

# From Bolls to Bolts

## Objective

Students will place sentences about the production of cotton clothing in sequential order using order words.

## Background

Cotton farmers plant cotton late in the 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 US 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. They cut jeans, shirts, dresses, and other items of clothing to sew.

## Materials

articles made from cotton (cotton balls, cotton shirt, pair of jeans, cotton thread or yarn, cotton swabs, towels, etc.)

## Procedure

1. Bring a variety of articles to class that were made from cotton (cotton balls, a cotton shirt, a pair of jeans, cotton embroidery or crochet thread, cotton swabs, towels). —Lead a discussion based on the following:
  - Where did your shirt come from?
  - Turn your shirt around and look at the tag and see what percentage

## Oklahoma Academic Standards

### GRADE 3

Speaking and Listening:  
R.1,2,3,4; W.1,2. Reading and  
Writing Process: R.3. Critical  
Writing: Narrative. Language:  
R.3

### GRADE 4

Speaking and Listening:  
R.1,2,3,4; W.1,2. Reading and  
Writing Process: R.3. Critical  
Writing: Narrative. Language:  
R.2

### GRADE 5

Speaking and Listening:  
R.1,2,3,4; W.1,2. Reading and  
Writing Process: R.3. Critical  
Writing: Narrative. Language:  
R.2

## Vocabulary

**fiber**— a slender and very long natural or synthetic unit of material

**germination**— the act of beginning to grow

**harvest**— the gathering of a crop

**life cycle**— the series of stages of form and activity through which a living thing passes from a beginning stage (as an egg) in one individual to the same stage in its offspring

**mature**— fully grown or developed

**mechanical planter**— a machine for planting

**mound**— a small hill or heap of dirt or stone

**pesticide**— a substance used to destroy pests

**plant**— to put or set in the ground to grow

**scout**— to go about and observe in search of information

**seed**— the grains of plants used for sowing

**soil**— the loose surface material of the earth in which plants grow

**wither**— to shrivel from or as if from loss of bodily moisture and especially sap

of it is made from cotton. (Some fabric content tags may be inside on the seam at the bottom of the garment.)

- Where does cotton come from?
- Do you think anyone grows cotton around where you live?

—Show students this 3.36-minute video showing how T shirts are made: <https://www.youtube.com/watch?v=FIA3wWj35Yw>

### 2. Read and discuss background and vocabulary.

—Hand out student worksheets.

—Students will read the sentences on the worksheet and place them in the proper order, using the time order words as clues.

—Students will cut the sentences into strips and arrange them in order on their desks before writing the paragraph in the proper order.

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 into a truck and takes it to the cotton gin.



After that, the cotton is pressed into bales.

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Name \_\_\_\_\_

# From Bolls to Bolts (answers)

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