



# THE LIFE CYCLE OF A COTTON PLANT

## Time required:

30-45 minutes

## Lesson Objectives:

1. Students will learn about the history of cotton.
2. Students will learn about the life cycle of a cotton plant.

## Video Link:

[www.lsuagcenter.com/agmagicagventuresnw](http://www.lsuagcenter.com/agmagicagventuresnw)

## Materials Needed:

- Cotton boll
- Magnifying glass



## Introduction

Cotton is one of northwest Louisiana's largest crops. We use cotton daily for the clothing we wear, products we use, and even the paper money we exchange.

Think about your morning routine. You wake up and get out of bed. You get dressed, eat breakfast, and come to school. What did you touch that had cotton in it? (Solicit answers.)

Usually, the first thing we think about that we use cotton for is the clothes we wear. We are not sure how long people have been using cotton to make clothes; however, it is believed that in ancient India cotton was grown, spun, and woven into cloth as early as 3000 B.C. Around that same time people in Egypt were making and wearing cotton clothing.

Traders brought cotton cloth to Europe around 800 A.D.

## The Life Cycle of Cotton:

**Planting:** Cotton seeds are planted in the spring of each year, usually in April or May. Cotton seed is planted 1 to 2 ½ inches below the ground. The ground should be 60 degrees or warmer when you plant the cotton seeds.

**Growing:** It will take two to four weeks to see a sprout come up from the ground. The cotton plant will then start branching and making leaves. It is very important during the growing that weather conditions are stable because if it is too wet or too dry during this time, it can affect the whole cotton crop.

Usually during the fifth to seventh weeks, you will start to see squares forming on the cotton plant. This is where the blooms will be. Once the flowers start appearing, they will be white in color. Once they are pollinated, they will turn pink.

From the flowers comes the boll. The boll is the protective covering of the seeds and cotton fibers. The cotton is ready to harvest once the boll has popped open. You will see the fluffy white cotton fibers appear once the boll has opened. The entire growing cycle takes five to six months.

**Harvesting:** The way we harvest cotton has improved over the years. What used to take all day to hand pick now takes one minute with the new machinery used. The large machine picks the cotton, cleans it, moisturizes it, and bales it into a round bale for the farmer to take to the gin. A round bale of cotton weighs approximately 6,000 pounds. This bale includes the lint cotton and the seeds.

A cotton gin is a machine that separates the lint cotton from the seeds. It was invented by Eli Whitney in 1794. Once a round bale of cotton goes to the gin and the cotton seeds are removed, approximately 5 square bales of pure cotton are produced. These bales are sent to textile mills that produce the cloth used to make clothes. The separated cotton seeds are not thrown away. They are crushed and made into cottonseed oil and other products including hair products and high-quality livestock animal feed.

**Cotton and money:** U.S. paper currency is made up of 75% cotton and 25% linen. That means there is three-quarters of a pound of cotton in every pound of dollar bills. Why do you think cotton is used to make paper money? When cotton gets wet it is very durable. Paper, on the other hand, is not and falls apart when it gets wet. Cotton also holds waterproof dyes, which are what they use to print money. Money that has no writing on it is worthless.

So next time someone says, “Money doesn’t grow on trees,” say, “You are right. It grows in fields!”

## Vocabulary Words

- **Cotton bale** – A bundle of picked cotton tightly wrapped and bound. There are round cotton bales (these include seeds) and square cotton bales (these are pure cotton).
- **Cotton boll** – The protective case around the seeds and fiber of cotton.
- **Cotton gin** – A machine that removes the cotton seed from the cotton plant.
- **Cotton harvester** – A machine that picks cotton, moisturizes it, and bales it into round bales to go to the cotton gin.
- **Cotton** – Soft, fluffy fiber that grows in a boll around the seeds of the cotton plant.
- **Textile** – A type of cloth or woven fabric.
- **Textile mill** – Manufacturing facility where textiles, or types of cloth, are produced.

## Activity

### Activity 1:

- Distribute a cotton boll and magnifying glass to a group of three to five students.
- Remind students that a cotton boll contains not only the soft, fluffy cotton fiber, but all the seeds.
- Before touching the boll, ask the students to guess how many seeds are in their one cotton boll and write down their guess.
- Pass around the cotton boll and feel the seeds in the cotton.
- Now, pull apart the boll and look at the fibers under the magnifying glass.
- What do you see?
- Have students separate the cotton seeds from the lint cotton. This is what happens at the cotton gin.
- How many seeds were in the boll? Was your guess correct?

### Activity 2:

Take a piece of paper, paper towel, newspaper, etc., and show the class how easily it rips.

- Next take a piece of paper money and show the class how it does not rip easily because it contains cotton and linen, which makes it strong and durable.

## Reflection

We use cotton every day.

- Think about a pair of blue jeans. How many cotton bolls do you think it takes to produce one pair of blue jeans? (Solicit answers.)
- It takes approximately 650 bolls of cotton to make one pair of blue jeans. That is a lot of cotton!

Every time you go to the store, pay your bills, get out of the shower and use a towel, put on your clothes, or get into bed at night, think about how much you use cotton and thank a cotton farmer!

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## References

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Pub. 3772 (Online Only) 11/20

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