Just Lookin' for a Home

Objective

Students will learn how the boll weevil impacted the economy and what has been done to eradicate the boll weevil. Students will analyze the words in a folk song about the boll weevil to understand its meaning.

Background

The boll weevil is one of the most serious cotton pests in North America. It occurs in almost every area where cotton is grown. It is estimated that this pest destroys 3-5 million bales of cotton annually.

In the 1890s, the boll weevil entered the United States from Mexico, causing catastrophic damage to the cotton crop—the dominant crop of that region. Often there was no cotton left to harvest. Since it was the dominant crop, its failure meant economic ruin for entire communities. Not only farmers, but merchants, laborers and bankers were forced to migrate to cities and other regions in search of work.

Some farmers learned from the catastrophe that monocropping—growing only one crop on a piece of land—was not a good idea. They began planting other crops, like peanuts and potatoes. Some farmers were quite successful with the alternative crops. The town of Enterprise, Alabama, even built a monument to the boll weevil in gratitude for the lessons it learned from the disaster. It is the world's only monument to an agricultural pest.

In Oklahoma, cotton producers tried moving cotton production from the eastern part of the state to the semi-arid southwest, where conditions are less favorable for the boll weevil. Although this helped reduce losses, the boll weevil has continued to damage cotton. In 1994, boll weevils cost Oklahoma cotton producers nearly $3 million dollars in crop losses and chemical control.

In the spring, adult boll weevils emerge from a partly dormant state and deposit between 100 and 300 eggs in cotton fruit. The females do not deposit their eggs in cotton bolls already visited by another female until most of the bolls are infested, but multiple larvae per boll are not uncommon under heavy infestation. An average of two or three weeks is required for an egg to develop into an adult, so there may be from two to ten generations each year.

Oklahoma Academic Standards

GRADE 3
Speaking and Listening: R.1,2,3; W.1,2.
Reading and Writing Process: R.3. Critical Reading and Writing: R.1,4,7; W.1.
Vocabulary: R.1,3. Research: R.1,2,3,4; W.1,2,3
Economics: 1,3. Geography: 1E
Visual Art: 2.1,2; 3.2; 4.4
Music: 2.2; 3.1

GRADE 4
Speaking and Listening: R.1,2,3; W.1,2.
Reading and Writing Process: R.3. Critical Reading and Writing: R.1,4,7; W.1.
Vocabulary: R.1,3. Research: R.1,2,3,4; W.1,3
Social Studies: 1.2B; 3;4;5
Visual Art: 2.1,2; 3.2; 4.4
Music: 2.1,2; 3.1

GRADE 5
Speaking and Listening: R.1,2,3; W.1,2.
Reading and Writing Process: R.1,3.
Critical Reading and Writing: R.1,4,7; W.1. Vocabulary: R.1,3. Research: R.1,2,3; W.1,2,4
Visual Art: 2.1,2; 3.2; 4.4
Music: 2.2; 3.1

GRADE 6
Speaking and Listening: R.1,2,3; W.1,2.
Reading and Writing Process: R.1,3.
Critical Reading and Writing: R.1,4,7; W.1. Vocabulary: R.1,3. Research: R.1,2,3; W.1,2,4
Social Studies: 5.2B
Visual Art: 2.1,2; 3.2; 4.4
Music: 2.2; 3.1

Vocabulary

alternative—something different from the usual
beneficial insects—insects that contribute to a positive environment for plant growth by preying on destructive insects or helping with pollination
catastrophe—a great, often sudden, calamity **dominant**—most prominent **dormant**—in a condition of bio- logical rest or inactivity **infestation**—inhabiting or overrunning in numbers
large enough to be harmful, threatening, or obnoxious
Integrated Pest Management (IPM)—a system of pest management aimed at reducing agricultural losses caused by pests using methods that cause minimal environmental damage and little or no health risk
larvae—the newly hatched, wingless, often wormlike form of many insects before undergoing metamorphosis.
metamorphosis— change in the form and often habits of an animal during normal development after the embryonic stage
migrate—to move from one region and settle in another
monocropping—growing only one crop
parasitic—an organism that grows, feeds, and is sheltered on or in a different organism while contributing nothing to the survival of its host
pheromone—a chemical secreted by an animal, especially an insect, that influences the behavior or development of others of the same species

Boll weevil larvae live entirely within the cotton boll, destroying not only the seeds but also the surrounding fibers. Because larvae and pupae remain inside the boll for their entire period of development, the application of insecticides is often useless.

To combat the problem, cotton producers turned to Integrated Pest Management (IPM) programs. Under these programs, producers are encouraged to explore several different possibilities for controlling pests before resorting to pesticides. If they do resort to pesticides, they use them in very carefully controlled quantities—no more or less than what they need. Alternative control programs for boll weevils include early destruction of cotton stalks, cleanup of hibernating areas, seed treatments, early planting, and the development of early maturing and rapid fruiting varieties of cotton.

In 1978 the US government launched the Boll Weevil Eradication Program based on a scientific combination of monitoring, scouting, insecticide and cultural management practices. Under this program, plastic traps, baited with a boll weevil pheromone, are placed around previously planted fields to catch weevils that survived the winter. Traps are also placed around new fields. The traps are checked on a weekly basis to assess weevil populations. The traps help monitor weevil activity and, if the numbers increase to a specific level from one period to the next, cotton is treated with an insecticide. This reduces the amount of chemical used because chemicals are only applied as needed. The reduction in chemical use also lowers the cost of production. An additional benefit is an increase in the population of beneficial insects—big-eyed bugs, pirate bugs and parasitic wasps—that attack several species of cotton pests.

Recent efforts also include introducing a parasitic wasp, which is a natural enemy of the boll weevil. These wasps are native to Central and South America, where boll weevils fed on wild tropical cotton for thousands of years before switching to cultivated cotton and moving north.

English Language Arts

1. Read and discuss background and vocabulary. If possible, bring a cotton boll to class so you can show students the part of the cotton plant the boll weevil destroys.
2. Hand out the copy of "The Boll Weevil Song" included with this lesson.
   —Students will take turns reading verses aloud.
   —Provide copies of the discussion questions. Students will answer the question individually or discuss them as a class.
3. Hand out the article about the boll weevil included with this lesson and the worksheet.
   —Students will read the article and use context to find definitions on the worksheet for the highlighted words.
4. Students will use the information found in the article to write additional verses to the song in which the farmer uses IPM methods to get rid of the boll weevil and is able to keep his home.
5. Divide students into groups. Each group will write and perform a skit

based on one of the verses of the song. Provide props such as a cowboy hat, a rocking chair, a frying pan, etc.

6. Students will select one of the topics below and use online or library resources to write research papers.
   —Top cotton-producing states in the US
   —Cotton-growing in other countries. Find out if the boll weevil is a problem in other places. Why or why not?
   —Other pests in history that have caused wide-scale social and political upheaval, e.g., the potato blight that caused the Irish potato famine, the tsetse fly, etc.

Social Studies

1. On the chalkboard, write the old saying, "Don't put all your eggs in one basket." Ask students what this means. Ask how this saying applies to the lesson farmers in the South learned about planting only one crop on their land.
2. On a map of the United States, students will trace the route of the boll weevil from Mexico through the southern states.
3. How does the climate affect cotton and boll weevils? Compare the climates of the different states and countries where cotton is grown.
4. Research the impact of cotton on our economy. Make a list of products made from cotton. If boll weevils wiped out all of the cotton, which of these products would you most miss? Write an opinion piece explaining why.

Visual Art

5. Each student will choose a verse of the song to illustrate. Make a classroom book, using the illustrations.

Music

7. Listen to a recording of "The Boll Weevil Song" for students to hear and sing along. Among others, the blues singer Blind Lemon Jefferson recorded it in the 1920s and by another blues singer, Brook Benton, in the early 1960s. https://www.youtube.com/watch?reload=9&v=z5H6iwQGWl4

Extra Reading

Burnie, *David, Plant (DK Eywitness Books)*, DK Children, 2004.
Gleason, Carrie, *The Biography of Cotton (How Did That Get Here?)*, Crabtree, 2005.
Greenaway, Theresa, *The Big Book of Bugs*, DK, 2000.
Halfmann, Janet, *Plant Tricksters (Watts Library)*, Children's, 2004.
Hopkinson, Deborah, *Up Before Day Break: Cotton and People in America*, Scholastic Nonfiction, 2006.
Moore, Heidi, *The Story Behind Cotton (True Stories)*, Heinemann Library, 2009.

The Boll Weevil Song

The author of The Boll Weevil Song is unknown. Among others, the song has been performed and recorded by the poet Carl Sandburg and blues singers Blind Lemon Jefferson in the 1920s and Brook Benton in the 1960s. The Brook Benton recording held the number two slot on the charts for two weeks in 1961.

The Boll Weevil is a mean little bug Came from
Mexico, they say.
Came all the way to Texas,
Just looking for a place to stay.
Just looking for a home, yes, looking for a home.

The first time I saw little Weevil
He was on the Western Plain.
Next time I saw the Weevil
He was riding a Memphis train.
He was looking for a home, just looking for a home.

When the Farmer saw those Boll Weevils
they were in his rocking chair.
The next time they were in his corn field
and they had all their family there
Just fixing up a home, yes, fixing up a home.

The Boll Weevil say to the Farmer
"You can ride in that Ford machine,
But when I get through with your cotton
You can't buy gasoline.
You won't have no home, won't have no home."

Oh, the Boll Weevil said to the Doctor,
"Better pour out all your pills.
When I get through with the Farmer
He can't pay no doctor's bills.
He'll have no home, he'll have no home."

The Farmer say to the Woman,
"What do you think of that?
Those devilish Boll Weevils
have been eating my Stetson hat.
It's full of holes, it's full of holes."

The Merchant said to the Farmer,
"Well what do think of that?
If you get rid of the Weevil
I'll give you a brand new Stetson hat."
He's looking for a home, just looking for a home."

The Farmer took little Weevil
And put him in Paris Green.*
The Weevil said to the Farmer,
"It's the best I've ever seen.
I'm going to have a home, a happy home."

The Farmer took the Boll Weevil
And put him in a frying pan.
Weevil said to the Farmer,
"It's mighty warm, but I'll stand it like a man.
This will be my home, yes, this will be my
home."

The Weevil grabbed the Farmer
And threw him in the sand,
Put on the Farmer's overcoat
and stood up like a natural man.
Said, "I'm going to have a home, a happy home."

The Farmer said to the Merchant,
"I need some meat and meal."
"Get away you son of a gun,
You got Boll Weevils in your field.
Going to get your home, going to get your home."

The Banker was bad as the Weevils,
Said, "There's nothing I can do.
I can't lend you any more money
for the Weevils might eat that too,
And leave it full of holes, all full of holes."

Now if anyone should ask you
Who it was that wrote this here song,
You can say it was just a homeless
Farmer with ragged britches on,
Just hunting for a home, yes, hunting for a home.

*An insect poison containing arsenic

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Name_____

Just Lookin' for a Home

1. What is the songwriter's purpose for writing this song?

2. Why would the merchant offer the farmer a reward for getting rid of the boll weevil?

3. How does the songwriter let us know that the boll weevil's attack on the cotton crop affected other members of the community?

4. What other members of the community were affected? How?

5. Give some examples of parts of the song that are fact and some that are exaggeration?

Fact:

Exaggeration:

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Just Lookin' for a Home (Answers)

1. What is the songwriter's purpose for writing this song?

   The songwriter's purpose for writing the song is to tell the story of how the boll weevil destroyed the cotton crop.

2. Why would the merchant offer the farmer a reward for getting rid of the boll weevil?

   The merchant is offering the farmer a reward to get rid of the boll weevil because the merchant can't make any money if the farmer isn't making money, and the farmer can't make money as long as the boll weevil is destroying the cotton crop.

3. How does the songwriter let us know that the boll weevil's attack on the cotton crop affected other members of the community?

   The songwriter lets us know that the boll weevils attack on the cotton crop affects other members of the community by including verses that describe the effects of the boll weevil on different community members.

4. What other members of the community were affected? How?

   The doctor was affected because the farmer couldn't pay the doctor bill. The merchant was affected because the farmer couldn't buy anything. The banker was affected because the farmer would not be able to pay back borrowed money if there was no crop to sell.

5. Give some examples of parts of the song that are fact and some that are exaggeration?

Fact: The boll weevil came from Mexico and moved into Texas. Farmers used Paris green to try to kill the boll weevil.

Exaggeration: Probably wasn't riding on the train. Probably didn't put the boll weevil in a frying pan.

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The Boll Weevil

Read the article below about the boll weevil and use context to define the words that are highlighted.

The boll weevil is the most serious cotton pest in North America. It is found in almost every area where cotton is cultivated. It is estimated that this pest destroys 3-5 million bales of cotton annually.

The boll weevil entered the United States from Mexico in the 1890s, destroying crops as it moved through Texas and into the southern states. Many farmers were forced to leave their farms and seek work in the cities.

Others learned from the disaster. They decided growing only one crop on their land was not a good idea. They started growing peanuts and other crops. Many were quite successful. Residents of Enterprise, Alabama, even erected a monument to the boll weevil because of the lesson they had learned. It is the world's only monument to an agricultural pest. The base of the monument reads:

> *In profound appreciation of the boll weevil and what it has done as the herald of prosperity this monument was erected by the citizens of Enterprise, Coffee County, Alabama.*

The boll weevil damages cotton by laying eggs in the cotton buds or fruit. The larvae live entirely within the cotton boll, destroying not only the seeds but also the surrounding fibers.

Over the years cotton growers have tried using many different insecticides to control the boll weevil. Some of these cause unwanted side effects. The boll weevil has developed resistance to others. For this reason, growers are constantly trying new ways to control the pest.

In one new method growers bait traps with synthetic pheromones to catch male insects Pheromones are chemicals released by adult female insects to signal their readiness to mate. A farmer can judge how heavily the field is infested by counting the insects in the trap. If the field is heavily infested, the grower uses insecticide spray in the fall, when the young larvae are most vulnerable. The traps remain in the field and the grower sprays again in the spring only if the traps still have large numbers of insects in them.

Other control programs include destroying the cotton stalks that remain after harvest, cleaning up hibernating areas, treating seeds, planting early, and using cotton varieties that mature and produce cotton bolls early, before the insects have a chance to destroy them. Researchers have also introduced a parasitic wasp from South America into cotton fields. The wasp is a natural predator of the boll weevil.

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The Boll Weevil

Find each of the following words in the article about the boll weevil and use context to match it with the correct definition. Write the correct number in the space next to each definition.

1. cultivate

___To improve and prepare (land), as by plowing or fertilizing, for raising crops.

2. infested

___The newly hatched, wingless, often wormlike form of many insects before metamorphosis.

3. insecticide

___A chemical substance used to kill insects.

4. larvae

___The capacity of an organism or a tissue to withstand the effects of a harmful environmental agent.

5. monitor

___A chemical secreted by an animal, especially an insect, that influences the behavior or development of others of the same species.

6. pheromone

___Prepared or made artificially.

7. predator

___To inhabit or overrun in numbers large enough to be harmful, threatening, or obnoxious.

8. resistance

___Susceptible to attack.

9. synthetic

___To keep track of systematically with a view to collecting information.

10. vulnerable

___An organism that lives by preying on other organisms.

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The Boll Weevil

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The Boll Weevil (Answers)

Find each of the following words in the article about the boll weevil and use context to match it with the correct definition. Write the correct number in the space next to each definition.

1. cultivate
2. infested
3. insecticide
4. larvae
5. monitor
6. pheromone
7. predator
8. resistance
9. synthetic
10. vulnerable

1 To improve and prepare (land), as by plowing or fertilizing, for raising crops.

4 The newly hatched, wingless, often wormlike form of many insects before metamorphosis.

3 A chemical substance used to kill insects.

8 The capacity of an organism or a tissue to withstand the effects of a harmful environmental agent.

6 A chemical secreted by an animal, especially an insect, that influences the behavior or development of others of the same species.

9 Prepared or made artificially.

2 To inhabit or overrun in numbers large enough to be harmful, threatening, or obnoxious.

10 Susceptible to attack.

5 To keep track of systematically with a view to collecting information.

7 An organism that lives by preying on other organisms

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The Boll Weevil

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