

Dark Days on the Prairie

Skills: Language Arts, Social Studies, Science

Objective: Students will learn about the causes and location of the Dust Bowl and interpret photos from that period in Oklahoma history.

Background

The Dust Bowl covered 150,000 square acres in the Oklahoma and Texas Panhandles, southeastern Colorado, northeastern New Mexico and southwestern Kansas. The worst of the dust storms swept over southwestern Kansas. Yet many people think only of Oklahoma when they think of the Dust Bowl. In fact, only a small part of Oklahoma—the Panhandle—was affected by the Dust Bowl. In southeastern Oklahoma during the early 1930s, rainfall actually increased.

The Oklahoma Panhandle is the driest part of Oklahoma. The average rainfall is about 20 inches per year, although in some years it gets as little as 12 inches. The average rainfall in the state is 34 inches, with an average of 50 inches in the southeastern part of the state. Farming in the Panhandle is only possible under irrigation and by using fallow farming and residue management systems. The soil is sandy, and high winds are common.

The entire Southern Plains region has always been subject to periodic drought. As long as the land was covered with short sod-forming native grasses, the dry spells did little damage. The first European settlers didn't even try to farm the Southern Plains. They ran cattle on the native grasses that held the fragile soil in place.

In 1889, the Oklahoma territory was opened for homesteading, and the number of settlers increased from a few thousand to 60,000. Thousands of acres of protective grass were plowed under for farmland. This took place during a period of abundant rainfall, and by 1900 the rich fertile soils of Oklahoma supported 390,000 persons. In 1910 a dry spell occurred, but by 1914 the soils were, once again, back in full production.

In 1924 there was a prolonged drought. World War I had just ended a few years before and had disrupted agricultural production in Europe. To make up for food shortages caused by the war, the US government encouraged farmers all over the United States to plant crops "from fence to fence." The shortages also caused the price of wheat to go up, so planting wheat became a very profitable business. Landowners in the Oklahoma Panhandle and all over the Southern Plains plowed up

P.A.S.S.

Grade 4

Oral Language—1.2, 3

Reading—3.1b

Writing—2.1

Social Studies—2.2,3; 3.2;
4.2,3

Science Process—3.2,3,
4.3; 5.2

Vocabulary

Black Sunday—April 14, 1935, the day that is associated with the beginning of the Dust Bowl years.

Civilian Conservation Corps—A government program established in 1933 to combat unemployment during the Depression of the 1930s. Unemployed, unmarried young men were enlisted to work on conservation and resource-development projects such as soil conservation, flood control, and protection of forests and wildlife. Enrollees were provided with food, lodging, and other necessities, and were given a small monthly salary. The CCC was abolished in 1942.

drought—A long period of abnormally low rainfall, especially one that adversely affects growing or living conditions.

Dust Bowl—Part of the Great Plains region of the US which is subject to severe droughts.

fallow farming—Leaving cropland idle, unplowed and unplanted to restore productivity through accumulation of moisture.

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the ground cover and planted winter wheat. With large areas of plowed land having no grassroot system to anchor it, the topsoil of the Oklahoma Panhandle simply blew away. The dust storms and sand storms buried roads and houses. Clouds of dust reached as far east as Washington, DC.

Farmers in the US learned valuable lessons about soil conservation from the Dust Bowl. One of the most important lessons was that sandy, fragile soils must be covered with some kind of vegetation. In some areas landowners keep some kind of ground cover on their land at all times. In other areas farmers use plowing techniques that prevent the soils from blowing away. Some farmers keep the native grass cover on their land and simply allow cattle to graze there rather than remove the ground cover for planting.

In response to the Dust Bowl the US government created agencies like the Civilian Conservation Corps to replant grasses, plant trees and teach farmers scientific techniques for protecting the soil. These agencies were the forerunners of today's Natural Resources Conservation Service. Through the efforts of these agencies, farmers over the years have learned to respect the special characteristics of the former Dust Bowl lands and to work with them to keep the land productive.

Language Arts

1. Read the background information to students, and lead a discussion about the Dust Bowl.
2. Provide students with copies of the attached photographs. Have each student write a descriptive paragraph about the picture.
3. Mix up the pictures and descriptions and have students match the picture with the correct description.
4. Hand out copies of the reading page, and have students read the information independently. Have students draw a time line of factors leading up to the Dust Bowl, using information found in paragraphs four and five.

Social Studies

1. Hand out copies of the Dust Bowl maps. Have students label the Oklahoma counties and surrounding states that were part of the Dust Bowl of the 1930s. Direct students to make a legend in the box provided that explains the information found on the map. Have students use map pencils or color lightly with crayons the three Dust Bowl regions shown on the map.
2. Have students research weather patterns, soil types, vegetation and agriculture in the Oklahoma counties and the regions of

each state that was affected by the Dust Bowl. After research is complete, lead a discussion in which students discuss their findings and suggest reasons why this area was so hard hit by the Dust Bowl. What do all parts of this region have in common? Light soils covered by short grasses, high winds, extreme temperatures, low average annual rainfall, and agriculture that includes cattle and irrigated crops like wheat, corn and sorghum.)

3. Invite a local person who lived during dust bowl times or a historian who can provide information about that time period in Oklahoma history. Record the interview to share with future students.
4. Severe dust storms occurred in Kazakhstan (in the former Soviet Union) 20 years after the American Dust Bowl. Have students locate Kazakhstan on a world map and research to discover its climate, soil type, vegetation and agricultural practices. How is this region similar and different from the Southern Plains?
5. Bring in topographical maps and elevation maps of the Plains region so students can see how this area is different from the surrounding areas.

Science

Divide the class into two groups, and provide each group with one pint of water in a sprinkler can and 12 cups of soil in an 8- or 10-inch pan. Have the first group construct a hill that slopes gently from one end of the pan to the other. Provide the second group with an assortment of natural materials (grass clippings, sticks, dried or green leaves). Instruct the second group to mix the natural materials with the soil in its pan, and construct a sloping hill similar to that constructed by the first group. Prop up the hill end of the first group's pan with a text book, and have one student sprinkle water from 12 inches above the sloping hill. Discuss the results. Before repeating the experiment with the second group's pan, have students predict what will happen. Repeat the experiment, and discuss the results. Have students write their observations.

Additional Reading

- Brandenburg, Jim, *An American Safari: Adventures on the North American Prairie*, Walker & Co., 1996.
- Friedrich, Elizabeth, and Michael Garland, *Leah's Pony*, Boyds Mills, 1996.
- Hesse, Karen, *Out of the Dust*, Scholastic Paperback, 1999.
- Myers, Anna, *Red-Dirt Jessie*, Walker, 1992.
- Porter, Tracey, *Treasures in the Dust*, Harper-Collins, 1996.
- Stanley, Jerry, *Children of the Dust Bowl: The True Story of the School at Weedpatch Camp*, Crown, 1992.
- Staub, Frank, *America's Prairies*, Carolrhoda, 1996.
- Turner, Ann Warren, and Robert Barrett, *Dust for Dinner*, Harper Trophy, 1997.

irrigation—The application of water to soil for the purpose of increasing plant production.

native grasses—Grass plants which occur naturally in an area and do not have to be planted.

residue management—A method of managing crop residues without plowing.

Soil Erosion Service—Emergency agency of the US government created in 1933. Became Soil Conservation Service in 1935 and the Natural Resources Conservation Service in 1993.

Dark Days on the Prairie

Oklahoma is windy sometimes. Strong winds carry dust and sand that stings our eyes and makes our teeth gritty. In the 1930s, people living in the Oklahoma panhandle saw some of the worst dust storms ever. These dust storms swept through the Oklahoma and Texas panhandles, southeastern Colorado, northeastern New Mexico and southwestern Kansas.

On Sunday afternoon, April 14, 1935, clouds of dust turned the sky black. People had to cover their noses and mouths so they could breathe. The day went down in history as Black Sunday. Robert E. Geiger was a newspaper writer who visited the area during that time. He was the first person to call this area “The Dust Bowl.”

Dust storms were common on the Great Plains. The soil was sandy, annual rainfall was low and high winds were common. The first European settlers there had allowed their livestock to graze the grass on the Plains until there was hardly any left to hold the soil in place.

Wheat shortages caused by World War I, in the early 20th century, caused the price of wheat to rise. Because farmers could make quite a bit of money on wheat, and because the US government encouraged them to do so, farmers on the southern Great Plains plowed up the natural grass cover and planted winter wheat.

The area suffered from severe drought between 1934 and 1937. With large areas of plowed land having no grassroot system to anchor it, much of the soil simply blew away. The dust storms and sand storms buried roads and houses. Clouds of dust reached as far east as Washington, DC.

In response to the disaster, the federal government created the Soil Erosion Service and the Civilian Conservation Corps to recover the land. Workers replanted grass, planted tree windbreaks and shelter belts and showed farmers scientific agricultural methods to help them protect the fragile ecosystem of the Southern Plains.

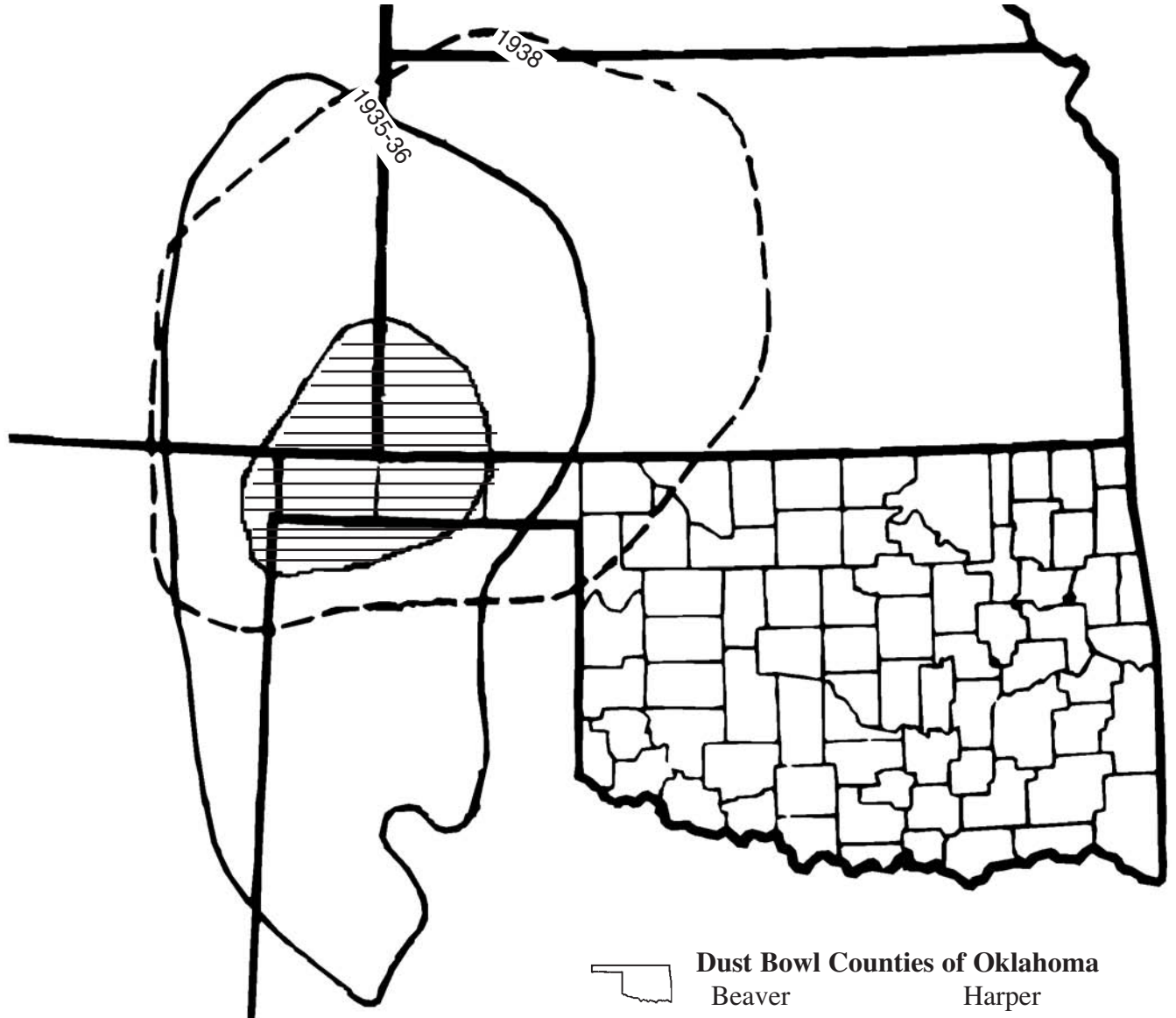


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Dust Bowl Map

The Dust Bowl covered only the panhandle of Oklahoma but reached much farther into surrounding states. The areas outlined below were the general boundaries of the Dust Bowl from 1935 to 1938. The lined circle in the center is the area that sustained the most severe wind erosion.

Label the Oklahoma counties and surrounding states that were part of the Dust Bowl of the 1930s. Make a legend in the box provided that explains the information found on the map. Use map pencils to color the three Dust Bowl regions shown on the map.



Dust Bowl Map Legend



Dust Bowl Counties of Oklahoma

- | | |
|----------|----------|
| Beaver | Harper |
| Texas | Woodward |
| Cimarron | Woods |
| | Ellis |



Name _____

Dark Days on the Prairie A



Photo from the Edd Roberts Collection, courtesy of the Oklahoma Historical Society, 20778.AG.SCS.OKLA.350.A

Write a paragraph describing this picture.



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Dark Days on the Prairie B



Photo by G.L.Risen, Haskell Pruett Collection, courtesy of the Oklahoma Historical Society, 207790.ST.DU.1.4.

Write a paragraph describing this picture.



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Dark Days on the Prairie C



Photo by B. C. McLean, Edd Roberts Collection, courtesy of the Oklahoma Historical Society, 20778.AG.SCS.OKLA.197

Write a paragraph describing this picture.



Name _____

Dark Days on the Prairie D



Photo from the Edd Roberts Collection, courtesy of the Oklahoma Historical Society, 20778.AG.SCS.OKLA.119.

Write a paragraph describing this picture.

