Students will be responsible for their own materials.

B. *Materials*

1. Pop flat, or other flat box, spray painted if desired
2. Fine, clean sand to fill the box three-quarters full
3. Assorted sea shells and star fish
4. Term *coast* and definition on transparency, Appendix AA
5. Globe
6. World map
7. Map of the United States
8. Assorted pictures depicting coasts, mounted if desired, minimum of one per student
9. Overhead projector
10. Lined paper, one sheet per student
11. White drawing paper cut to 4" X 6", one sheet per student
12. Glue sticks
13. Colored pencils, map colors
14. Dictionary page checklist, Appendix B, from previous lessons
15. *A Seaside Alphabet* by Donna Grassby
16. World Map, Appendix D, one per student on heavy cardstock
17. Transparency of Appendix D, optional
18. Transparency of Appendix C, *The Landform Song*, used in previous lessons
19. Coasts, Appendix E, one transparency per student
20. Blue markers for use on transparencies, fine tip, students may share if needed
21. Large paper clips, four per student
22. Blue construction paper, 12" X 12", folded and cut for triorama according to directions in Appendix F, one per student
23. Crayons
24. Markers
25. White craft glue, one bottle for every two or three students
26. Sand from display box used in first part of the lesson
27. White quilt batting scraps or cotton balls
28. Small bits of dried or silk plants
29. Scraps of shiny white paper such as butcher paper
30. Scraps of construction paper in a variety of colors
31. Appendix G, Rubric for Evaluation of Coast Triorama

C. *Key Vocabulary*

1. Coast—the land that is next to the sea

D. *Procedures/Activities*

1. Prior to this lesson prepare the box by painting or covering if desired. Fill it about three-quarters full of clean sand. Arrange shells and star fish on the sand. Cover the top of the box with a cloth to temporarily hide the contents.
2. Prior to this lesson find pictures showing the coast and mount them if desired. They should have the location on the back, including continent, country and ocean. I have been able to build up a good set using calendars and web sources. (use coast+photos)
3. Tell students that the landform they will be studying today has something to do with the ocean. Ask them to guess what that landform might be, reviewing if necessary the definition of a landform. After a few guesses tell them you have brought a hint and uncover the box. Let students guess again. Some students may use terms like *seashore*, *shore*, or *beach*. Tell them that these terms are very close but that you are looking for the geographical term which is somewhat different.

4. If this is the first geography unit of the school year you may want to conduct a brief oral review of the continents and major oceans, information from the past two years. This will be especially important if you have students who are new to Core Knowledge.
5. Tell the student that they will now have a chance to put their knowledge of maps to work while playing a game. Let them know that you will be giving them clues but you will only be able to use the words *north, south, east, or west*. Remind them that there will also be clue words in the location name. They should think about the words that tell continent, ocean, country or state. Have the globe and maps where students can easily see and reach them. Call up one student at a time or ask for volunteers. Show the class the picture and read the location. Ask the student to show that place on the globe or map of their choice. Give clues as needed to help students find the correct location using only the words north, south, east, and west. Play until you have gone through all the pictures.
6. Ask students what they can tell you about the pictures. Did they all look the same? (no) Where, on the maps or globe, were coasts found? (next to the ocean, all over the world) Are coasts in hot areas or cold areas? (both) Are coasts big or small? (both) As you lead the discussion be sure to point out that beaches, cliffs, rocky outcrops, patches of tall grasses, even frozen snow covered areas are all typical of coasts depending on their location. (See Appendix A for further information you may want to share with the class.) Tell students that there are two main characteristics they will be expected to know on the final assessment at the end of this unit. First, a coast is land (not water) and second, it is always along a sea or ocean.
7. Discuss the climate of coastal regions briefly because climate will be talked about in later lessons. Let students know that there is not one typical climate for all coastal regions because of their relationship to the poles and the equator. Using the classroom globe, ask students what they remember about the equator and where it is. Review its position if necessary. Ask what type of weather they think of when they think of the equator. (hot) Point out that coasts near the equator are going to be the hottest, show them some of those coast lines on the globe. Ask what the poles are and where they can be found on the globe. (They are the points farthest away from the equator. Starting at the equator of the globe run your finger up to the North Pole, then skip back to the equator and run down to the South Pole. Ask how they would expect the weather to be on the coasts near the poles. (very cold) Most coasts are humid because they are near the ocean, they may also be foggy in many areas.
8. Display a transparency of Appendix C, *The Landform Song* with only the first two verses showing. Read through the words once then guide students in singing the song two or more times. END HERE FOR DAY ONE.
9. BEGIN HERE FOR DAY TWO. Prior to this lesson prepare the blue construction paper pieces for the trioramas. It will be easiest to have an adult or an upper grade student prepare them than to use class time for this step. Remove shells from the sand display and store them for later use. Have the sand ready for the triorama project.
10. Begin this lesson by reading aloud *A Seaside Alphabet* by Donna Grassby. This alphabet books covers many things besides the coast as a landform, but the pictures show a variety of actual coastlines. After reading the book let students discuss the pictures in terms of what they have learned about the coast, guiding them away from references to things such as boats and lighthouses.

11. Review the term *coast*. Hand out a copy of the world map, Appendix D. Have them neatly label the four major oceans and the seven continents, using classroom maps to help them if needed. (Optional: You may display a copy of this map on the overhead and label the oceans and continents as a group if you feel the class will label more accurately this way.) If your students have had a strong geography background in a Core Knowledge school you may choose to use this map as an assessment tool. If you choose to do so it will be necessary to have students make corrections as necessary so that the map can be used throughout the unit.
12. Hand out transparencies made from Appendix E to each student along with the blue markers. Students may share markers if necessary but it is often possible to borrow from other teachers for this short period of time. Point out the information on the transparency asking what this portion of a map is called. (legend) Display your own copy on the overhead; you will need to stack your transparencies. Using the blue markers have students color code the box for oceans in blue. Have students line up the map and the transparency then use paper clips to hold them together while they work. Instruct students to use the blue markers to highlight all the coastal areas on the map. Circulate to make sure students understand the directions. Tell students that since coasts are narrow strips of land they will be outlining not coloring with the markers. If your students need the extra guidance you may want to complete this step on the overhead as well, covering the steps of lining up, clipping and highlighting.
13. Have students get their folders. Hand out lined paper, drawing paper, glue sticks and colored pencils for students to use in creating their next dictionary page. Display the term *coast*, review the definition orally then display the definition. Allow time for students to do the definition and illustration. Students should be directed to put the new dictionary page, map and transparency into the folder and return the folder to the proper place.
14. Hand out blue paper for trioramas and show student where craft items # 22-29 can be found. (A central table or counter is best.) Show students how to put the triorama together and have them place an X on the section that will be covered up. Ask students to create a coast inside the triorama using the craft supplies available. (An alternate would be to glue the trioramas together prior to class. This makes construction easier, but it is somewhat harder for students to draw on the two sky sections.) Tell students that you want them to make both a coast and water area in their triorama using the supplies provided. Remind students that coasts do not all look the same and that they may choose the type of coast they want to make. You may want to remind students that some features such as rocks or cliffs may be drawn on the sky sections of the triorama so that they appear to rise above the ground. It will be helpful to circulate the room, especially while students are putting together their trioramas. It works very well to have students decorate the two sky sections and then help them put the triorama together before finishing the bottom section, if you can get through the class quickly enough or have a helper.
15. As a quick review display the transparency from Appendix C and sing the first two verses of *The Landform Song* one or more times.

E. *Assessment/Evaluation*

1. Using the checklist from Appendix B, check dictionary pages for accuracy and neatness. Check that the drawing of the coast is accurate.

2. Using Appendix G, Rubric for Evaluation of Coast Trioramas, evaluate key components of the coast triorama. Leave them on display in the classroom following assessment if possible.
3. If you used the world map as an assessment, collect them at the end of class and check them for accuracy. It is important that students correct any errors, however a letter or percentage grade may be given as well.

Lesson Four: Valleys (approximately sixty minutes)

A. *Daily Objectives*

1. Concept Objective(s)
 - a. Students will begin to develop an awareness of landforms throughout the world.
 - b. Students will recognize the characteristics of specific landforms.
 - c. Students will understand the significance of the geographic location of specific landforms.
2. Lesson Content
 - a. Geographical term: valley (p. 47)
 - b. Understand that maps have keys or legends with symbols and their uses (p. 47)
 - c. Term: landform (not specifically included in the *Core Knowledge Sequence*)
3. Skill Objective(s)
 - a. Students will become familiar with the definitions of key geographic terms.
 - b. Students will create visual representations of selected geographic terms.
 - c. Students will practice good penmanship on daily work.
 - d. Students will use games, songs and other pneumatic devices to reinforce learning.
 - e. Students will apply previous knowledge to classroom discussions.
 - f. Students will be responsible for their own materials.

B. *Materials*

1. Assorted valley pictures that show evidence of a hill or mountain
2. Term *valley* and definition written on transparency, Appendix BB
3. Lined paper, one sheet per student
4. White drawing paper cut to 4" X 6", one sheet per student
5. Colored pencils, map colors
6. Glue sticks
7. Sand clay, one batch for every two or three students, recipe in Appendix H
8. Blue clay, one batch for every six to eight students, recipe in Appendix H
9. Ingredients for both types of clay, see Appendix H
10. Heavy cardboard, approximately 8" square, one per student
11. Optional: pipe cleaners in several shades of green cut into one-inch pieces
12. Optional: small rocks or gravel to add to mountains
13. Transparency from Appendix C, *The Landform Song*, used in previous lessons
14. Rubric for Evaluation of Valley Models, Appendix I

C. *Key Vocabulary*

1. Valley—an area of low ground between two hills, usually containing a river

D. *Procedures/Activities*

1. Prior to this lesson find and mount pictures that show valleys. It is important for second grade students that these pictures not be too close. If the mountains or hills are not obvious it may be hard for students to make the connection. Again,

look for valley/mountain pictures on calendars and by searching the internet.
(valley+photos)

2. Display pictures at the beginning of class and ask students what they see. Initially students will see the mountains and other details in the pictures. Make sure you point to the area where the valley actually is. Let students know that you want them to focus on the exact area you are pointing to. Don't allow students to guess for too long, if it seems like they don't understand what you are pointing at you may want to draw a quick sketch on the board. If you feel that they simply do not know the term move on to step three.
3. Tell students that you will be learning about valleys today. Ask if anyone has heard that term before. Some students will connect the term with non-geographic things such as titles of books or songs. When possible, connect that title back to the geographic term.
4. There are two main characteristics of valleys that student will need to know. A valley is an area of low land, and it is positioned between hills or mountains. As you tell students about these characteristics point to the valleys in the photo displays. Explain to students that a valley does not have to have a river running through it, but it usually does. Tell them that the amount of precipitation (use the term *rain/snow* if the students have not covered the water cycle yet) that falls on the mountains is key to the size of the stream or river. The more precipitation that falls on the mountains, the more runoff there is to form streams or rivers. As you cover the topic of valleys some discussion questions might be: Where do you find valleys? (between mountains or hills) Could you find a valley on all the continents? (yes) Does a valley have to have a river running through it? (no—but it usually does)
5. Pass out materials for the dictionary activity: lined paper, drawing paper and colored pencils. Have students get their folders. Display the term and definition on the overhead while students follow the procedure from previous days to create a dictionary page for the word *valley*. Have the students put this completed page with the others in their folders.
6. Ask students what kind of weather they think valleys would usually have. Tell students that the weather in valleys will always be similar to the weather on the hills or mountains around them, but that it will not be exactly the same. Ask them what kind of weather they would expect in a valley that is surrounded by a hot, dry area. (hot, dry) Ask what kind of weather they would find in a valley that was surrounded by mountains with a lot of snow. (cold, snowy) Keep this questioning general; the main point is that the valley is affected by the weather around it.
7. Next, tell students that they will get a chance to make a model of a valley in class today. Show the supplies for making the model and explain to students that they will be using two types of clay. One is sand clay (show a ball of clay) and the other is blue clay (show a small ball). Ask what the sand clay might be used to show. (mountains or hills) What would be a good use of the blue clay? (water, rivers, streams) If students are not familiar with working with clay you might need to remind them to work the clay in their hands so it is pliable before starting. Give each student a cardboard base, a large ball of sand clay and a small ball of the blue clay. If your students are having trouble putting the blue clay for water into the valley you might suggest making a long, thin snake. They can drape it through the valley then press on it gently to flatten it out. You may choose to have students add trees or rocks to their mountains, if so you will need the optional materials listed above. One inch pieces of pipe cleaner can be

pushed down into the clay to form a variety of tree sizes. If students are encouraged to work on their models rather than simply play with the clay this is not a particularly time consuming activity. When completed set the models on a shelf or counter to dry. Circulate the room to offer help or advice as needed during the project.

8. Using the transparency of Appendix C, continue to sing *The Landform Song* daily. Add the valley verse today.

E. *Assessment/Evaluation*

1. Continue to evaluate the dictionary pages for neatness, accuracy and illustration accuracy using the checklist from Appendix B.
2. Using the rubric found in Appendix I, evaluate student models.

Lesson Five: Prairies (two days, approximately sixty minutes each)

A. *Daily Objectives*

1. Concept Objective(s)
 - a. Students will begin to develop an awareness of landforms throughout the world.
 - b. Students will recognize the characteristics of specific landforms.
 - c. Students will begin to recognize the effects of weather on landforms.
2. Lesson Content
 - a. Geographical term: prairie (p. 47)
 - b. The seven continents: Asia, Europe, Africa, North America, South America, Antarctica, Australia (p. 47)
 - c. Term: landform (not specifically included in the *Core Knowledge Sequence*)
3. Skill Objective(s)
 - a. Students will become familiar with the definitions of key geographic terms.
 - b. Students will create visual representations of selected geographic terms.
 - c. Students will identify and use map keys or legends.
 - d. Students will practice good penmanship on daily work.
 - e. Students will use games, songs and other pneumatic devices to reinforce learning.
 - f. Students will apply previous knowledge to classroom discussions.
 - g. Students will mark landforms on maps based on visual clues.
 - h. Students will mark landforms on maps following geographic references such as direction, continent, or hemisphere.
 - i. Students will look for visual information while listening to a picture book.
 - j. Students will be responsible for their own materials.

B. *Materials*

1. Assorted photos of prairies
2. Lined paper, one sheet per student
3. White drawing paper cut to 4" X 6", one sheet per student
4. Colored pencils, map colors
5. Glue sticks
6. Term *prairie* and definition on transparency, Appendix CC
7. Transparency of *The Landform Song*, Appendix C, from previous lessons
8. World map from previous lessons
9. Prairies, Appendix J, on transparencies, one per student
10. Large paper clips, four per student

11. Prairie Marking Chart, Appendix K
 12. Yellow markers for use on transparencies, fine tip, students may share if needed
 13. *A Walk in the Prairie* by Rebecca L. Johnson
 14. Access to an art room if possible
 15. Paint smocks or old shirts, one per students
 16. Water colors, at least one set per every two students
 17. Brushes, assorted, at least one per student
 18. Water color paper or heavy white construction paper, 12" X 18" is a good size
 19. CD, *Nature's Creations, songbirds: prairie*, optional
 20. Access to CD player
 21. Rubric for Prairie Watercolor, Appendix L
- C. *Key Vocabulary*
1. Prairie—a large area of flat or rolling grassland with few or no trees
- D. *Procedures/Activities*
1. Prior to class find and mount an assortment of prairie photos. In addition to calendar photos you will find photos on the internet. (prairie+photo or tallgrass+photo) You may want to search according to the name of state parks or prairie preserves in your own area to make additional student connections.
 2. Tell students that you will be studying a new landform today. It is one that is much harder to see than mountains, coasts, or valleys. Explain to them that much of the middle of the United States was once covered with this landform, but that roads, cities and farms have replaced much of that area. Ask students if they know what that landform might be. Let students guess briefly but do not give the answer until you have shown the photographs.
 3. Show photos of prairies and ask students to name the landform. Point out that in all the pictures you can see grass. Some is tall, so those areas are called tallgrass prairies. Show a photo with shorter grass and tell them that these areas are called shortgrass prairies. Tell them that some prairies have both and so are called mixed-grass prairies. Most students will be familiar with prairies from movies and books. If you have already studied the Core Knowledge unit on Westward Expansion you should remind students that as people traveled west they were traveling through the prairies. Mention to students that the only continent without prairies is Antarctica. You might want to share with students that the term *prairie* is used only in North America. In South America it is called the *pampa*, in Africa it is called the veldt, and in Asia it is called the *steppe*, but no matter what the name the landform is the same.
 4. Ask students to think about the pictures they have just seen and what they may know from their experiences. Ask what kind of weather they think occurs on the prairie. Accept all suggestions then lead students into a discussion of the weather on the prairie. Tell students that there is very little rain or snow on the prairies and that most of the moisture that falls is heavy at seasonal times of the year with long dry periods in-between. Prairies are very likely to experience severe storms. Like valleys and coasts prairies are hotter near the equator and colder farther from the equator. Explain to students that small amount of moisture that prairies receive are why grass is the most common plant found there. Remind students that this grass is a coarse, hardy, wild grass, not a bright green grass that uses a lot of water like lawns do. Tell students that the two main things they need to remember about prairies are that they are large flat or rolling areas and that the main plants are grasses.
 5. Pass out lined paper, white drawing paper and colored pencils and glue sticks. Have students get their folders. Put the transparency of the term *prairie* on the

overhead. Following the procedures established in previous lessons have students make a dictionary page then place it in their folder.

6. Display the transparency from Appendix C, *The Landform Song*. Guide students in singing the first four verses at least two times. END HERE FOR DAY ONE.
7. BEGIN HERE FOR DAY TWO Have the students remove the world map from their folders for the next activity. Review with them how they clipped a transparency sheet to the map in a previous lesson and then marked the coasts. Hand out the new transparencies and tell students that today they will be marking prairies. Have students use a yellow marker to highlight map key then the prairies on the map while you highlight one on the overhead for them to follow. Talk to them about what you are highlighting so that they stay with you through the whole process. Say things such as: Now I am going to highlight the prairies of South America, they are called the pampas. Go slowly on this as it will take more time. I would suggest doing one continent at a time then move away from the overhead so that students can see and catch up. If students get the prairies marked in the approximate area that is fine as these are small maps and the lines of prairie lands are not as clear cut as those for roads or state lines.
8. To provide students with a review and a good visual image of prairies read the book: *A Walk in the Prairie* by Rebecca L. Johnson. Although this book does cover a variety of animals and plants the pictures and text are excellent descriptions of the landform and its weather.
9. Have students move to an art room and put on paint smocks for the next activity if possible. If not, you might want to cover areas with newspaper before beginning. Tell students that they will now have a chance to paint the prairie. You may want to review the definition of a prairie from part one of this lesson. Let students know that they may include animals in their pictures but that they should not be the main focus of the work. Tell them that you will expect the drawings to be an accurate visual description of the prairie. If painting is not a regular activity for your class it is advisable that you go over handling the paint (not too much water, rinse brush between colors) and clean-up. Tell students that as they begin to paint they will be listening to a CD of prairie sounds; remind them that some animals live on the prairie, including song birds that they will hear on the CD. A listening activity such as this helps students to stay on focus. As students work it is helpful to circulate around the room offering suggestions or helping with the technique of painting.

E. *Assessment/Evaluation*

1. Following day one of lesson five review the definitions and illustrations of the term using the checklist from Appendix B.
2. Following day two of lesson five use Appendix L, Rubric for Prairie Watercolor, to evaluate the student's paintings then place them on display in a hallway to share with others.

Lesson Six: Deserts (two days, approximately sixty minutes each)

A. *Daily Objectives*

1. Concept Objective(s)
 - a. Students will begin to develop an awareness of landforms throughout the world.
 - b. Students will recognize the characteristics of specific landforms.
 - c. Students will understand the significance of the geographic location of specific landforms.
 - d. Students will begin to recognize the effects of weather on landforms.

2. Lesson Content
 - a. Geographic terms: desert, oasis (p. 47)
 - b. Understand that maps have keys or legends with symbols and their uses (p. 47)
 - c. The seven continents: Asia, Europe, Africa, North America, South America, Antarctica, Australia (p. 47)
 - d. Locate: the Equator, Northern Hemisphere and Southern Hemisphere, North and South Poles (p. 47)
 - e. Term: landform (not specifically included in the *Core Knowledge Sequence*)
 3. Skill Objective(s)
 - a. Students will become familiar with the definitions of key geographic terms.
 - b. Students will create visual representations of selected geographic terms.
 - c. Students will identify and use map keys or legends.
 - d. Students will practice good penmanship on daily work.
 - e. Students will use games, songs and other pneumonic devices to reinforce learning.
 - f. Students will apply previous knowledge to classroom discussions.
 - g. Students will mark landforms on maps based on visual clues.
 - h. Students will mark landforms on maps following geographic references such as direction, continent, or hemisphere.
 - i. Students will identify the areas near the Equator as being hot and those near the poles as being cold.
 - j. Students will look for visual information while listening to a picture book.
 - k. Students will be responsible for their own materials.
- B. *Materials*
1. Assorted pictures of deserts
 2. Globe
 3. *It Could Still Be a Desert*, by Allan Fowler
 4. Two or more pictures showing an oasis
 5. Lined paper, two sheets per student
 6. White drawing paper cut to 4" X 6", two sheets per student
 7. Colored pencils, map colors
 8. Terms *desert*, and *oasis* with definitions on transparencies, Appendixes DD, EE
 9. Transparency of *The Landform Song* from previous lessons
 10. Crayons
 11. Flap Books, prepared according to Appendix M, one per student
 12. World map, from previous lessons
 13. Deserts, Appendix N, on transparencies, one per student
 14. Appendix O, Desert Marking Chart
 15. Large paper clips, four per student
 16. Brown markers for use on transparencies, fine tip, students may share if needed
 17. Rubric for Evaluation of Flap Books, Appendix P
- C. *Key Vocabulary*
1. Desert—a dry area where hardly any plants grow because there is so little moisture
 2. Oasis—a place in a desert where there is water and plants and trees grow

D. *Procedures/Activities*

1. Prior to class find an assortment of desert picture and mount them. Use calendars and an internet search to find a good variety. (desert+photo or the name of a specific desert plus photo) Include at least one picture of a frozen area such as Antarctica. Also find at least two pictures showing an oasis.
2. Begin this lesson by telling students that today they will learn about a landform they are all very familiar with so you will not be giving any hints. Ask them to save their guess since you want them to get to see all the pictures. Show the typical desert pictures, but save the pictures of snow covered, frozen deserts for later in the lesson. After viewing the pictures ask the class to respond in unison with the name of this landform. (You might need to count to three so that all students get a chance to answer.)
3. Since students of this age typically know a great deal about deserts it might be helpful to let them tell you what they already know before you go on. Do this by creating a list of things they know on the board, going around the room so each student gets to contribute.
4. After students have exhausted their knowledge of deserts fill in the gaps with key information from the background material in Appendix A. Tell students the key characteristics that they should know are: super-dry air, little moisture, usually have lots of wind. Use the pictures you showed before to illustrate as you talk about the types of deserts. Tell students that not all deserts are sandy. In fact, many are rocky because the loose, fine particles are easily blown away. Explain that only some types of deserts have much plant or animal life. These are the deserts that cool down a lot at night Using a globe ask students what kind of weather a desert would have *here*, as you point to land along the Equator. (hot) Tell students that most of the world's deserts are not far from the Equator because the extreme heat evaporates the moisture very quickly. Ask students what the point at the top of the globe is called. (North Pole) Ask what the area between the Equator and the North Pole is called. This is a review from first grade but some students may have forgotten and need a hint. (Northern Hemisphere) Ask students what the point at the bottom of the globe is called. (South Pole) Ask what the area between the Equator and the South Pole is called. (Southern Hemisphere) Tell students that the Antarctic is a continent because even though it is covered with ice and snow there is land underneath. Explain to students that very cold areas such as Antarctica can also be deserts because it is so cold that the air dries out and the water is frozen year around. Show the pictures you have collected of cold snow-covered deserts.
5. Read aloud *It Could Still Be a Desert* by Allan Fowler, as a review of the material you have just covered. This book is a quick book to read to your class with excellent text and pictures. This book also introduces the concept of oasis in a very concise way. After reading the book talk with students about the term *oasis* and show them the pictures you have collected. Let them know that these areas are created by underground water that rises to the surface. Even though the area around the oasis is hot and dry the water enables plants to grow.
6. Pass out the lined paper, white drawing paper, colored pencils and glue sticks. Display one term at a time and follow the procedures from previous lessons to make dictionary pages for the terms *desert* and *oasis*. When completed have students place them in their folders.
7. Using the transparency of *The Landform Song* sing all four verses of the landform song at least two times through. END HERE FOR DAY ONE.

8. BEGIN HERE FOR DAY TWO. Prior to this lesson prepare the pages for a flap book according to directions in Appendix M. These books are fairly quick to put together for an adult or older student but somewhat difficult for second graders. You may find it helpful to make a flap book on another topic to use as an example or to use in another subject area prior to this unit so that students are familiar with them.
 9. As you show students a blank or sample flap book tell them that they have listened to several books as they have studied landforms, but that today they will have a chance to write their own book about deserts. Point out to students the exposed writing area and the “hidden” picture area. Talk to them about what information goes on the front page (title, author) and that the flaps that are showing tell the story. Ask them to write their story first and then illustrate it. Tell students they will have a cover page and five pages for text and illustrations. Ask students to write neatly and check their spelling using their dictionary pages in necessary. You may want to provide scratch paper so that students can write their story then re-copy it. If so, allow a little extra time for that process. Have crayons and colored pencils ready for their use. Markers do not work well with this project. As students work circulate around the room to answer questions, offering a minimum of suggestions.
 10. Have students get their world map from previous lessons. Pass out the brown markers and transparencies. Review the use of a legend or key if necessary. Guide students in lining up the map and transparency and clipping them together as they did in previous lessons. Tell students that today they will be making the page for deserts using brown. Instruct them to color the box for the key or legend using brown. Using Appendix O, guide students in marking the areas of desert in brown on the world map, using the overhead projector and transparency of Appendix N. Use the language of geography, such as the names of continents, oceans, hemispheres and poles, while marking the deserts. Have students return their map and transparency to their folders.
 11. Sing all verses *The Landform Song* using the transparency from previous lessons. As students if they could sing it without words tomorrow.
- E. *Assessment/Evaluation*
1. Following the conclusion of the first part of this lesson collect and evaluate dictionary pages using the checklist from previous lessons.
 2. Following day two of this lesson check that student’s transparencies of desert areas are fairly accurate. This map is small and the markings do not have to be exact.
 3. Evaluate the flap books using the rubric found in Appendix P.

Lesson Seven: Review and Preparation (approximately sixty minutes)

A. *Daily Objectives*

1. Concept Objective(s)
 - a. Students will begin to develop an awareness of landforms throughout the world.
 - b. Students will recognize the characteristic of specific landforms.
 - c. Students will understand the significance of the geographic location of specific landforms.
 - d. Students will begin to recognize the effects of weather on landforms.
2. Lesson Content
 - a. Geographical terms: coast, valley, prairie, desert, oasis (p. 47)

- b. Term: landform (not specially included in the *Core Knowledge Sequence*)
 - 3. Skill Objective(s)
 - a. Students will become familiar with the definitions of key geographic terms.
 - b. Students will create visual representations of selected geographic terms.
 - c. Students will practice good penmanship on daily work.
 - d. Students will use games, songs and other mnemonic devices to help them learn.
 - e. Students will participate in oral reviews on material covered in class.
 - f. Students will put single words into alphabetical order.
- B. *Materials*
- 1. Ten pictures, from previous lessons, see # 2 below for directions
 - 2. Lined paper, such as notebook paper, cut in half lengthwise, one piece per student
 - 3. Blank 3" X 5" cards, twelve for every two students, see # 2 below
 - 4. Colored pencils, markers or pens for making cards, see # 2 below
 - 5. White drawing paper, 12" X 18", one per student, pre-fold if desired
 - 6. Colored pencils, any colors
 - 7. Crayons
 - 8. Materials required to put together books, your choice
 - 9. Teacher's Key for final test, Appendix Q
- C. *Key Vocabulary*
- 1. Landform—a natural feature of a land surface
 - 2. Coast—the land that is next to the sea
 - 3. Valley—an area of low ground between two hills, usually containing a river
 - 4. Prairie—a large area of flat or rolling grassland with few or no trees
 - 5. Desert—a dry, often sandy area where hardly any plants grow because there is so little rain
 - 6. Oasis—a place in a desert where there is water and plants and trees grow
- D. *Procedures/Activities*
- 1. NOTE: This lesson does not introduce any new information. It is designed to review key points in preparation for the written test. The students will also prepare their dictionaries for publishing.
 - 2. Prior to the lesson prepare items for the lesson. Quiz: select ten pictures from the set you have used in this unit. There should be two representing each landform. Put them in a random order then number them one through ten. Put them inside a folder where students will not see them. Landform Memory: using blank 3" X 5" cards make a set of twelve cards for every two students. Write the definition of the six vocabulary words and the six words each on a different card. If possible make each set in a different color marker or pen so that they are easy to sort into sets if they get mixed up.
 - 3. Tell the students that this is review day. As part of the review they will be playing games and doing activities to help them remember the most important information they learned about landforms.
 - 4. Give students a half-sheet of lined paper and ask them to put their name on top then skip a line and number it one through ten. When students have completed this step explain that this is not a test, but something called a quiz which will help them to prepare for the test. Tell students that you will show them one picture at a time and that you will ask them record what the picture shows on the numbered lines of paper using L for landform, C for coast, V for valley, P for prairie, D for

- desert and O for oasis. Write each of those terms and matching letters on the board where all students can see them as you repeat the word and letter. Show one picture at a time and allow all students to finish before going on to the next picture. When the quiz is completed collect all the papers for grading later.
5. Tell students that their next activity is a game called memory. Most students have played this before using either picture cards or a standard deck of cards. Ask if everyone remembers how to play and if not, review the rules. Tell students that they will be matching the name of the landform with the correct definition. Form students into groups of two, adding a third only if necessary. Pass out a set of Landform Memory cards to each group. Allow groups to play until all the cards have been picked up. If some groups finish quickly you may re-group them and allow them to play again. Once students begin playing this activity should not take more than fifteen minutes. Collect cards for use another year.
 6. Have students get their folders and remove all the dictionary pages. Instruct students to put them in alphabetical order. As an alternative, tell them page by page the order they should be in. This should be based on language arts skills used in your classroom. If you are going to name off the pages it is easiest to start with the last page and have students put the other pages on top as you name them off. Ask students to put a large paper clip on the top or side of the stack of pages so that they remain in that order. Have all students count their dictionary pages, they should have six. They should have three transparencies and one map. Ask students to put the dictionary pages, map, and transparencies into the folder and turn it in.
 7. Pass out white drawing paper. Have students fold it in half just like their folder is folded so that they have a front and back to their book. (An alternative would be to pre-fold the sheets.) Ask students to design a cover for their Landform Dictionary using the wording and pictures of their choice. Write words on the board that students may not know how to spell such as *dictionary*. Let students use colored pencils or crayons for decorating their design. On the bottom of the back cover have them put their name, class and year on three lines. Demonstrate this on the board so all students understand. Have students turn in their completed covers.
 8. Using the Key Characteristics portion of the final test conduct an oral review with students. Ask questions in the manner that suits your teaching style and classroom. I like to use oral questions like this when it is almost time to line up for something such as recess or lunch. I go down the rows giving questions. Students with correct answers line up in order. If a student misses a question then the question goes on to the next person. I keep going through the students until everyone has gotten and correct answer and is standing. If necessary you may use other questions from the test to ensure that everyone has a correct answer.
 9. After this lesson is over the student's books will need to be put together following the method of your choice. If you choose to staple books together the transparencies will not last as long with wear. I prefer to put books using transparencies together with a binding machine and plastic combs. The map may have to be punched alone depending on your machine and the weight of the cardstock. If using a binding machine I cut the cover on the fold line to make two separate sheets. You may also choose to laminate the cover to make it hold up better.

- E. *Assessment/Evaluation*
 - 1. Grade the picture quiz and give each one a percentage or letter grade according to practices in your classroom.

VI. CULMINATING ACTIVITY

- A. Administer the Landform Test, Appendix R, and grade using percentages or letter grades using the Teacher's Key found in Appendix Q. Testing Directions: You will need to select one picture for each landform. Once tests have been passed out and everyone is quiet hang the pictures on the chalk or white board and label them with the letters A through F. Tell students that these words are for use in the second portion of the test.
- B. Optional Activity: Set up a display using student's trioramas, models, watercolor paintings and flap book. Invite parents or another class to come see the student's work and have the class sing *The Landform Song* for those in attendance.
- C. Optional Field Trip: If your school is within a reasonable distance of one of these landforms, arrange a field trip to see it.

VII. HANDOUTS/WORKSHEETS

- A. Appendix A: Teacher Background Information
- B. Appendix B: Dictionary Checklist
- C. Appendix C: The Landform Song
- D. Appendix D: World Map
- E. Appendix E: Coasts
- F. Appendix F: Triorama Directions
- G. Appendix G: Rubric for Evaluation of Coast Triorama
- H. Appendix H: Clay Recipes
- I. Appendix I: Rubric for Evaluation of Valley Models
- J. Appendix J: Prairies
- K. Appendix K: Prairie Marking Chart
- L. Appendix L: Rubric for Evaluation of Prairie Watercolor
- M. Appendix M: Flap Book Directions
- N. Appendix N: Deserts
- O. Appendix O: Desert Marking Chart
- P. Appendix P: Rubric for Evaluation of Flap Books
- Q. Appendix Q: Teacher's Key
- R. Appendix R: Landform Test
- S. Appendix S: Landform
- T. Appendix T: River
- U. Appendix U: Lake
- V. Appendix V: Mountains
- W. Appendix W: Peninsula
- X. Appendix X: Harbor
- Y. Appendix Y: Bay
- Z. Appendix Z: Island
- AA. Appendix AA: Coast
- BB. Appendix BB: Valley
- CC. Appendix CC: Prairie
- DD. Appendix DD: Desert
- EE. Appendix EE: Oasis

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Appendix A, page 1
Teacher Background Information

This unit has been developed to teach the landforms, *coast*, *valley*, *prairie*, *desert*, and *oasis*, along with other general geography content for second grade from the *Core Knowledge Sequence*. Generally it is assumed that second grade students will have some previous knowledge of geography, although throughout the unit you will find review suggestions. It may be necessary to cover the terms in Lessons One and Two more thoroughly if this is the first experience your class has had in geography.

Lesson Three: Coasts

The student vocabulary definition for coasts is “the land that is next to the sea.” This is a very good working definition. It is, however, to move students beyond the idea that all coasts are sandy white beaches. Coasts around the world exhibit a variety of land types. As you do the photo search you will find coasts that show rocky outcrops, steep cliffs, dunes, marsh land with tall grasses, sandy beaches in a variety of colors, as well as snow and ice. The picture book included in this lesson, *A Seaside Alphabet*, has some valuable information at the end concerning the actual coastal areas the pictures were based on.

As you do the map activity with this unit it is important to show students that every continent has coasts and that coasts are anywhere that the land meets an ocean or sea. Islands have coasts as well, some students may ask about this since you will not be marking small islands. This is due to the size of the map, not lack of coastal regions.

The two key characteristics students will be expected to know for the test are 1) coasts are land, and 2) they are along the sea or ocean.

Lesson Four: Valleys

The concept of *valley* will be hard for a few students because their eyes will be attracted to the mountains not the low spots. This is why Lesson Four suggests drawing a very simple sketch on the board; it makes the idea of high and low spots simple. Many times students are confused by the term because they hear it used in ways unrelated to the concept of *valley*. Depending on the geography of your area, students may have experience driving through a valley to a specific location. This experience can be used to help students relate to the term.

The vocabulary definition that students will use for valley is: an area of low ground between two hills, usually containing a river. Students may become overly concerned about the river. It is helpful to explain that the river forms because water that comes down in the form of rain or snow runs off the mountains and into the low area forming a river. Let students know that if an area is dry that may not happen and that the smaller the hill the less runoff will accumulate. Many times a valley contains a dry creek bed which runs only when a fast, hard rain falls or during spring runoff.

Students will be expected to know two main characteristics of valleys, 1) an area of low land, and 2) between hills or mountains.

Lesson Five: Prairies

Many students will believe they have never seen a prairie even if they live in an area of prairies because so much prairie land has been covered up by roads and cities or plowed up to become cropland. You may be able to help students see the prairie in their own communities by searching out small plots of land that have remained undeveloped along railroads, between divided highways, or two small towns have grown to almost meet each other.

Appendix A, page 2

The best way to help students visualize the prairie, if a field trip is not possible, is the use of picture books, especially those about westward expansion (a second grade Core Knowledge topic), plains Indians, and the buffalo. Many very good picture books are available on these subjects. In addition, many states have preserved at least a few acres of natural prairie grasslands as state parks; they often have pictures, maps, and brochures available by mail.

Students should learn that prairies are 1) large plains regions with 2) tall grass.

Lesson Six: Deserts

Lesson six focuses on deserts, but the term *oasis* is included as well. An oasis is an area of plants and surface water. The water surfaces from beneath the desert. We often think of an oasis as a stopping off point for a caravan, but an oasis may be large enough to support a family or even a small village.

A large number of students are visually familiar with deserts even if they have never visited one. Students from Core Knowledge schools will remember studying Egypt last year and will recall large expanses of desert surrounding the pyramids.

For most students, and many adults, the hardest land to associate with the word desert is Antarctica. A technical definition of a desert is an area where more water evaporates than falls. While we visualize Antarctica as a land of ice and snow the fact is that very little snow falls annually. Also the high winds and freezing temperatures dry out the little moisture that is in the air. Other polar areas such as parts of Greenland are also considered deserts.

Although many of us think of sand when we think of deserts, many have rock hard surfaces or areas of rocks and gravel because extreme winds can remove the fine particles of sand.

There are three main characteristics of deserts 1) super-dry air, 2) little rain—less than ten inches a year, and 3) lots of wind.

Appendix B
Dictionary Checklist

NAME _____

.....

WORD	SPELLED CORRECTLY	DEFINITION CORRECT	ILLUSTRATION SHOWS TERM
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.....

Landform

River

Lake

Mountains

Peninsula

Harbor

Bay

Island

Coast

Valley

Prairie

Desert

Oasis

.....

NOTES:

Appendix C
The Landform Song

(Sung to the tune of *Are You Sleeping?*)

I'm a landform, I'm a landform,
Yes I am, Yes I am,
Natural feature on land, Natural feature on land
All around, All around.

I'm a coast, I'm a coast,
Yes I am, Yes I am,
Land next to oceans, Land next to oceans,
Or to seas, Or to seas.

I'm a valley, I'm a valley,
Yes I am, Yes I am,
Ground between two hills, Ground between two hills,
Or mountains, Or mountains.

I'm a prairie, I'm a prairie,
Yes I am, Yes I am,
Flat or rolling grassland, Flat or rolling grassland,
Few trees, Few trees.

I'm a desert, I'm a desert,
Yes I am, Yes I am,
Dry, sandy area, Dry, sandy area
Plants can't grow, Plants can't grow.

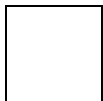
I'm an oasis, I'm an oasis,
Yes I am, Yes I am
Water in a desert, Water in a desert,
Trees are found, Trees are found.

Appendix D
World Map



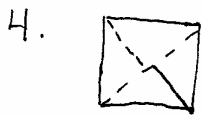
Appendix E
Coasts

Coasts



Appendix F
Triorama Directions

1. Use a piece of paper cut to a 12" square.
2. Fold the paper in half diagonally, and then open.
3. Fold the paper in half diagonally the other way, open.
4. Cut on one of the four fold lines to the center. Example below shows dotted line for the folded lines and solid lines for cutting.
5. Put together by overlapping the sections on either side of the cut line. Triorama should now be a three-sided open box.
6. The glued section is the heaviest so use it as the bottom.



Appendix G
Rubric for Evaluation of Coast Triorama

NAME _____

TOTAL POINTS _____

CRITERIA	1 POINT	2 POINTS	3 POINTS
Triorama shows coastal land.	Coast is not shown.	Land is shown but does not clearly depict a coastal area.	Coastal land is clearly depicted.
Triorama shows ocean or sea.	An area of ocean or sea is not present.	Water is depicted but appears to be a smaller body of water such as a lake or river.	Ocean or sea is clearly shown in the triorama.
Materials were used in a way that represents the water and coastal areas.	Materials were used in a way that does not show visual differences between coast and water.	Materials were used in a way that only somewhat shows the differences between the coast and water.	Materials were used in a way that clearly depicts the differences between the coast and water.

Comments:

Appendix H
Clay Recipes

Sand Clay:

1 cup sand
½ cup cornstarch
¾ cup liquid starch

Combine sand and cornstarch in an old pan. Add liquid starch and mix together. Cook the mixture over medium heat while stirring constantly. The mixture will thicken and turn into a dough. Remove from stove and let cool. Take clay from pan and knead it 20 to 30 second before using. Store in an airtight container. Items made with sand clay will harden as they dry.

Blue Clay:

2 ¼ cups flour
1 cup salt
2 tablespoons unsweetened powdered drink mix, blue
4 tablespoons cooking oil
1 cup water

Mix flour, salt and drink mix in a large bowl. Add cooking oil and water. Stir until the mixture is the consistency of bread dough. Remove dough from bowl and knead on a floured surface for two or three minutes, until firm. Store in an airtight container.

Appendix I
Rubric for Evaluation of Valley Models

NAME _____

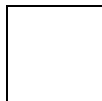
TOTAL POINTS _____

CRITERIA	1 POINT	2 POINTS	3 POINTS
Use of sand clay to represent mountains and valleys.	Sand clay was not used or did not represent mountains and valleys.	Sand clay was used but mountains and valleys were not clearly represented.	Sand clay was used and the mountains and valleys are clearly represented.
Use of blue clay to depict a river in the valley.	Blue clay was not used to depict a river in the valley.	Blue clay is present in model but does not accurately depict a river in the valley.	A river running through the valley is clearly depicted with blue clay.
The addition of trees and rocks add to the model without obscuring the landform.	Additions obscure the depiction of a valley.	Additions somewhat hide or distort the valley.	Additions add to the overall effect of the model without obscuring the landform.

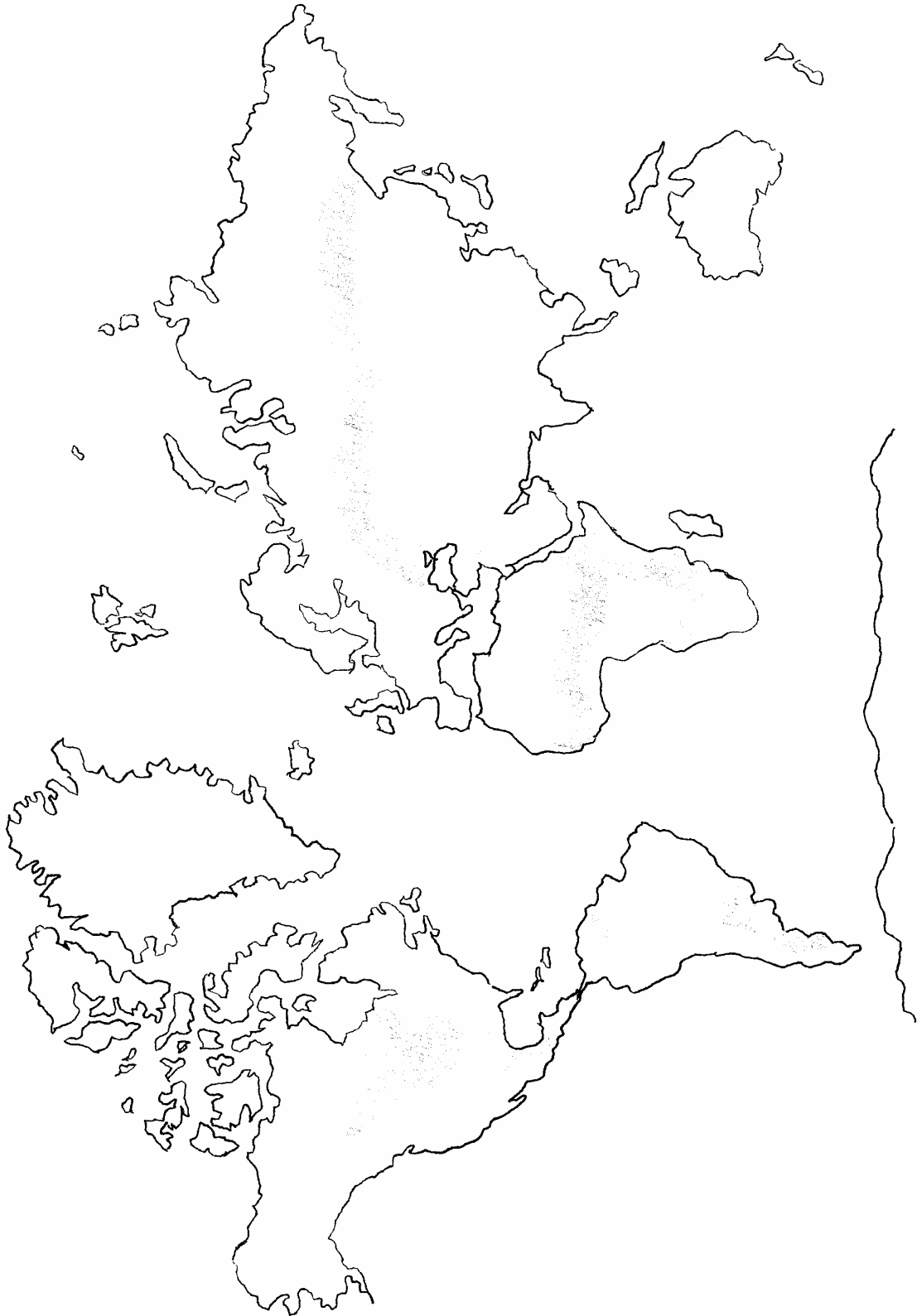
Comments:

Appendix J
Prairies

Prairies



Appendix K
Prairie Marking Chart



Appendix L
Rubric for Evaluation of Prairie Watercolor

NAME _____

TOTAL POINTS _____

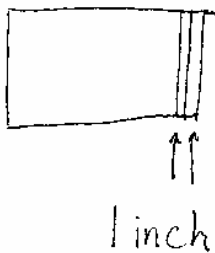
CRITERIA	1 POINT	2 POINTS	3 POINTS
Watercolor paints were used and put away correctly.	Paints were not used or put away correctly.	Paints were used or put away correctly but both behaviors were not present.	Paints were used correctly then put away correctly.
Painting clearly shows flat or rolling plains.	Painting shows no evidence of plains or shows another landform instead.	Painting has a large area resembling a prairie but the plains are not clearly depicted.	Painting shows flat and/or rolling plains in a large area.
Prairie grass is clearly depicted in the painting.	Grass is not depicted in the painting.	A solid area of color depicts the presence of grass.	Grass is clearly depicted by variations in color or brushstrokes showing grass.
Overall picture quality.	Picture quality is poor, either a prairie is not present or the depiction is sloppy and shows limited effort.	Picture quality is acceptable. Effort is evident but details are not in evidence.	Picture quality shows evidence of effort and attention to detail.

Comments:

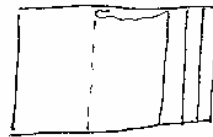
Appendix M
Flap Book Directions

1. Use three sheets of construction or copy paper for each flap book. Each sheet should be a different color.
2. Line sheets up so that the ends are one inch apart (see # 1 below) with the sides matching.
3. Holding the stacked ends in place carefully fold the top sheet so it ends one inch from the top sheet. (This will be the same color.) (see #2 below)
4. Repeat with the second and third sheet always making it one inch from the end of the previous sheet. (see # 3 below)
5. Staple on the fold. Book is used with the fold on top. (see # 4 below)

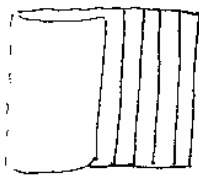
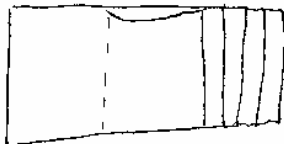
1.



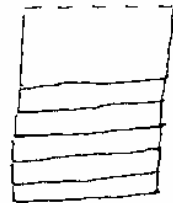
2.



3.



4.



Appendix N
Deserts

Deserts



Appendix O
Desert Marking Chart



Appendix P
Rubric for Evaluation of Flap Books

NAME _____

TOTAL POINTS _____

CRITERIA	1 POINT	2 POINTS	3 POINTS
Title page contains title written in standard form.	Title page is not included or does not include title written in standard form.	Title page includes title but correct form was not used.	Title page clearly shows title written in standard form.
Title page contains author's name.	Title page not present.	Title page does not include the author's name.	Title page includes the author's name.
Text is written in complete sentences.	Less than 50% of the text is written in complete sentences.	75% of the text is written in complete sentences.	100% of the text is written in complete sentences.
Text is punctuated using marks standard for second grade.	Text contains no punctuation or is incorrectly punctuated.	Text contains punctuation but less than 75% of it is done correctly.	100% of the text is punctuated correctly.
Text is factual and informative.	Text does not contain factual information.	Text contains some factual information.	The text is factual and informative.
Drawings are complete and show examples of deserts accurately.	Drawings are incomplete and do not depict deserts accurately.	Drawings are complete but deserts are not depicted accurately.	Drawings are complete and deserts are accurately depicted.
Overall appearance of the book.	Book is sloppy and difficult to read.	Book shows evidence of some effort.	Book is neat and shows acceptable to high effort.

Comments:

Name: **KEY**

DEFINITIONS

Directions: Match the word from the word bank to the correct definition below.

--

landform coast valley prairie desert oasis

--

1. **VALLEY** is an area of low ground between two hills, usually containing a river.
2. **COAST** is the land that is next to the sea.
3. **OASIS** is a place in a desert where there is water and plants and trees grow.
4. **LANDFORM** is a natural feature of a land surface.
5. **DESERT** is a dry, often sandy area where hardly any plants grow because there is so little rain.
6. **PRAIRIE** is a large area of flat or rolling grassland with few or no trees.

PICTURE IDENTIFICATION

Directions: Match the letter beneath the picture display with the name of the correct landform.

7. _____ coast
8. _____ valley
9. _____ prairie
10. _____ desert
11. _____ oasis

KEY CHARACTERISTICS

Directions: Here is a list of the key characteristics. Write the name of the landform beside the correct characteristics using the word bank below.

1. **B** land, along a sea or ocean
2. **E** low land, between hills or mountains
3. **D** large, flat or rolling areas, main plants are grasses
4. **A** super-dry air, little moisture, usually has a lot of wind
5. **C** underground water that rises to the surface, plants and trees

Terms:

- A. Desert
- B. Coast
- C. Oasis
- D. Prairie
- E. Valley

Landform Test

Name: _____

DEFINITIONS

Directions: Match the word from the word bank to the correct definition below.

landform coast valley prairie desert oasis

1. _____ is an area of low ground between two hills, usually containing a river.
2. _____ is the land that is next to the sea.
3. _____ is a place in a desert where there is water and plants and trees grow.
4. _____ is a natural feature of a land surface.
5. _____ is a dry, often sandy area where hardly any plants grow because there is so little rain.
6. _____ is a large area of flat or rolling grassland with few or no trees.

PICTURE IDENTIFICATION

Directions: Match the letter beneath the picture display with the name of the correct landform.

- | | |
|------------------|------------------|
| 7. _____ coast | 10. _____ desert |
| 8. _____ valley | 11. _____ oasis |
| 9. _____ prairie | |

KEY CHARACTERISTICS

Directions: Here is a list of the key characteristics. Write the name of the landform beside the correct characteristics using the word bank below.

1. _____ land, along a sea or ocean
2. _____ low land, between hills or mountains
3. _____ large, flat or rolling areas, main plants are grasses
4. _____ super-dry air, little moisture, usually has a lot of wind
5. _____ underground water that rises to the surface, plants and trees

Terms:

- A. Desert
- B. Coast
- C. Oasis
- D. Prairie
- E. Valley

Landform:
a natural feature
of a land
surface

River:
a large natural
stream of fresh
water that flows
into a lake or an
ocean

Lake:
a large body of
fresh water
surrounded by
land

Mountain:
a very high
piece of land

Peninsula:
a piece of land that
sticks out from a larger
land mass and is almost
completely surrounded
by water

Harbor:
a sheltered
place on the
coast of a sea or
lake

Bay:
a portion of the
ocean that is
partly enclosed
by land

Island:
a piece of land
surrounded by
water

Coast:
the land that is
next to the sea

Valley:
an area of low
ground between
two hills,
usually
containing a
river

Prairie:
a large area of
flat or rolling
grassland with
few or no trees

Desert:
a dry, often
sandy area
where hardly
any plants grow
because there is
so little rain

Oasis:
a place in a
desert where
there is water
and plants and
trees grow