

Mini-Qs™ in American History
VOLUME 2, UNIT 7

What Caused the
Dust Bowl?

MINI-Q™ LESSON PLAN

NOTE: Time required to do a Mini-Q varies greatly with skill level, grade, and DBQ experience. Time range is generally two to five 45 minute class periods.

1 to 2 DAYS: 45 – 90 minutes

Step One: The Hook Refer to the Step One teacher notes in the Mini-Q. Read the directions aloud. The purpose is to get students engaged, talking, and wanting to do the Mini-Q.

Step Two: Background Essay Refer to the Step Two teacher notes in the Mini-Q. Students can write out answers to the BGE questions or the questions can simply be discussed.

Step Three: Understanding the Question The first task of recognizing and defining key words in the question is a crucial habit of mind. The second task of pre-bucketing based on clues in the question is an important categorization skill.

2 DAYS: 90 minutes

Step Four: Document Analysis Model Document A with the whole class, showing the kind of thinking and detail you expect in student answers to the Document Analysis questions. Working in pairs or groups of three, students proceed to examine the remaining documents, writing answers to the Document Analysis questions, or alternatively, filling out the Document Analysis Sheet located in the Toolkit. Conclude by asking volunteer pairs to present the remaining documents to the class by going through the Document Analysis questions and discussing their answers.

1 DAY: 45 minutes

Step Five: Bucketing, Chickenfoot & Thrash-out Have students complete the bucketing and chickenfoot work page. This step will help students clarify their thesis and road map. Then do a Thrash-out.

1 DAY: 45 minutes (Optional)

Step Six: The Essay Conduct an in-class Writing Workshop. You may want to use the Outline Guide Sheet or the Guided Essay in the Toolkit. The Guided Essay is especially helpful for students needing extra support.

MINI-Q™ LESSON PLAN: CLEAN VERSION OPTION

If students are ready, use the Clean Version of the Mini-Q, which requires them to handle more of the analysis on their own. Estimated time to complete is 2 to 3 class periods.

TEACHER DOCUMENT LIST (EV)

There are 5 documents in this Mini-Q. Students are provided with the same document list but it is not divided into analytical categories or buckets. Students may develop buckets that are different from these.

Context

Document A: Dusters

Geography

Document B: Shortgrass Prairie (with photograph)

Mechanization

Document C: Fred Folkers, Tractors, and Combines (with photograph)

Document D: Acreage Under Plow (chart)

Weather

Document E: Rainfall on the Plains in the 1930s (charts)

What Caused the Dust Bowl?

EV



Dust storm approaching Stratford, Texas, April 18, 1935.

Overview: In the 1930s, America was hit by very bad times. These were the years of the Great Depression. In cities and in small towns across the land, banks were failing, businesses were closing, and workers were being fired. But in some ways farmers were hit hardest of all, and few farmers were hit harder than those in the Southern Great Plains, which extended into northern and central Texas. This region has come to be known as the Dust Bowl. The question for this Mini-Q is what caused the Dust Bowl tragedy.

The Documents:

Document A: Dusters

Document B: Shortgrass Prairie (with photograph)

Document C: Fred Folkers, Tractors, and Combines (with photograph)

Document D: Acreage Under Plow (chart)

Document E: Rainfall on the Plains in the 1930s (charts)

A Mini Document Based Question (Mini-Q)

Step One: The Hook

Teacher Note: The purpose of the Hook Exercise is to create some initial interest in the Mini-Q. Divide the class into pairs. Read the Background Essay aloud. Give the students about five minutes to talk through and make their decision. Tell them this is based on a true story.

Open the discussion to the whole class. Both the Osteen family and Baca County, Colorado, in the far southeastern part of the state, are very real. After the class finishes their discussion, you may want to tell them that Ike left. He didn't take any money from Oscar for his share of the farm.

For more on Ike Osteen, see Timothy Egan's *The Worst Hard Time*.

Hook Exercise: The Dust Bowl

The Background: The granddaddy duster had struck Stratford, Texas, on April 18, 1935. Across the plains, they called it Black Sunday and it just about did everybody in. Now it was late May and the Osteen family just up over the border in Baca County, Colorado, had a decision to make. The little dugout with its dirt floors had been home to nine children. Now with father dead, the family had choices to make. Mother and the two daughters, Anna and Rose, had already decided to walk away and move to town. The sons, Oscar, and Ike, could have the 320-acre farm. Ike had just graduated second in his class at Walsh High School and had given a little speech about how he loved Baca. He was the first Osteen ever to graduate from high school. But now what to do? Oscar said he was staying. He didn't know anything else and some day the rains would come back. The orchard was all dead but the elm tree was still alive ... and so was the mule.

Decision: You are Ike Osteen. You are 17 years old. It is dawn on May 28, 1935. You have a bundle of clothes tied up in an old shirt, a paper bag with two jackrabbit sandwiches inside, and a canteen of water. You are sitting at the table, writing a note to Oscar, saying he can have the farm, that you are walking up to Springfield to try to get a job with the railroad. But you stop writing. Is this what you really want to do? The job is a long shot. You look out the open door at the fields of dust and dirt. You don't have a dollar to your name.

Your Task: With a partner, talk through Ike's situation. Will you leave? You love your brother, but you've got to be true to yourself. Jot down your reasons for leaving or staying.

Reasons to Stay

Reasons to Leave

Your Decision:

Step Two: Background Essay

General Instructions

- Review the Timeline on the Background Essay Questions page and find the Southern Great Plains area on a map.
- Pre-teach the boldfaced vocabulary.
- Have students read, or read aloud, the Background Essay.
- Have students answer the Background Essay questions.

Specific Considerations

The main purpose of the Background Essay is to create a context for the Mini-Q exercise. Its job is to provide a sense of time, place, and story, and to introduce important vocabulary and concepts. Reading and working with the Background Essay gives all students a context for their essays.

Time: Be sure students review the Timeline on the Background Essay Questions page.

Place: Review the map in the Hook Exercise. In 1607, when the first British settlers arrived at Jamestown, most of the eastern United States was covered with forest. An exception was Illinois and parts of Indiana and southern Wisconsin, where tallgrass prairie was the dominant feature. The grasses could reach heights of seven feet. Between the Mississippi River and the Rocky Mountains, grass height lessened and gradually became the shortgrass prairie of the Northern and Southern Plains.

Story: Consider reading the Background Essay aloud. We believe it is helpful for many students, even strong readers, to hear the words as they see them. For many students, it is important to hear the cadence of the language, to experience pauses and emphasis.

Vocabulary and Concepts

You may want to pre-teach the five boldfaced terms in the essay. Our approach to vocabulary is that some pre-teaching is useful, but keep the word list short. Understanding vocabulary is another reason for reading aloud. Encourage students to use context clues to discover meaning.

Teaching Note

The term “dust bowl” can be a bit confusing because historians and geographers use it to designate both a place (the Southern Plains) and an event (the drought and harsh conditions of the 1930s).

What Caused the Dust Bowl?

On Thursday, April 18, 1935, a huge, black, billowing cloud piled up on the western horizon. For Stratford, Texas, and thousands of farms and small towns, it was the arrival of another dust storm, one of more than 300 that would make an unwelcome visit to the Southern Great Plains during the 1930s.

For thousands of years, the Southern Plains were covered by **shortgrass prairie** and provided home to vast herds of 20 or 30 million buffalo. In more recent times, people arrived. First came the Apache, the Comanche, and the Kiowa. Shortly after the Civil War, there came a few thousand cowboys and several million cattle. Then came farmers.

The first farmers arrived in the 1880s. Word had gotten out back east that the Southern Great Plains was good for wheat. Yes, rainfall was a bit spotty, but the land was cheaper than farmland in Arkansas or Illinois. Besides, it was said that rain would follow the plow. Grow crops and clouds would form.

With few trees for lumber, many of these early farmers lived in **soddies**, houses made of earth and grass. Soddies were soon replaced by wood frame houses. A severe drought in the 1890s caused some farmers to move away, but then the federal government sweetened the pot. A new **Enlarged Homestead Act** passed in 1909 offered 320 acres of land to anyone who could hang on for three years. Thousands of new farm families took up the offer. In addition, the giant XIT ranch on the Texas **panhandle** sold off much of its three-million-acre spread to wanna-be farmers. Wheat would replace cattle as

the new king of the Southern Plains.

Wheat fever was in the air. The railroad sent out branch lines to small towns, and more wheat could get to market. World War I, which brought so much pain to Europe, was good for Plains farmers. A hungry Europe bought Kansas wheat. Wheat that sold for 93 cents a bushel in 1914 was close to \$2.50 in 1919. More families moved in. Small towns popped up like spring

flowers. Boise City, out near the end of the Oklahoma panhandle, sported a theater, a newspaper, a furniture store, a bank, and several cafes.

But then trouble came. The Great Depression of the 1930s was the first blow.

Unemployment back east made it harder to sell wheat. Sadly, the Depression did not come alone. What made life on the Southern Plains almost unbearable were the dust

storms. In the middle thirties,

these wind-driven **dusters** darkened the midday sky and carried off millions of tons of precious topsoil as far as Washington, DC and New York City. During the 1930s, more than three million plains settlers left their farms – some for town, some for a neighboring state, some for California. Many more, however, stayed put, covering their windows with a water-soaked sheet, eating jackrabbit stew at a kitchen table where an “eating” cloth covered all the plates and drinking cups. Children died from breathing in dust. They called it “dust pneumonia.” Writer Timothy Egan has titled his book on Dust Bowl history as *The Worst Hard Time*.

But exactly what happened to cause this worst hard time? Examine the documents that follow and do your best to answer the question before us: *What caused the Dust Bowl?*



Step Two: Background Essay (continued)

Answers to Background Essay Questions

1. What two states in the Dust Bowl region have panhandles?

Texas and Oklahoma

2. Could a child born in a soddy in the 1880s have been a farmer during the Dust Bowl years? Explain your thinking.

Yes. A child born in 1880 would have only been in his or her fifties during the Dust Bowl years.

3. What economic effect did World War I have on Plains wheat farmers? Explain.

World War I created a food shortage in Europe. This meant that Plains wheat farmers were able to sell their wheat to European countries at a high price.

4. List three pieces of evidence that support the idea that the Dust Bowl was “the worst hard time.”

- hanging wet sheets over windows to keep out dust
- eating jackrabbits
- children dying from inhaling dust particles

5. Did most people leave the Southern Plains during the Dust Bowl years?

No

6. Define or explain each of these terms:

shortgrass prairie: grass on the Southern Plains

soddies: houses made of earth and grass because there were few trees available

Enlarged Homestead Act: an act passed by Congress in 1909 which gave settlers 320 acres if they lived on the property for at least three years (This doubled the land offered by the 1862 Homestead Act.)

panhandle: a piece of land, as in Texas, that sticks out a bit like the handle of a pan. Oklahoma, Florida, and Alaska also have panhandles.

dusters: dust storms; term especially used in the Southern Plains

- ✓ Write a two- or three-sentence summary of the Background Essay describing time, place, and story.

The grasslands of the Southern Plains had long been home to Native Americans before cowboys and cattle arrived, and then wheat farmers. At first, the farmers did well, but when the Great Depression came, prices dropped. Worse, though, were the dust storms of the mid-1930s that devastated the region.

Background Essay Questions

1. What two states in the Dust Bowl region have panhandles?
 2. Could a child born in a soddy in the 1880s have been a farmer during the Dust Bowl years? Explain your thinking.
 3. What economic effect did World War I have on Plains wheat farmers? Explain.
 4. List three pieces of evidence that support the idea that the Dust Bowl was “the worst hard time.”
 5. Did most people leave the Southern Plains during the Dust Bowl years?
 6. Define or explain each of these terms:
 - shortgrass prairie
 - soddies
 - Enlarged Homestead Act
 - panhandle
 - dusters
- ✓ Write a two- or three-sentence summary of the Background Essay describing time, place, and story.

1929– U.S. unemployment is 1.6 million.

1932 – U.S. unemployment is 12.1 million.

1933 – Prohibition is repealed.

1934 – Dallam County, Texas, records less than ten inches of rainfall.

1935 – Soil Conservation Service is created to stop erosion in Dust Bowl.

1936 – Jesse Owens wins four gold medals in Olympics in Nazi Berlin.

1939 – John Steinbeck’s *The Grapes of Wrath* is published.

Step Three: Understanding the Question

Understanding the Question

Answers to student questions:

1. What is the analytical question asked by this Mini-Q?

What caused the Dust Bowl?

2. Is there any term in the question that needs definition?

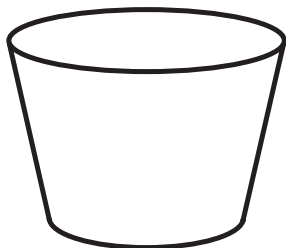
Dust Bowl

3. Restate the question so that your interpretation of the term “Dust Bowl” is clearly understood.

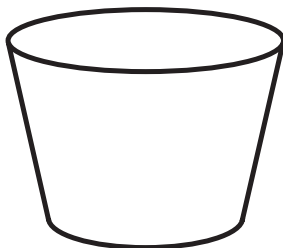
What caused the conditions that led to the terrible dust storms in the Southern Plains during the 1930s?

Pre-Bucketing

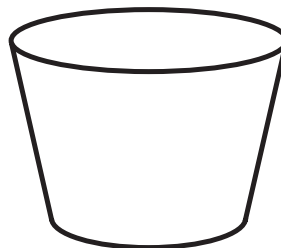
Note: As students suggest their bucket labels, draw bucket sets on the board. At this stage, students are simply looking for generic labels that provide the framework for organizing their essays. For this Mini-Q essay, we suggest a three bucket format at this pre-bucketing stage. For each bucket, students will need to decide one likely cause of the Dust Bowl.



Cause #1



Cause #2



Cause #3

Suggestions for Differentiation:

1. Give the students all or some of the final bucket labels.
2. Ask students to use the Background Essay and the Hook to predict what the bucket labels might be. As they read the documents, they can see whether their predictions were correct.

Understanding the Question and Pre-Bucketing

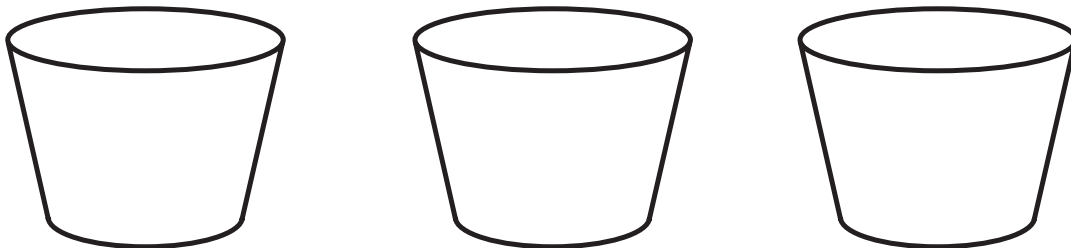
Understanding the Question

1. What is the analytical question asked by this Mini-Q?
2. What terms in the question need to be defined?
3. Rewrite the question in your own words.

Pre-Bucketing

Bucketing is designed to help you sort evidence from the documents into groups or categories. These buckets eventually become your body paragraphs.

Directions: Using clues from the Mini-Q question, think of logical analytical categories and label the buckets. We suggest a three-step bucketing strategy. At this point, your bucket labels should be very general. Later, as you read through the documents and start filling your buckets with evidence, the labels will become more specific.



Step Four: Document Analysis

Document A: Dusters

Content Notes:

- First, there were two kinds of dusters. There were the more continual sand-bearing winds that blew from the west and built up drift dunes against buildings and fences. Sand storms stayed low. Second, there were the great, billowing 7,000-to-8,000-foot high black clouds of dust that were carried in by a polar air mass. These were sometimes attended by thunder and lightning and could be frightening. More than a few diary accounts speak of the end of the world.

- Dust storms in the Southern Plains occurred before the 1930s and they certainly have occurred since. What made the '30s different is the frequency. Soil Conservation Service "frequency report" provides these dust storm numbers for the Southern Plains:

1932	14
1933	38
1934	22
1935	40
1936	68
1937	72
1938	61
1939	30
1940	17

- Health consequences of the dust storms were serious. In the month following Black Sunday (April 14, 1935), four small hospitals in Meade County, Kansas, reported that over half of their admissions were respiratory cases. Of these, 33 people died. Gauze masks and Vaseline around the nostrils were not enough to protect the most vulnerable, especially babies and the elderly. The cause of death was usually given as "dust pneumonia."
- Margaret Bourke-White was a famous photographer for *Life* magazine.

Teaching Tips:

- Discuss the Document Analysis questions:

1. Does this document contain primary source material? Explain.

The document includes at least one primary source quotation, the recollection of Avis Carlson. The Bourke-White quote is less clearly primary.

2. What does the author mean when he says, "the earth ran amok"?

To "run amok" is to be out of control.

3. What problem was shared by both people and cattle?

Both animals and people breathed in dust. It could be deadly.

4. Does this document do a better job of describing dust storm conditions or explaining causes behind the dust storm problem?

The document describes conditions; it does not explain causes.

5. In a short essay entitled, "What Caused the Dust Bowl?" how might you use this document?

One use would be to give some background information in an introductory paragraph.

- Ask students to refer to the photo on the cover page. Read them the first Content Note that distinguishes between the "sand storm dusters" and the towering black blizzard dusters. Which is shown in the photo? (black blizzard duster) Can students sympathize with Plains people who feared the end of the world?

Document A

Source: Donald Worster, *Dust Bowl: The Southern Plains in the 1930s*, 1979.

The story of the southern plains in the 1930s is essentially about dust storms, when the earth ran amok. And not once or twice, but over and over for the better part of a decade: day after day, year after year, of sand rattling against the window, of fine powder caking one's lips, of springtime turned to despair....

In the memory of older plains residents, the blackest year was 1935.... On 15 March, Denver reported that a serious dust storm was speeding eastward. Kansans ignored the radio warnings, went about their business as usual, and later wondered what had hit them. Smalltown printer Nate White was at the picture show when the dust reached Smith Center: as he walked out the exit, it was as if someone had put a blindfold over his eyes; he bumped into telephone poles, skinned his shins on boxes and cans in the alleyway, fell to his hands

and knees, and crawled along the curbing to a dim houselight....

Livestock and wildlife did not have even ... crude defenses. "In a rising sand storm," wrote Margaret Bourke-White, "cattle quickly become blinded. They run around in circles until they fall and breathe so much dust that they die. Autopsies show their lungs caked with dust and mud."...

Avis Carlson told what it was like at night: "A trip to water to rinse the grit from our lips. And then back to bed with washcloths over our noses. We try to lie still, because every turn stirs the dust on the blankets. After a while, if we are good sleepers, we forget."

EV

Document Analysis

1. Does this document contain primary source material? Explain.
2. What does the author mean when he says "the earth ran amok"?
3. What problem was shared by both people and cattle?
4. Does this document do a better job of describing dust storm conditions or explaining causes behind the dust storm problem?
5. In a short essay entitled, "What Caused the Dust Bowl?" how might you use this document?

Step Four: Document Analysis (continued)

Document B: Shortgrass Prairie (with photograph)

Content Notes:

- Until 200 years ago, the great American grasslands extended from Ohio to the Rocky Mountains. In the eastern parts, the grass received more rain and grew tall, as high as seven feet. In the Southern and Western Plains, where rainfall was under 20 inches per year, the land was covered by several species of short grasses. In the Dust Bowl region, the most common of these was buffalo grass.
- The trees that existed in the Southern Plains grew mostly along the river bottoms – cottonwood, willow, and wild plum.
- The job of the buffalo grass, and its other shortgrass friends, was to hold the soil in place and capture the sun’s energy, converting it into a food source for tens of millions of buffalo, and perhaps as many as 20 million pronghorn antelope. Ultimately, all up and down the food chain, wildlife depended on the shortgrass prairie. This included carnivores like wolves, coyote and eagles as well as smaller critters like jackrabbits, prairie dogs, pocket gophers, mice, rattlesnakes, skunks, and moles.
- The shortgrass prairie has ebbed and flowed over the centuries. Drought has caused it to recede; wet periods have caused it to expand. It had been around for hundreds of thousands, perhaps millions of years, withstanding much of what Mother Nature threw at her. The shortgrass prairie was the ecological underpinning of the Southern Plains. Settlers would tamper with it at their peril.
- Different animals eat grass in different ways, which can impact grasslands. For example, cows like shorter grasses (about six inches tall) and they leave about two inches of the stalk intact. Sheep, in contrast, are more selective grass eaters, but they tend to snip grasses much closer to the ground. The number of cows or sheep grazing also affects grasslands because of their trampling of the ground.
- Discuss with students if they think it is possible to manage grasslands so they both are productive and conserved.

Teaching Tips:

- Review the Document Analysis questions:
 1. Look at the photograph. How would you describe what the shortgrass prairie looks like?

It looks like a huge meadow, a pretty, rolling grassland.
 2. According to the note, how fast were wind speeds on the shortgrass prairie of the Southern Great Plains?

Over 60 miles-per-hour, on average
 3. The shepherd says that grass “holds the earth together.” What does he mean?

The shortgrass prairie acts as a giant spongy mat that absorbs rainwater and prevents erosion. It covers the soil and holds it in place.
 4. Make an inference about what might happen if the tough mat of grass were removed.

The soil will eventually turn into dust if the shortgrass prairie is not allowed to regrow and if there is not enough rain to sustain the planted crops.
 5. How can you use this document to help answer the question, “What Caused the Dust Bowl?”

Ignoring the importance of the shortgrass prairie could cause problems if plowed fields were to dry up and dirt was to blow around. Destroying the shortgrass prairie seems a likely cause of the Dust Bowl.

Document B

Source: Texas sheepherder quoted in *Rich Land, Poor Land* by Stuart Chase, 1936.

“Grass is what counts. It’s what saves us all – far as we get saved....
Grass is what holds the earth together.”

EV

Source: Photo of prairie in the Dust Bowl region; date unknown.



Until about 200 years ago, grasslands extended from Indiana to the Rocky Mountains. The eastern part of these Great Plains received about 50 inches of rain, on average, per year. There, the grass grew as high as seven feet tall. In the Southern Plains, the Dust Bowl region, the most common grass was buffalo grass, and it only grew about 4 inches high. It produced a tough, grassy mat that for hundreds of thousands of years helped protect a thin layer of soil from eroding. On the shortgrass prairie where the Dust Bowl occurred, the average wind speeds were (and still are) nearly double that of other parts of the Great Plains. During some of the worst dust storms of the 1930s, winds regularly averaged speeds of over 60 miles-per-hour.

Document Analysis

1. Look at the photograph. How would you describe what the shortgrass prairie looks like?
2. According to the note, how fast were wind speeds on the shortgrass prairie of the Southern Great Plains?
3. The sheepherder says that grass “holds the earth together.” What does he mean?
4. Make an inference about what might happen if the tough mat of grass were removed.
5. How can you use this document to help answer the question, “What Caused the Dust Bowl?”

Step Four: Document Analysis (continued)

Document C: Fred Folkers, Tractors, and Combines (with photograph)

Content Notes:

- Originally from Missouri, Fred Folkers lived on a farm outside of Boise City on the Oklahoma panhandle. When Folkers arrived, the panhandle was called “No Man’s Land” because it was not yet an official part of any territory or state.
- The one-way disk plow that Folkers and thousands of other wheat farmers bought did not cut as deeply as the old moldboard plow. It moved through the earth quickly. It left a more pulverized soil, which better absorbed the precious rain water, but in drought years was vulnerable to blowing.
- The combine did two jobs at once. It cut the wheat and then threshed it, that is, separated the wheat grain from the straw stem. By 1930, more than half the farmers in the wheat-growing plains owned a combine, or more accurately, took out a loan to buy a combine.
- The effect of the new machines on wheat farmers was sometimes close to giddiness. It turned the old-time sodbuster into “an operator,” a “mechanic.”

Teaching Tips:

- Discuss the Document Analysis questions:
 1. Why did Fred Folkers need a tractor, a plow, and a combine? What did each do?

The tractor pulled farm implements like plows and combines. The plow broke the grass sod and turned the soil over, making the soil ready for planting. The combine did two things: it cut the wheat and separated the wheat grain from the stalk.
 2. The author says that the tractor “changed everything.” What does he mean?

The tractor changed everything by reducing the time required to farm an acre of wheat. It meant larger farms and the loss of more and more short-grass prairie.
 3. What detail from the photo might you use to support the details in the quote about Fred Folkers?

The machines that Simon Fishman is so obviously proud of seem powerful and efficient. The prairie did not stand a chance, and the Fred Folkers of the world may have been great businessmen in the short run, but eventually they were going to destroy the grass that held the soil in the earth.
 4. How does this document help answer the question, “What caused the Dust Bowl?”

It suggests that machines like the tractor and the plow might have contributed to the destruction of the protective layer of grass that held the soil in place.
- Fred Folkers, like many Plains wheat farmers, borrowed money from his local bank to buy his machinery. Does this make the bank partly responsible for stripping the grass and helping to cause a Dust Bowl?
- It is 1930. Ask students to imagine that they had owned ten shares of stock in Case International Harvester, the company that sold Fred Folkers his combine. Would they, as investors, have shared the blame for stripping the buffalo grass off the prairie and causing the Dust Bowl? Who is responsible for taking care of the environment?

Document C

Source: Timothy Egan, *The Worst Hard Time*, 2006.

With a horse-drawn plow, Fred Folkers produced nearly enough to stay afloat. What changed everything for him, and other dryland farmers, was the tractor.... A tractor did the work of ten horses. With his new combine, Folkers could cut and thresh the grain in one swoop, using just a fraction of the labor.... Folkers plowed nearly his entire square mile, and then paid to rent nearby property and ripped up that grass as well. By the late 1920s, his harvest was up to ten thousand bushels of wheat – a small mountain of grain. What’s more, there was now an easy way to get the wheat of Fred Folkers ... to the rest of the world. In 1925, a train finally arrived in Boise City....

EV

Source: Photo courtesy of Kansas State Historical Society, 1925.



Wheat king Simon Fishman (in coat and tie) and his employees working the land. Greeley County, Kansas, 1925.

Document Analysis

1. Why did Fred Folkers need a tractor, a plow, and a combine? What did each do?
2. The author says that the tractor “changed everything.” What does he mean?
3. What detail from the photo might you use to support the details in the quote about Fred Folkers?
4. How does this document help answer the question, “What Caused the Dust Bowl?”

Step Four: Document Analysis (continued)

Document D: Acreage Under Plow (chart)

Content Notes:

- Franklin Roosevelt's letter to the Great Plains Drought Area Committee members in 1935 began as follows:

I am writing to ask you to serve as a member of a Great Plains Drought Area Committee to carry on a study looking toward the most efficient utilization of the natural resources of the Great Plains area, and especially toward practicable measures for remedying the conditions which have brought widespread losses and distress to so many inhabitants of the Missouri, Platte and Arkansas valleys, the Panhandles of Oklahoma and Texas, and contiguous areas.

- The actual numbers (rounded) represented by the drawings are as follows:
 - 12,000,000 acres
 - 53,000,000 acres
 - 103,000,000 acres
- The chart is for all crop land in the eight Great Plains states – North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, eastern Colorado, and eastern New Mexico. The acreage under plow in 1929 in the more limited Dust Bowl area is estimated at 44,000,000 acres.

Teaching Tips:

- Discuss the Document Analysis questions:
 - Is this document a primary or a secondary source? Explain your thinking.

Arguable. The source is primary in that it is from the period and from a government document. It is secondary in that the acreage data had to be drawn from other sources.
 - How many acres of crops were harvested in the Plains states in 1879? In 1899? In 1929?

10 million acres; 50 million acres; 100-plus million acres
 - What generalization can you make about the information in this chart?

The number of acres farmed on the Plains increased about tenfold between 1879 and 1929, and the increase was largely due to machines.
 - How does this chart help answer the question, "What caused the Dust Bowl?"

There seems to be a strong connection between machines, grassland turned over by the plow, and dust storms.
- Discuss the fact that the chart deals with the entire Great Plains, not just the Dust Bowl region. Is it reasonable to infer that harvested acreage in the Dust Bowl region increased at the same rate as the Plains in general? (This is an interesting question. Documents frequently do not provide a perfect fit with the question. A student who recognizes the imperfect fit between document and question is using critical thinking skills.)

Step Four: Document Analysis (continued)

Document E: Rainfall (charts)

Content Notes:

- John Wesley Powell was one of the first to warn Americans that farming beyond the 100th meridian (line of longitude) was unwise. There simply was not enough rainfall. He also argued against the continued distribution of 160-acre homesteads in the region. He supported enlarged tracts of four square miles (2,560 acres), not for farming but for small ranching operations. He was criticized in the 1880s for being pessimistic and undemocratic. However, a half century later, during the years of the Dust Bowl, Powell was seen as a level-headed prophet.
- The 100th meridian cuts through the middle of Kansas and Oklahoma. The rainfall charts support Powell's early findings that rainfall west of the 100th meridian averaged under 20 inches per year. One reason that Powell and others had trouble convincing sodbusters to stay away from farming the Southern Plains was that the rainfall averages were just that – averages. There were years that were wet. 1923 was unusually wet, and there were occasional strings of wet years that lured families into the region.
- The Depression era drought that overwhelmed the Plains really began in 1933. During the next eight years, the average rainfall in Dalhart was 12.4 inches.

Teaching Tips:

- Discuss the Document Analysis questions:
 1. According to John Wesley Powell, how much annual rainfall was necessary to grow crops in arid regions like the Southern Great Plains?
20 inches
 2. To the nearest inch, what was the average annual rainfall of the five Dust Bowl towns?
17 inches
 3. From 1931 to 1940, how many years was Dalhart's rainfall below normal?
nine years
 4. How do these charts together help answer the question, "What caused the Dust Bowl?"
The main idea is two-fold: 1) in normal times, the Southern Plains does not get enough rainfall to support farming; 2) in the 1930s it was even worse.
- Mention that, throughout the Depression years, most farmers in the Dust Bowl region tried to put in a crop every year, hoping that the drought would break. There were a few years where some farmers got absolutely no harvest.
- The term "Dust Bowl" was possibly first used by an AP reporter from Denver. In a dispatch sent to the *Washington Evening Star* on April 15, 1935, Robert Geiger wrote: "Three little words, achingly familiar on a Western farmer's tongue, rule life in the dust bowl of the continent – if it rains."

Document E

Source: Data compiled from the High Plains Regional Climate Center, University of Nebraska, Lincoln, Nebraska.

Normal Annual Precipitation for Five Dust Bowl Towns	
Town	Normal Precipitation (inches)
Clovis, New Mexico	17.64
Boise City, Oklahoma (panhandle)	17.00
Dalhart, Texas (panhandle)	17.87
Burlington, Colorado	16.38
Goodland, Kansas	18.02

Note: John Wesley Powell, the great Western explorer, determined that 20 inches of rain annually was the minimum for successful farming on the Plains. But, he said, "... at 20 inches agriculture will not be uniformly successful from season to season."

EV

Source: From Randy Francis, *The Texas Dust Bowl in Historical Perspective*, 1998.

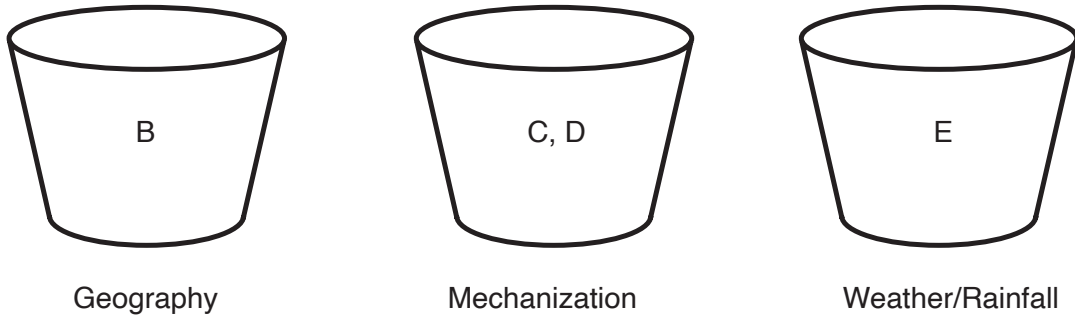
Actual Precipitation for Dallam County, Texas (County Seat, Dalhart)	
1923	33.40 inches
1924	15.32
1931	14.66
1932	20.09
1933	10.14
1934	9.78
1935	13.31
1936	9.93
1937	14.48
1938	14.08
1939	14.75
1940	12.74

Document Analysis

1. According to John Wesley Powell, how much annual rainfall was necessary to grow crops in arid regions like the Southern Great Plains?
2. To the nearest inch, what was the average annual rainfall of the five Dust Bowl towns?
3. From 1931 to 1940, how many years was Dalhart's rainfall below normal?
4. How do these charts together help answer the question, "What caused the Dust Bowl?"

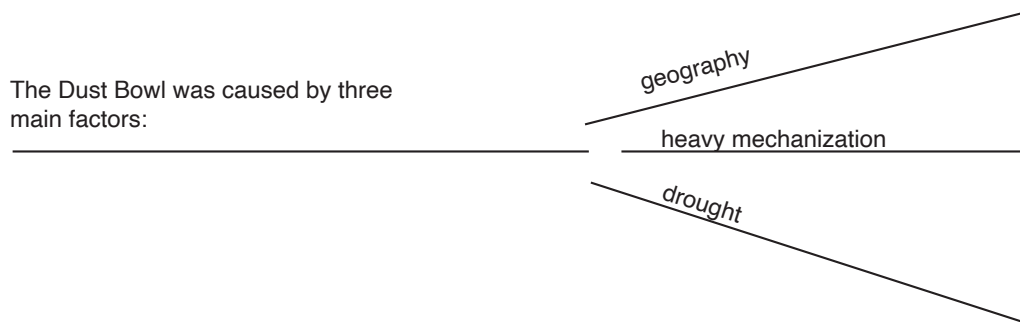
Step Five: Bucketing, Chickenfoot & Thrash-out

Task One: Bucketing



Task Two: Thesis Development and Road Map

Once students decide on their buckets and the order of the buckets, have them transfer the bucket labels onto the “toes” of the chickenfoot. The “leg” of the chickenfoot should address the question. In the outline, students should use the chickenfoot to write their thesis and road map.

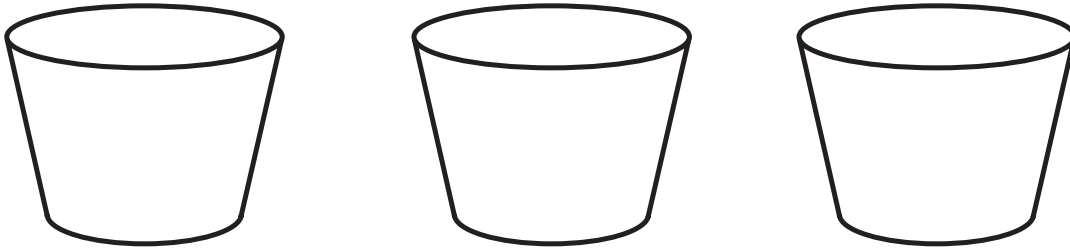


Thrash-out Students benefit from discussing, or “thrashing out,” their responses to the Mini-Q question before they write. This can be an informal debate or a discussion. Students join a team or a group and then explain to their peers how the documents in the Mini-Q can be used to answer the question. This activity can be done any time before students write.

Bucketing – Getting Ready to Write

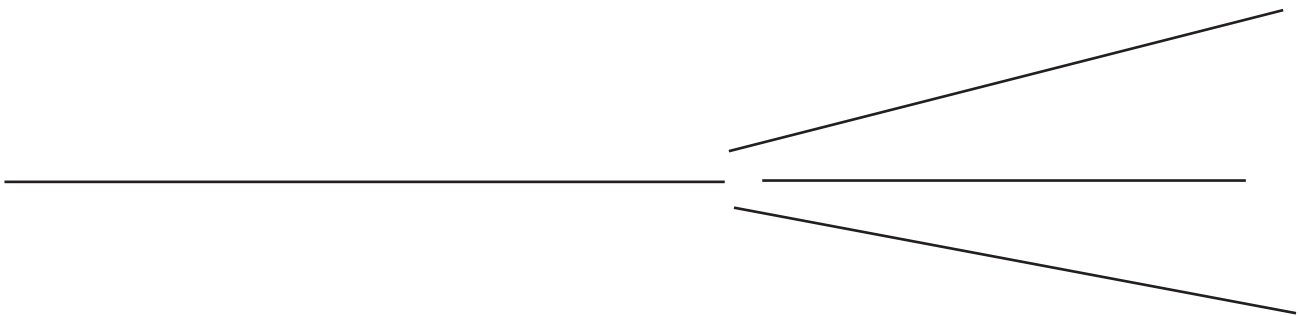
Bucketing

Look over all the documents and organize them into your final buckets. Write labels under each bucket and place the letters of the documents in the buckets where they belong. It is okay to put a document in more than one bucket. That is called multi-bucketing, but you need a good reason for doing so. Remember, your buckets are going to become your body paragraphs.



Thesis Development and Road Map

On the chickenfoot below, write your thesis and your road map. Your thesis is an arguable claim that answers the question. The road map is created from your bucket labels and lists the topic areas you will examine in order to prove your thesis.



Step Six: The Essay

Mini-Q Essay Outline Guide

IMPORTANT

For students new to DBQs, young students, and students needing extra writing support, see the Guided Essay form in the Teacher's Toolkit.

Working Title What Caused the Dust Bowl?

Paragraph #1

Grabber: Timothy Egan called it “The worst hard time.”

Background: Dust storms hit the Southern Plains in the 1930s. Over 300. Texas and Oklahoma panhandles hard hit. Same time as Depression. A double blow.

Stating the question with key terms defined: What caused these dust storms?

Thesis and road map: Three reasons for the Dust Bowl: loss of shortgrass prairie, machinery, and lack of enough rain.

Paragraph #2

Baby Thesis for bucket one: One cause of the Dust Bowl was the loss of the shortgrass prairie.

Evidence: supporting detail from documents with document citation

“Grass is what holds the earth together.” (Doc B)

Enlarged Homestead Act brought in more farmers to grow wheat. (Background Essay)

Argument: connecting evidence to the thesis

Grass was needed to hold the soil in place because of the extremely windy conditions. As people started to move to the area to take advantage of the Homestead Act, they started to plow up land, destroying the natural shortgrass prairie—the geography of the area could not sustain that destruction.

Paragraph #3

Baby Thesis for bucket two: New farm machinery helped cause the Dust Bowl.

Evidence: Tractor plus combine could do the work of ten horses. (Doc C)

Between 1899 and 1929 the number of acres harvested in the plains doubled. (Doc D)

Fred Folkers a good example. (Doc C)

Argument: This machinery caused the shortgrass prairie to be plowed up even faster.

Paragraph #4

Baby Thesis for bucket three: A third cause of the Dust Bowl was the lack of rainfall.

Evidence: Plains farmers needed 20 inches of rain a year to produce crops. (Powell, Doc E)

Normal rain in Southern Plains was between 16 and 18 inches. (Doc E)

In 1930s many areas in Southern Plains got between 10 and 15 inches a year.

Argument: Lack of rain caused huge dust storms. In combination with the 60 mph wind speeds (Doc B), the drought and the wind created sand and dust storms. Dust blew to Washington, DC.

Paragraph #5

Conclusion: Restatement of main idea along with possible insight or wrinkle

Result of strong winds and grasslands (geography), machinery cutting up the shortgrass, and lack of rain created a disaster. Many people moved. Jackrabbit stew. Table cloths to keep dust off food. Dust pneumonia. Finish with Avis Carlson quote (Doc A).

From Thesis to Essay Writing

Mini-Q Essay Outline Guide

Working Title

Paragraph #1

Grabber

Background

Stating the question with key terms defined

Thesis and road map

Paragraph #2

Baby Thesis for bucket one

Evidence: supporting detail from documents with document citation

Argument: connecting evidence to the thesis

Paragraph #3

Baby Thesis for bucket two

Evidence

Argument

Paragraph #4

Baby Thesis for bucket three

Evidence

Argument

Paragraph #5

Conclusion: Restatement of main idea along with possible insight or wrinkle

EV

Mini-Q Sample Essay: Non-Proficient What Caused the Dust Bowl?

It has been called the Worst Time Ever. It was in the 1930s and it spread across America. It had lots of causes like the prairie grass and the rainfall.

The first cause was the prairie grass. It was called shortgrass prairie and it was about four inches tall. It was excellent for cattle to eat but not so good for wheat farming. You had to dig it up which was a problem. (Doc B)

The second big cause was the farm machinery. It helped the farmers plow quickly and it could even pull a combine which means they could separate the wheat from the straw which on a hot day saves a lot of time.

The third big cause was the rainfall. It just didn't very much. You needed at least 30 inches a year to farm and farmers were lucky to get that. But it was their fault because a man named Powell warned them all about it. (Doc E)

America is a great country but sometimes it doesn't all work out. But that's OK. I'll bet most of the farmers understand. They believe in this country which is the best.

Mini-Q Sample Essay: Basic Proficiency What Caused the Dust Bowl?

It has been called the "Worst Hard Time." This was the decade of the 1930s, when the Southern Plains were hit by 300 dust storms. What caused these terrible storms? There were three main reasons: the loss of prairie grass, new farm machinery, and low rainfall.

One cause of the Dust Bowl storms was the loss of the shortgrass prairie. For many years, the grass grew on these prairie lands in response to its windy conditions. (Doc B) An old Texas sheepherder said that "Grass is what holds the earth together." (Doc B) That is true. The roots keep the soil from blowing away. When wheat farmers moved in and replaced cattle ranchers, they plowed up the grass and left the soil unprotected. But the strong winds blew as they had for years.

A second cause of the Dust Bowl was machines like the tractor and the combine. These helped wheat farmers like Fred Folkers to plow up more grass and plant more crops. It seemed good for him but was bad for the land. (Doc C) Between 1899 and 1929, the number of acres harvested in the Great Plains about doubled. (Doc D) The machines made the shortgrass prairie disappear even faster.

A final cause of the dust storms was the low rainfall. The normal yearly average in the region was between 16 and 18 inches. In the 1930s, this dropped to between 10 and 15 inches. (Doc E) The soil got even drier and the winds just picked it up and blew it away.

It is pretty clear why there were such terrible storms and why people had to eat under tablecloths and put washcloths over their faces when they slept. There was too little grass, too much wind, too many tractors, and too little rain. The sad result was the Dust Bowl.

Mini-Q Sample Essay: Higher Proficiency What Caused the Dust Bowl?

Historian Timothy Egan called it “The Worst Hard Time.” These were the Dust Bowl years that nearly smothered the Southern Plains in the 1930s. The Texas and Oklahoma panhandles were especially hard hit. During these years, the entire nation was knocked about by the Depression but the Southern Plains received a double blow, an economic depression and then a series of more than 300 dust storms that just wore people down. The question is, what caused these storms? It was really a combination of man’s mistakes and nature doing what nature had been doing for thousands of years. There were three main reasons for the storms and the Dust Bowl that was created: the loss of the shortgrass prairie, the heavy use of farm machinery, and a lack of rain.

The loss of the shortgrass prairie that carpeted the Southern Plains was a main cause of the Dust Bowl. For centuries, the grass had evolved on these prairie lands, adapting to its extreme windy conditions. (Doc B) The grass only stood about four inches high, but the roots held the soil in place despite the strong winds that could average over 60 miles-per-hour. (Doc B) In the late 1800s, it was mostly cattle ranchers that settled on the Southern Plains. The cattle grazed on the grass, but it could grow back. The problem came when a new Enlarged Homestead Act in 1909 encouraged wheat farmers to settle these lands. (BGE) The shortgrass prairie began to disappear as it was plowed up for wheat. The dirt was no longer protected from the winds that continued to blow fiercely, just as they had for centuries.

The shortgrass prairie might have survived if it were not for the new farm machinery. Take the case of Fred Folkers of Boise City, Oklahoma. In the 1920s Folkers bought a new tractor and a combine. The tractor and combine did the work of ten horses. (Doc C) It greatly increased what Folkers could grow. It also greatly increased the amount of shortgrass prairie he tore up. And Fred Folkers was not alone. Between 1899 and 1929, in the eight states that made up the Great Plains, the number of acres harvested more than doubled. (Doc D) To make matters even worse, the plow that Folkers and others used pulverized the soil. It left little crumbs of soil that could more easily blow away. More machinery meant less grass and less grass meant more dry dirt for the strong winds to pick up and blow away.

The final reason for the Dust Bowl disaster was drought. According to John Wesley Powell, farmers in the Plains needed at least 20 inches of rain in a year to make a wheat crop. (Doc E) Southern Plains wheat farmers were already living on the edge with normal annual precipitation between 16 and 18 inches. (Doc E) In the 1930s drought hit, with average annual rainfall running between 10 and 15 inches. Dry soil was easily picked up by the winds and blown hundreds of miles, sometimes as far as Washington, DC.

The result of the loss of the shortgrass prairie, the extreme winds, the widespread use of machines, and the lack of rainfall was a near disaster. Many farm families moved to neighboring states or to California. Those that stayed in the region, and it was the majority, lived behind water-soaked curtains and ate jackrabbit stew from under a tablecloth. Children died from dust pneumonia. People slept with washcloths over their noses. Describing such nights, Avis Carlson recalled, “After a while, if we are good sleepers, we forget.” (Doc A) But Americans today should not forget. The land is delicate. If we are sure to consider geography and climate—and are careful how we farm and where we farm—we can reduce the chances of another Dust Bowl in the future.

TEACHER DOCUMENT LIST (CV)

There are 5 documents in this Mini-Q. Students are provided with the same document list but it is not divided into analytical categories or buckets. Students may develop buckets that are different from these.

Context

Document A: Dusters

Geography

Document B: Shortgrass Prairie (with photograph)

Mechanization

Document C: Fred Folkers, Tractors, and Combines (with photograph)

Document D: Acreage Under Plow (chart)

Weather

Document E: Rainfall on the Plains in the 1930s (charts)

What Caused the Dust Bowl?

CV



Dust storm approaching Stratford, Texas, April 18, 1935.

Overview: In the 1930s, America was hit by very bad times. These were the years of the Great Depression. In cities and in small towns across the land, banks were failing, businesses were closing, and workers were being fired. But in some ways farmers were hit hardest of all, and few farmers were hit harder than those in the Southern Great Plains, which extended into northern and central Texas. This region has come to be known as the Dust Bowl. The question for this Mini-Q is what caused the Dust Bowl tragedy.

The Documents:

Document A: Dusters

Document B: Shortgrass Prairie (with photograph)

Document C: Fred Folkers, Tractors, and Combines (with photograph)

Document D: Acreage Under Plow (chart)

Document E: Rainfall on the Plains in the 1930s (charts)

A Mini Document Based Question (Mini-Q)

The Hook

Teacher Note: The purpose of the Hook Exercise is to create some initial interest in the Mini-Q. Divide the class into pairs. Read the Background Essay aloud. Give the students about five minutes to talk through and make their decision. Tell them this is based on a true story.

Open the discussion to the whole class. Both the Osteen family and Baca County, Colorado, in the far southeastern part of the state, are very real. After the class finishes their discussion, you may want to tell them that Ike left. He didn't take any money from Oscar for his share of the farm.

For more on Ike Osteen, see Timothy Egan's *The Worst Hard Time*.

Hook Exercise: The Dust Bowl

The Background: The granddaddy duster had struck Stratford, Texas, on April 18, 1935. Across the plains, they called it Black Sunday and it just about did everybody in. Now it was late May and the Osteen family just up over the border in Baca County, Colorado, had a decision to make. The little dugout with its dirt floors had been home to nine children. Now with father dead, the family had choices to make. Mother and the two daughters, Anna and Rose, had already decided to walk away and move to town. The sons, Oscar, and Ike, could have the 320-acre farm. Ike had just graduated second in his class at Walsh High School and had given a little speech about how he loved Baca. He was the first Osteen ever to graduate from high school. But now what to do? Oscar said he was staying. He didn't know anything else and some day the rains would come back. The orchard was all dead but the elm tree was still alive ... and so was the mule.

Decision: You are Ike Osteen. You are 17 years old. It is dawn on May 28, 1935. You have a bundle of clothes tied up in an old shirt, a paper bag with two jackrabbit sandwiches inside, and a canteen of water. You are sitting at the table, writing a note to Oscar, saying he can have the farm, that you are walking up to Springfield to try to get a job with the railroad. But you stop writing. Is this what you really want to do? The job is a long shot. You look out the open door at the fields of dust and dirt. You don't have a dollar to your name.

Your Task: With a partner, talk through Ike's situation. Will you leave? You love your brother, but you've got to be true to yourself. Jot down your reasons for leaving or staying.

Reasons to Stay

Reasons to Leave

Your Decision:

Background Essay

General Instructions

- Review the Timeline on the Background Essay Questions page and find the Southern Great Plains area on a map.
- Pre-teach the boldfaced vocabulary.
- Have students read, or read aloud, the Background Essay.
- Have students answer the Background Essay questions.

Specific Considerations

The main purpose of the Background Essay is to create a context for the Mini-Q exercise. Its job is to provide a sense of time, place, and story, and to introduce important vocabulary and concepts. Reading and working with the Background Essay gives all students a context for their essays.

Time: Be sure students review the Timeline on the Background Essay Questions page.

Place: Review the map in the Hook Exercise. In 1607, when the first British settlers arrived at Jamestown, most of the eastern United States was covered with forest. An exception was Illinois and parts of Indiana and southern Wisconsin, where tallgrass prairie was the dominant feature. The grasses could reach heights of seven feet. Between the Mississippi River and the Rocky Mountains, grass height lessened and gradually became the shortgrass prairie of the Northern and Southern Plains.

Story: Consider reading the Background Essay aloud. We believe it is helpful for many students, even strong readers, to hear the words as they see them. For many students, it is important to hear the cadence of the language, to experience pauses and emphasis.

Vocabulary and Concepts

You may want to pre-teach the five boldfaced terms in the essay. Our approach to vocabulary is that some pre-teaching is useful, but keep the word list short. Understanding vocabulary is another reason for reading aloud. Encourage students to use context clues to discover meaning.

Teaching Note

The term “dust bowl” can be a bit confusing because historians and geographers use it to designate both a place (the Southern Plains) and an event (the drought and harsh conditions of the 1930s).

What Caused the Dust Bowl?

On Thursday, April 18, 1935, a huge, black, billowing cloud piled up on the western horizon. For Stratford, Texas, and thousands of farms and small towns, it was the arrival of another dust storm, one of more than 300 that would make an unwelcome visit to the Southern Great Plains during the 1930s.

For thousands of years, the Southern Plains were covered by **shortgrass prairie** and provided home to vast herds of 20 or 30 million buffalo. In more recent times, people arrived. First came the Apache, the Comanche, and the Kiowa. Shortly after the Civil War, there came a few thousand cowboys and several million cattle. Then came farmers.

The first farmers arrived in the 1880s. Word had gotten out back east that the Southern Great Plains was good for wheat. Yes, rainfall was a bit spotty, but the land was cheaper than farmland in Arkansas or Illinois. Besides, it was said that rain would follow the plow. Grow crops and clouds would form.

With few trees for lumber, many of these early farmers lived in **soddies**, houses made of earth and grass. Soddies were soon replaced by wood frame houses. A severe drought in the 1890s caused some farmers to move away, but then the federal government sweetened the pot. A new **Enlarged Homestead Act** passed in 1909 offered 320 acres of land to anyone who could hang on for three years. Thousands of new farm families took up the offer. In addition, the giant XIT ranch on the Texas **panhandle** sold off much of its three-million-acre spread to wanna-be farmers. Wheat would replace cattle as

the new king of the Southern Plains.

Wheat fever was in the air. The railroad sent out branch lines to small towns, and more wheat could get to market. World War I, which brought so much pain to Europe, was good for Plains farmers. A hungry Europe bought Kansas wheat. Wheat that sold for 93 cents a bushel in 1914 was close to \$2.50 in 1919. More families moved in. Small towns popped up like spring

flowers. Boise City, out near the end of the Oklahoma panhandle, sported a theater, a newspaper, a furniture store, a bank, and several cafes.

But then trouble came. The Great Depression of the 1930s was the first blow.

Unemployment back east made it harder to sell wheat. Sadly, the Depression did not come alone. What made life on the Southern Plains almost unbearable were the dust

storms. In the middle thirties,

these wind-driven **dusters** darkened the midday sky and carried off millions of tons of precious topsoil as far as Washington, DC and New York City. During the 1930s, more than three million plains settlers left their farms – some for town, some for a neighboring state, some for California. Many more, however, stayed put, covering their windows with a water-soaked sheet, eating jackrabbit stew at a kitchen table where an “eating” cloth covered all the plates and drinking cups. Children died from breathing in dust. They called it “dust pneumonia.” Writer Timothy Egan has titled his book on Dust Bowl history as *The Worst Hard Time*.

But exactly what happened to cause this worst hard time? Examine the documents that follow and do your best to answer the question before us: *What caused the Dust Bowl?*



Document Analysis

Document A: Dusters

Content Notes:

- First, there were two kinds of dusters. There were the more continual sand-bearing winds that blew from the west and built up drift dunes against buildings and fences. Sand storms stayed low. Second, there were the great, billowing 7,000-to-8,000-foot high black clouds of dust that were carried in by a polar air mass. These were sometimes attended by thunder and lightning and could be frightening. More than a few diary accounts speak of the end of the world.

- Dust storms in the Southern Plains occurred before the 1930s and they certainly have occurred since. What made the '30s different is the frequency. Soil Conservation Service "frequency report" provides these dust storm numbers for the Southern Plains:

1932	14
1933	38
1934	22
1935	40
1936	68
1937	72
1938	61
1939	30
1940	17

- Health consequences of the dust storms were serious. In the month following Black Sunday (April 14, 1935), four small hospitals in Meade County, Kansas, reported that over half of their admissions were respiratory cases. Of these, 33 people died. Gauze masks and Vaseline around the nostrils were not enough to protect the most vulnerable, especially babies and the elderly. The cause of death was usually given as "dust pneumonia."
- Margaret Bourke-White was a famous photographer for *Life* magazine.

Teaching Tips:

- Discuss the Document Analysis questions:

1. Does this document contain primary source material? Explain.

The document includes at least one primary source quotation, the recollection of Avis Carlson. The Bourke-White quote is less clearly primary.

2. What does the author mean when he says, "the earth ran amok"?

To "run amok" is to be out of control.

3. What problem was shared by both people and cattle?

Both animals and people breathed in dust. It could be deadly.

4. Does this document do a better job of describing dust storm conditions or explaining causes behind the dust storm problem?

The document describes conditions; it does not explain causes.

5. In a short essay entitled, "What Caused the Dust Bowl?" how might you use this document?

One use would be to give some background information in an introductory paragraph.

- Ask students to refer to the photo on the cover page. Read them the first Content Note that distinguishes between the "sand storm dusters" and the towering black blizzard dusters. Which is shown in the photo? (black blizzard duster) Can students sympathize with Plains people who feared the end of the world?

Document A

Source: Donald Worster, *Dust Bowl: The Southern Plains in the 1930s*, 1979.

The story of the southern plains in the 1930s is essentially about dust storms, when the earth ran amok. And not once or twice, but over and over for the better part of a decade: day after day, year after year, of sand rattling against the window, of fine powder caking one's lips, of springtime turned to despair....

In the memory of older plains residents, the blackest year was 1935.... On 15 March, Denver reported that a serious dust storm was speeding eastward. Kansans ignored the radio warnings, went about their business as usual, and later wondered what had hit them. Smalltown printer Nate White was at the picture show when the dust reached Smith Center: as he walked out the exit, it was as if someone had put a blindfold over his eyes; he bumped into telephone poles, skinned his shins on boxes and cans in the alleyway, fell to his hands

and knees, and crawled along the curbing to a dim houselight....

Livestock and wildlife did not have even ... crude defenses. "In a rising sand storm," wrote Margaret Bourke-White, "cattle quickly become blinded. They run around in circles until they fall and breathe so much dust that they die. Autopsies show their lungs caked with dust and mud."...

Avis Carlson told what it was like at night: "A trip to water to rinse the grit from our lips. And then back to bed with washcloths over our noses. We try to lie still, because every turn stirs the dust on the blankets. After a while, if we are good sleepers, we forget."

CV

Document Analysis

1. Does this document contain primary source material? Explain.
2. What does the author mean when he says "the earth ran amok"?
3. What problem was shared by both people and cattle?
4. Does this document do a better job of describing dust storm conditions or explaining causes behind the dust storm problem?
5. In a short essay entitled, "What Caused the Dust Bowl?" how might you use this document?

Document Analysis (continued)

Document B: Shortgrass Prairie (with photograph)

Content Notes:

- Until 200 years ago, the great American grasslands extended from Ohio to the Rocky Mountains. In the eastern parts, the grass received more rain and grew tall, as high as seven feet. In the Southern and Western Plains, where rainfall was under 20 inches per year, the land was covered by several species of short grasses. In the Dust Bowl region, the most common of these was buffalo grass.
- The trees that existed in the Southern Plains grew mostly along the river bottoms – cottonwood, willow, and wild plum.
- The job of the buffalo grass, and its other shortgrass friends, was to hold the soil in place and capture the sun’s energy, converting it into a food source for tens of millions of buffalo, and perhaps as many as 20 million pronghorn antelope. Ultimately, all up and down the food chain, wildlife depended on the shortgrass prairie. This included carnivores like wolves, coyote and eagles as well as smaller critters like jackrabbits, prairie dogs, pocket gophers, mice, rattlesnakes, skunks, and moles.
- The shortgrass prairie has ebbed and flowed over the centuries. Drought has caused it to recede; wet periods have caused it to expand. It had been around for hundreds of thousands, perhaps millions of years, withstanding much of what Mother Nature threw at her. The shortgrass prairie was the ecological underpinning of the Southern Plains. Settlers would tamper with it at their peril.
- Different animals eat grass in different ways, which can impact grasslands. For example, cows like shorter grasses (about six inches tall) and they leave about two inches of the stalk intact. Sheep, in contrast, are more selective grass eaters, but they tend to snip grasses much closer to the ground. The number of cows or sheep grazing also affects grasslands because of their trampling of the ground.
- Discuss with students if they think it is possible to manage grasslands so they both are productive and conserved.

Teaching Tips:

- Review the Document Analysis questions:
 1. Look at the photograph. How would you describe what the shortgrass prairie looks like?

It looks like a huge meadow, a pretty, rolling grassland.
 2. According to the note, how fast were wind speeds on the shortgrass prairie of the Southern Great Plains?

Over 60 miles-per-hour, on average
 3. The shepherd says that grass “holds the earth together.” What does he mean?

The shortgrass prairie acts as a giant spongy mat that absorbs rainwater and prevents erosion. It covers the soil and holds it in place.
 4. Make an inference about what might happen if the tough mat of grass were removed.

The soil will eventually turn into dust if the shortgrass prairie is not allowed to regrow and if there is not enough rain to sustain the planted crops.
 5. How can you use this document to help answer the question, “What Caused the Dust Bowl?”

Ignoring the importance of the shortgrass prairie could cause problems if plowed fields were to dry up and dirt was to blow around. Destroying the shortgrass prairie seems a likely cause of the Dust Bowl.

Document B

Source: Texas sheepherder quoted in *Rich Land, Poor Land* by Stuart Chase, 1936.

“Grass is what counts. It’s what saves us all – far as we get saved....
Grass is what holds the earth together.”

CV

Source: Photo of prairie in the Dust Bowl region; date unknown.



Until about 200 years ago, grasslands extended from Indiana to the Rocky Mountains. The eastern part of these Great Plains received about 50 inches of rain, on average, per year. There, the grass grew as high as seven feet tall. In the Southern Plains, the Dust Bowl region, the most common grass was buffalo grass, and it only grew about 4 inches high. It produced a tough, grassy mat that for hundreds of thousands of years helped protect a thin layer of soil from eroding. On the shortgrass prairie where the Dust Bowl occurred, the average wind speeds were (and still are) nearly double that of other parts of the Great Plains. During some of the worst dust storms of the 1930s, winds regularly averaged speeds of over 60 miles-per-hour.

Document Analysis (continued)

Document C: Fred Folkers, Tractors, and Combines (with photograph)

Content Notes:

- Originally from Missouri, Fred Folkers lived on a farm outside of Boise City on the Oklahoma panhandle. When Folkers arrived, the panhandle was called “No Man’s Land” because it was not yet an official part of any territory or state.
- The one-way disk plow that Folkers and thousands of other wheat farmers bought did not cut as deeply as the old moldboard plow. It moved through the earth quickly. It left a more pulverized soil, which better absorbed the precious rain water, but in drought years was vulnerable to blowing.
- The combine did two jobs at once. It cut the wheat and then threshed it, that is, separated the wheat grain from the straw stem. By 1930, more than half the farmers in the wheat-growing plains owned a combine, or more accurately, took out a loan to buy a combine.
- The effect of the new machines on wheat farmers was sometimes close to giddiness. It turned the old-time sodbuster into “an operator,” a “mechanic.”

Teaching Tips:

- Discuss the Document Analysis questions:
 1. Why did Fred Folkers need a tractor, a plow, and a combine? What did each do?

The tractor pulled farm implements like plows and combines. The plow broke the grass sod and turned the soil over, making the soil ready for planting. The combine did two things: it cut the wheat and separated the wheat grain from the stalk.
 2. The author says that the tractor “changed everything.” What does he mean?

The tractor changed everything by reducing the time required to farm an acre of wheat. It meant larger farms and the loss of more and more short-grass prairie.
 3. What detail from the photo might you use to support the details in the quote about Fred Folkers?

The machines that Simon Fishman is so obviously proud of seem powerful and efficient. The prairie did not stand a chance, and the Fred Folkers of the world may have been great businessmen in the short run, but eventually they were going to destroy the grass that held the soil in the earth.
 4. How does this document help answer the question, “What caused the Dust Bowl?”

It suggests that machines like the tractor and the plow might have contributed to the destruction of the protective layer of grass that held the soil in place.
- Fred Folkers, like many Plains wheat farmers, borrowed money from his local bank to buy his machinery. Does this make the bank partly responsible for stripping the grass and helping to cause a Dust Bowl?
- It is 1930. Ask students to imagine that they had owned ten shares of stock in Case International Harvester, the company that sold Fred Folkers his combine. Would they, as investors, have shared the blame for stripping the buffalo grass off the prairie and causing the Dust Bowl? Who is responsible for taking care of the environment?

Document C

Source: Timothy Egan, *The Worst Hard Time*, 2006.

With a horse-drawn plow, Fred Folkers produced nearly enough to stay afloat. What changed everything for him, and other dryland farmers, was the tractor.... A tractor did the work of ten horses. With his new combine, Folkers could cut and thresh the grain in one swoop, using just a fraction of the labor.... Folkers plowed nearly his entire square mile, and then paid to rent nearby property and ripped up that grass as well. By the late 1920s, his harvest was up to ten thousand bushels of wheat – a small mountain of grain. What’s more, there was now an easy way to get the wheat of Fred Folkers ... to the rest of the world. In 1925, a train finally arrived in Boise City....

CV

Source: Photo courtesy of Kansas State Historical Society, 1925.



Wheat king Simon Fishman (in coat and tie) and his employees working the land. Greeley County, Kansas, 1925.

Document Analysis (continued)

Document D: Acreage Under Plow (chart)

Content Notes:

- Franklin Roosevelt's letter to the Great Plains Drought Area Committee members in 1935 began as follows:

I am writing to ask you to serve as a member of a Great Plains Drought Area Committee to carry on a study looking toward the most efficient utilization of the natural resources of the Great Plains area, and especially toward practicable measures for remedying the conditions which have brought widespread losses and distress to so many inhabitants of the Missouri, Platte and Arkansas valleys, the Panhandles of Oklahoma and Texas, and contiguous areas.

- The actual numbers (rounded) represented by the drawings are as follows:
 - 12,000,000 acres
 - 53,000,000 acres
 - 103,000,000 acres
- The chart is for all crop land in the eight Great Plains states – North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, eastern Colorado, and eastern New Mexico. The acreage under plow in 1929 in the more limited Dust Bowl area is estimated at 44,000,000 acres.

Teaching Tips:

- Discuss the Document Analysis questions:
 - Is this document a primary or a secondary source? Explain your thinking.

Arguable. The source is primary in that it is from the period and from a government document. It is secondary in that the acreage data had to be drawn from other sources.
 - How many acres of crops were harvested in the Plains states in 1879? In 1899? In 1929?

10 million acres; 50 million acres; 100-plus million acres
 - What generalization can you make about the information in this chart?

The number of acres farmed on the Plains increased about tenfold between 1879 and 1929, and the increase was largely due to machines.
 - How does this chart help answer the question, "What caused the Dust Bowl?"

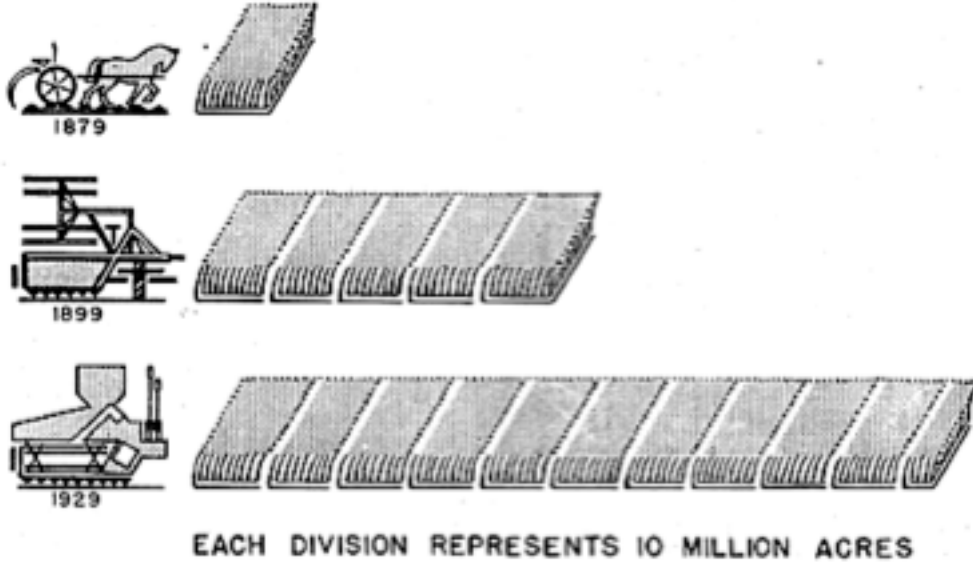
There seems to be a strong connection between machines, grassland turned over by the plow, and dust storms.
- Discuss the fact that the chart deals with the entire Great Plains, not just the Dust Bowl region. Is it reasonable to infer that harvested acreage in the Dust Bowl region increased at the same rate as the Plains in general? (This is an interesting question. Documents frequently do not provide a perfect fit with the question. A student who recognizes the imperfect fit between document and question is using critical thinking skills.)

Document D

Source: *Great Plains Drought Area Committee Report of August 27, 1936.*

Note: This committee was formed at the request of President Franklin Roosevelt.

ACREAGE OF HARVESTED CROPS IN 8 GREAT PLAINS STATES



CV

Document Analysis (continued)

Document E: Rainfall (charts)

Content Notes:

- John Wesley Powell was one of the first to warn Americans that farming beyond the 100th meridian (line of longitude) was unwise. There simply was not enough rainfall. He also argued against the continued distribution of 160-acre homesteads in the region. He supported enlarged tracts of four square miles (2,560 acres), not for farming but for small ranching operations. He was criticized in the 1880s for being pessimistic and undemocratic. However, a half century later, during the years of the Dust Bowl, Powell was seen as a level-headed prophet.
- The 100th meridian cuts through the middle of Kansas and Oklahoma. The rainfall charts support Powell's early findings that rainfall west of the 100th meridian averaged under 20 inches per year. One reason that Powell and others had trouble convincing sodbusters to stay away from farming the Southern Plains was that the rainfall averages were just that – averages. There were years that were wet. 1923 was unusually wet, and there were occasional strings of wet years that lured families into the region.
- The Depression era drought that overwhelmed the Plains really began in 1933. During the next eight years, the average rainfall in Dalhart was 12.4 inches.

Teaching Tips:

- Discuss the Document Analysis questions:
 1. According to John Wesley Powell, how much annual rainfall was necessary to grow crops in arid regions like the Southern Great Plains?
20 inches
 2. To the nearest inch, what was the average annual rainfall of the five Dust Bowl towns?
17 inches
 3. From 1931 to 1940, how many years was Dalhart's rainfall below normal?
nine years
 4. How do these charts together help answer the question, "What caused the Dust Bowl?"
The main idea is two-fold: 1) in normal times, the Southern Plains does not get enough rainfall to support farming; 2) in the 1930s it was even worse.
- Mention that, throughout the Depression years, most farmers in the Dust Bowl region tried to put in a crop every year, hoping that the drought would break. There were a few years where some farmers got absolutely no harvest.
- The term "Dust Bowl" was possibly first used by an AP reporter from Denver. In a dispatch sent to the *Washington Evening Star* on April 15, 1935, Robert Geiger wrote: "Three little words, achingly familiar on a Western farmer's tongue, rule life in the dust bowl of the continent – if it rains."

Document E

Source: Data compiled from the High Plains Regional Climate Center, University of Nebraska, Lincoln, Nebraska.

Normal Annual Precipitation for Five Dust Bowl Towns

Town	Normal Precipitation (inches)
Clovis, New Mexico	17.64
Boise City, Oklahoma (panhandle)	17.00
Dalhart, Texas (panhandle)	17.87
Burlington, Colorado	16.38
Goodland, Kansas	18.02

Note: John Wesley Powell, the great Western explorer, determined that 20 inches of rain annually was the minimum for successful farming on the Plains. But, he said, "... at 20 inches agriculture will not be uniformly successful from season to season."

CV

Source: From Randy Francis, *The Texas Dust Bowl in Historical Perspective*, 1998.

Actual Precipitation for Dallam County, Texas (County Seat, Dalhart)

1923	33.40 inches
1924	15.32
1931	14.66
1932	20.09
1933	10.14
1934	9.78
1935	13.31
1936	9.93
1937	14.48
1938	14.08
1939	14.75
1940	12.74

