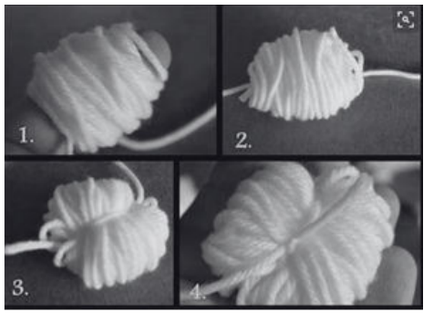
The Cotton Clipping

3rd to 5th grade activity newsletter

"Grow Your Own" Cotton

For this activity students will discuss the different stages of cotton and its many uses. Thinking of the cotton plant, with mature cotton that is ready for harvest – students will make their very own cotton plant.



1. Split students into partners, and give students a spool of yarn (students will need several feet of yarn each for this activity). Then, showing about an inch (holding up two fingers), students will start rolling the yarn slowly around their fingers. Be sure to instruct students not to roll too tightly, as it can hurt them. Once they have an amount about an inch wide and half an inch thick, their partner will take a pair of scissors and snip the end.
2. Then the partner will take a brown pipe cleaner and thread it through the middle of the yarn. Once the pipe cleaner is threaded through, instruct the students to slide the yarn carefully off their fingers.
3. Next, the students will use a small pre-cut template to cut out the leaves, or boll (hard outer shell), from brown felt. Slide this onto the pipe cleaner so it meets the bottom of the cotton boll. Use a brown string to secure the cotton boll.
4. Now switch so the other partner can roll their yarn to make a cotton boll.

Activity courtesy of North Carolina Ag in the Classroom

Sustainable Farming

Draw a line to match the "cause" to the "effect" to show how cotton farming practices help the environment.

Cause	Effect
Cotton farmers use precision irrigation that targets only the plants that need water.	This helps keep fertilizer out of the surrounding ecosystem.
Some cotton farmers do not plow the soil before planting their seeds.	This helps prevent water from being wasted.
Cotton farmers use mapping technology and GPS to apply fertilizer only where it's needed.	This helps prevent soil erosion.

Activity courtesy of cotton.org

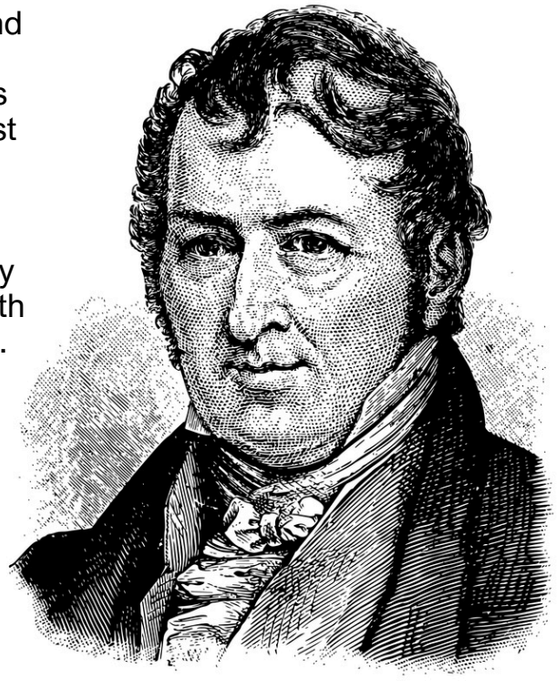
Precision in Agriculture

Read the passage then answer the questions about the inventor of the cotton gin.

Eli Whitney was born in Massachusetts in 1765 in the small town of Westborough. His father, Eli Whitney Sr., was a farmer who also ran a small workshop where he made tools and repaired things for neighbors. From a young age, Eli helped out on the farm and in the workshop. He once made a violin and a nail-making machine all by himself! Even though his family wasn't wealthy, they valued learning and problem-solving. Eli showed a strong interest in mechanics and inventions. By the time he was a teenager, he was already known in his town for fixing tools and building gadgets. His background in a practical, hands-on family helped shape his talent for inventing and solving problems with machines.

Even though it wasn't easy, Eli worked hard to go to college. He studied at Yale University and learned more about science and inventions. After he graduated, he traveled to the South to work as a tutor, helping children learn. While he was there, Eli heard about a big problem. Farmers were having a hard time cleaning cotton. The cotton plant had sticky seeds that were hard to pull out by hand. This job took a lot of time and effort. Eli had an idea. In 1793, he invented a machine called the cotton gin. The cotton gin used a spinning cylinder with small wires and brushes to pull the seeds out of cotton quickly. This made cotton much easier to prepare and helped farmers work faster.

Eli Whitney didn't stop there. He organized work so that machines and workers could produce parts quickly and consistently. His approach helped change the way things were made, leading to what we now call mass production. Whitney brought precision and standardization to agriculture, which were ideas that were new at the time. Although these aren't inventions in the traditional sense, they were very important in the development of early factory systems in the United States. Eli Whitney is remembered as an important American inventor. His creative thinking and hard work made a big impact on farming and how machines are used even today.



Eli Whitney

1. How do you think growing up in a family that valued learning and problem-solving helped Eli become an inventor?

2. Why do you think Eli Whitney worked so hard to go to college, even though it wasn't easy?

3. What does Eli Whitney's invention of the cotton gin tell you about how he approached solving problems?

4. Why might factories have liked Eli Whitney's idea of making gun parts that could be replaced easily?

5. If you could ask Eli Whitney one question about his inventions, what would it be and why?

FLORIDA Agriculture IN THE CLASSROOM

Florida Agriculture in the Classroom is funded by the sale of the specialty license plate, the AgTag.