



To The Gin and Beyond

Audience: 3-5

Activity Length: 1 Hour

TEKS:

- ELA:
 - 3rd Grade: 3.1A, 3.1D, 3.6C, 3.6E, 3.6F, 3.6H, 3.7C, 3.7D, 3.7F, 3.7G, 3.10A, 3.13C, 3.13E
 - 4th Grade: 4.11, 4.1D, 4.6C, 4.6E, 4.6F, 4.6H, 4.7C, 4.7D, 4.7F, 4.7G, 4.10A, 4.13C, 4.13E
 - 5th Grade: 5.1A, 5.1D, 5.6C, 5.6E, 5.6F, 5.6H, 5.7C, 5.7D, 5.7F, 5.7G, 5.10A, 5.13C, 5.10E
- Science:
 - 3rd Grade: 3.1D, 3.1E
 - 4th Grade: 4.1D, 4.1E
 - 5th Grade: 5.1D, 5.1E
- Social Studies:
 - 3rd Grade: 3.1A, 3.15A, 3.15E
 - 4th Grade: 4.18B, 4.21D
 - 5th Grade: 5.11A, 5.12D, 5.22A, 5.25D

Objectives:

Students will learn about Eli Whitney and the contributions he made to the world. Students will be able to describe the different uses of cotton.

Introduction:

The cotton gin was invented by Eli Whitney in 1793 and transformed the American economy. The cotton gin removed the need to separate the seeds, stems, leaves, dirt, and other debris from the cotton by hand. Cotton today is used to make many products, including clothing, compost, livestock feed, oil, hulls, and whole cottonseed meal.

Materials Needed:

- *Where Did My Clothes Come From?* By Chris Butterworth
- Cotton Boll
- Magnifying Glass
- *Vocabulary Doodle Worksheet*

Activity Outline:

1. Guided Reading



Read the book *Where Did My Clothes Come From?* By Chris Butterworth. As you read, ask the following questions:

Pre-Reading:

- Describe what you see on the front and back cover of the book.
- What information does the title provide about the text?
- What facts do you already know about this topic from your background knowledge?

During:

- What was the cotton gin made to do? Does anyone know who invented the cotton gin? (p. 10)
 - a. Answer: Eli Whitney invented the cotton gin to allow the harvesting of cotton to be an easier, hands-free process.
- List the steps to ginning cotton (p. 10-11).
 - a. Answer: First, cotton is grown on shrub-like plants. After several weeks, the cotton boll opens, and they are picked by machine. Next, A gin removes the seeds, and it is taken to a spinning mill. Finally, the fibers are combed and pulled into rope and yarn to be used for whatever you may need.

Post-Reading:

- The book is called *Where Did My Clothes Come From*, so, where do our clothes come from? Name a few of the different materials.
 - a. Answer: Cotton, wool, silk, synthetic/artificial fibers, fleece, and rubber.
- What are the benefits of wearing cotton?
 - a. Answer: Clothing made from cotton, such as jeans, is strong and can last against harsh usage.
- Why do you think the author wrote this book?
 - a. Answer: To teach readers where their clothes come from and how.

2. Vocabulary Doodle

Utilizing the provided vocabulary doodle sheet, students will research the following vocabulary words. They will find the definition and draw a quick doodle of it.

Cotton: the soft and fluffy part of the cotton plant

Cotton Boll: the rounded shell of the cotton plant that contains the seeds, stems, leaves, dirt, other debris, and lint

Cotton Gin: a machine that removes the cotton seed from the plant

Fiber: a thin thread of a substance, cotton fiber grows on the surface of the seeds

3. Cotton Boll Investigation



1. Hold up the cotton boll for the students to see. Explain to the students that the cotton boll contains both the soft, fluffy cotton we are familiar with *and* all the seeds.
 - Guess how many seeds are in each cotton boll.
 - What is cotton used for?
 - a. Answer: clothing, compost, livestock feed, oil, hulls, and whole cottonseed meal
2. Pass the cotton boll out and allow students to feel the seeds inside the cotton boll. With a magnifying glass, students can take a closer look.
 - Did anyone's guess change?
 - What does the cotton boll look and feel like?
3. Reveal to students that the average cotton boll has roughly 20-30 seeds inside it!
 - Did anybody guess correctly?
 - How many cotton bolls does it take to make one pair of jeans?
 - a. Answer: About 650 bolls of cotton.
 - How does cotton transform from the cotton boll with seeds, to the fluffy cotton we are able to use?
 - a. Answer: In the past, cotton was picked and separated by hand. Today, we use the cotton gin.

4. Eli Whitney Scavenger Hunt

1. In addition to inventing the cotton gin, Eli Whitney was also the pioneer of interchangeable parts, which were used to invent the cotton gin. Explain to your students that interchangeable parts are parts that can be used in multiple products.
2. Split your class into even-numbered teams of 2-4 to participate in a scavenger hunt to find examples of interchangeable parts around the classroom. Whichever team finds the most accurate examples within 10 minutes is the winner. Examples include:
 - a. Light bulbs
 - b. Screws in a chair or table
 - c. Batteries
 - d. Zipper on a jacket
 - e. Earring back
 - f. Eraser or lead in a mechanical pencil

NOTE: An easy way to think about interchangeable parts is to remember that they are parts that can be easily replaced because they are mass produced.



Name: _____

Vocabulary Doodle

Using any resource available to you, research the following words. Each word needs a simple definition and a quick doodle.

Word	Definition	Doodle
Cotton		
Cotton Boll		
Cotton Gin		
Fiber		