

From Bolls to Bolts

Utah Social Studies



Materials

- ◆ Cotton bolls, available from Utah AITC
- ◆ Articles of clothing made from cotton
- ◆ *From Bolls to Bolts* worksheet

Optional

Watch the video, *Tractors, Cotton-pickers and the Stuff Kids Wear* or read *Mr. Blue Jeans, the Story of Levi Strauss*

Time: 1 hour

Grade Level: 5

Background

Cotton farmers plant cotton in the late spring. They use mechanical planters that can plant seed in as many as eight rows at a time. During the growing season scouts go out into the fields to count harmful insects. If there are too many, the farmer will use pesticides to control them.

About two months after planting, flower buds, called squares, appear on the plant. Three weeks later the blossoms open. The petals change colors as they mature. First, they are creamy white, then they turn yellow, then pink, and finally, dark red. After three days, the red flowers wither and fall, leaving green pods called cotton bolls

The boll is shaped like a tiny football. Moist fibers grow and push out from the newly-formed seeds. As the boll ripens, it turns brown. The fibers continue to expand in the warm sun. Finally they split the boll apart and the fluffy cotton bursts out.

Cotton is harvested in the fall. Most of the cotton is harvested by machine. After the cotton is harvested, it is stored at the edge of the field in big mounds or loaded on trailers or trucks and carried to the cotton gin.

At the cotton gin, powerful pipes suck the cotton into the building and through cleaning machines that remove burs, dirt, and leaf trash. Then circular saws with small, sharp teeth pull the fiber from the seed. The ginned fiber is called lint. The lint is pressed into 480-pound bales, about the size of a refrigerator.

The bales are sold to cotton merchants who sell them to textile mills in the U.S. or in foreign countries. At the textile mills huge machines spin the cotton fibers into cotton thread. The thread is then woven into cloth on looms. The rolls of cloth that come off the looms are called bolts. Clothing manufacturers buy bolts of cloth and cut jeans, shirts, dresses, and other items of clothing from them to sew.

Activity Procedures

1. Acquire cotton bolls and bring them to class**. Show the cotton bolls to your students and have them guess what they are and what they are for. Let students feel the cotton and try to pull the cotton lint from the cotton boll.
2. Bring a variety of articles to class that were made from cotton cotton balls, cotton shirt, jeans, cotton embroidery or crochet thread, cotton swab, towels, etc.) Share the background material.
3. Discuss time order words with your students. Hand out student

Social Studies, Standard 1

Students will understand how the exploration and colonization of North America transformed human history.

Objective 2

Assess the global impact of cultural and economic diffusion as a result of colonization.

- a. Describe the cultural and economic impacts that occurred as a result of trade between North America and other markets (e.g., arts, language, ideas, the beginning and expansion of the slave trade, new agricultural markets).

Objective 3

Distinguish between the rights and responsibilities held by different groups of people during the colonial period.

- a. Compare the varying degrees of freedom held by different groups of people (e.g. American Indians, landowners, women, indentured servants, enslaved people).

Social Studies, Standard 4

Students will understand that the 19th century was a time of incredible change for the United States including geographic expansion, constitutional crisis, and economic growth.

Objective 2

Assess the geographic, cultural, political and economic divisions between regions that contributed to the Civil War.

- a. Describe the impact of physical geography on the cultures of the northern and southern regions (e.g. industrial resources, agriculture, climate).
- b. Compare how cultural and economic differences of the North and South led to tensions.

worksheets. Instruct students to read the sentences on the worksheet and place them in the proper order, using the time order words as clues.

** A package of 35 cotton bolls can be purchased from Utah Agriculture in the Classroom for \$12.



Name _____

From Bolls to Bolts

Words like “first,” “next,” “then,” and “last” are order words. Order words show where the sentence goes in the paragraph. They are often used in directions or in recipes. Number the following sentences to show their order. Put your numbers inside the cotton bolls. Then, write the paragraph on the lines at the bottom of the page. Don’t forget to indent.



At the gin, saws with sharp teeth pull the fibers from the seed.



Second, the cotton fiber bursts open.



Now the thread is woven into cloth.



Finally, the bolts are cut into jeans, shirts, dresses, towels, and many other things to sew.



First, the farmer plants the cotton and waits for it to grow.



At the textile mill, fibers are spun into cotton thread.



Next, the farmer loads the cotton onto a truck and takes it to the cotton gin.



After that, the cotton is pressed into bales.

From Bolls to Bolts (answers)

Words like “first,” “next,” “then,” and “last” are order words. Order words show where the sentence goes in the paragraph. They are often used in directions or in recipes. Number the following sentences to show their order. Put your numbers inside the cotton bolls. Then, write the paragraph on the lines at the bottom of the page. Don’t forget to indent.



At the gin, saws with sharp teeth pull the fibers from the seed.



Second, the cotton fiber bursts open.



Now the thread is woven into cloth.



Finally, the bolts are cut into jeans, shirts, dresses, towels, and many other things to sew.



First, the farmer plants the cotton and waits for it to grow.



At the textile mill, fibers are spun into cotton thread.



Next, the farmer loads the cotton onto a truck and takes it to the cotton gin.



After that, the cotton is pressed into bales.
