Industrial Revolution Inventions Station Activity

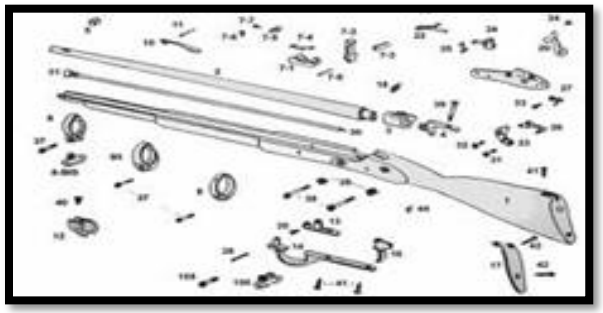
- Short 1 page summaries of each invention
- Graphic Organizer to complete
- Key
- Exit Ticket Activity

- ✓ Interchangeable Parts
- ✓ Steamboat
- ✓ Steel Plow
- ✓ Mechanical Reaper
- ✓ Threshing Machine
- ✓ Cotton Gin
- ✓ Telegraph/Morse Code

Teacher instructions:

*I usually use this as a station activity. I have these posted around the room and the students travel from station to station gathering the information on their graphic organizer.
*This activity can be completed in one 45 minute class period.

Interchangeable Parts



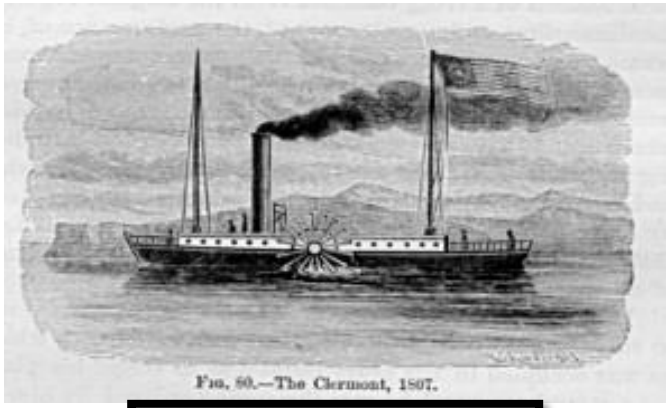
Before the invention of interchangeable parts, guns were made by hand, therefore no two guns were exactly alike. Repairs also had to be made by hand. As you can imagine, this would be time consuming and costly.

When the United States government hired **Eli Whitney** to make 10,000 muskets for the army in 1797 , he knew there had to be a better and faster way to make them. If every part was exactly alike, he could interchange them. The idea for interchangeable parts was born – parts that are exactly alike. The idea spread and soon machines created parts for clocks, locks and other goods. Eventually, small workshops soon turned into factories using interchangeable parts, which sped up production.

Interchangeable parts:

- Repairs could be made quickly and easily
- Less skilled workers, could be used to assemble items (and they could be paid less)
- Assembling items would be much faster.

Steamboat



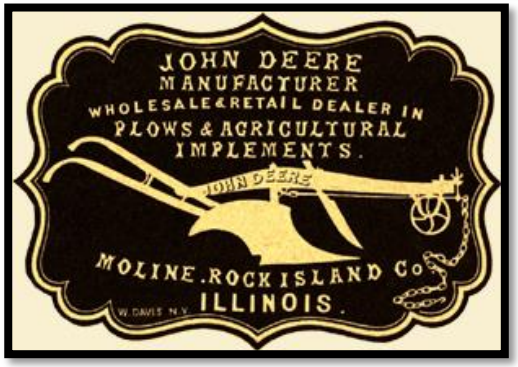
In 1807, **Robert Fulton** launched his steamboat called ***The Clermont***. This new boat had a steam engine that turned two paddle wheels, which pulled the boat through the water. This was so powerful that it could move against the current or even against a strong wind.

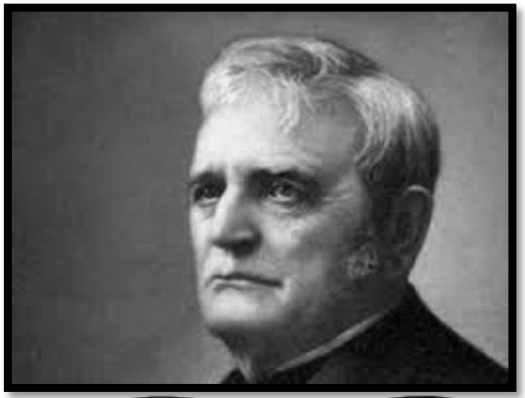
Robert Fulton

Many people doubted this new steamboat would work and called it "Fulton's Folly". *The Clermont* made a successful trip from New York to Albany even faster than even Fulton expected!

With the invention of the steamboat, people, goods and supplies could travel farther and move at a faster rate. Within a few years, steamboats were seen on the Mississippi River traveling upstream.

Steel Plow

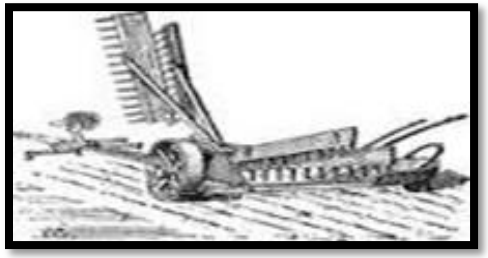


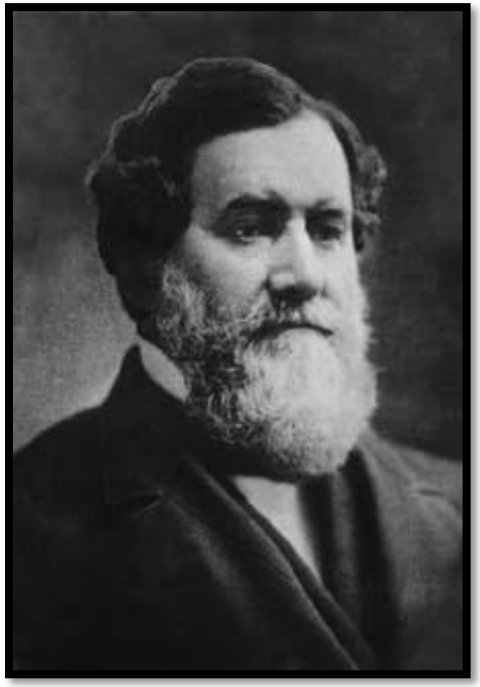


Improvements to farming tools made life easier for farmers. Older plows were made out of heavy cast iron and worked well in the sandy soil of New England. When farmers moved west, they encountered a different type of soil which was heavy and thick. This heavy soil would stick to the old type of plow making it difficult to prepare the ground for farming.

John Deere invented a light weight plow with a steel cutting edge. This made working with the heavy, rich soil in the Midwest easier and faster to plow. Inventions such as the steel plow encouraged farmers to move west.

Mechanical Reaper & Threshing Machine

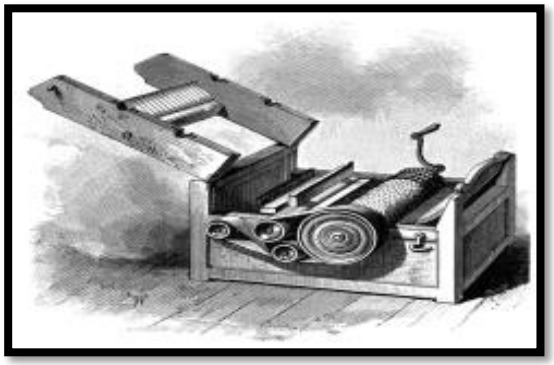




Prior to the invention of the mechanical reaper, harvesting grain was done by hand with a scythe – like a large curved knife at the end of a pole. This limited the amount of grains that could be produced by a land owner. **Cyrus McCormick** invented the **mechanical reaper** which automatically cut the grain while being pulled by a team of horses. The **threshing machine** threshed (loosening the edible part of the grain) from the inedible parts, thus making the harvesting of grain faster and easier.

These farming inventions dramatically increased farming production and led to more farmers moving west.

Cotton Gin

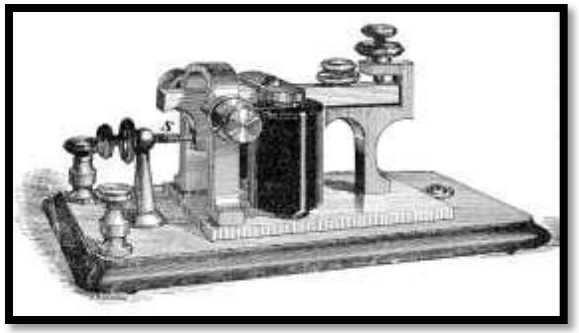


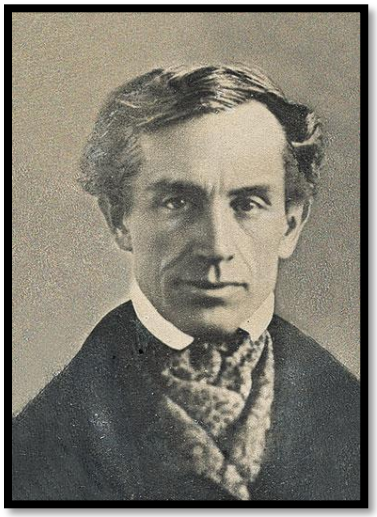
In 1793**, Eli Whitney** invented the cotton gin. America was forever changed by this very important invention.

Cotton seeds were difficult to separate from cotton, therefore a worker (usually a slave) could only produce one pound of cotton per day by hand. The invention of the cotton gin made the cotton cleaning process much more efficient and faster. Cotton production increased dramatically when using a cotton gin and a worker could produce 50 pounds per day. Once the cotton gin became widely used in the South, the demand for cotton grew dramatically and the need for slavery increased. Cotton became very valuable and more planation owners planted cotton.

Plantation owners in the South went looking for more land to the west. Sometimes Native Americans were removed from their lands so that cotton could be grown. Cotton became “king” in the South for decades to come.

Telegraph/Morse Code





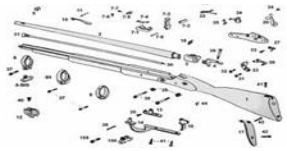
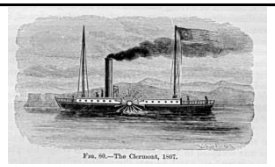
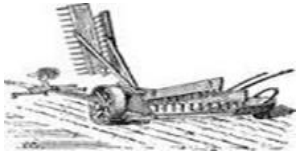
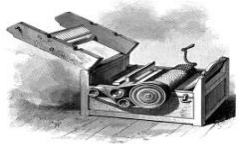
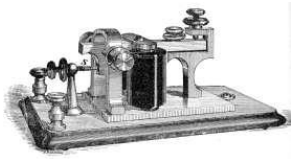
Samuel Morse

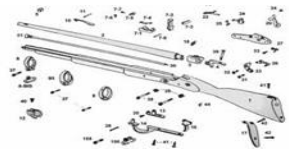
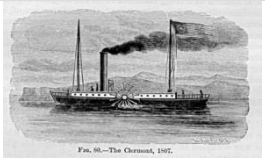
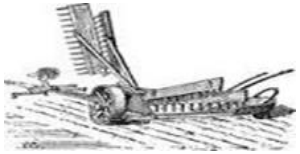
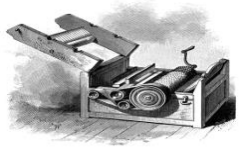
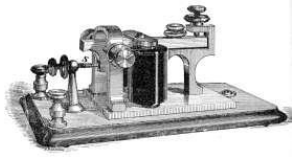
Communication changed forever with the invention of the telegraph by **Samuel Morse**. In 1837, he unveiled his machine that could send pulses of electricity (long and short) along a wire. These pulses (called **Morse Code**) were translated into letters to make messages. Before the telegraph, it used to take days or weeks to send a letter. Now it took only seconds to communicate with someone across the country using Morse Code. The first message was sent in 1844 from to Washington, D.C. to Baltimore, Maryland.

Telegraph lines were installed connecting major cities across the country. Almost instantly, the nation was brought together with faster communication which allowed businesses to grow.

Inventions – Industrial Revolution

Name: _____Per: ___

	Invention and inventor	What did it do?	What impact did it have?
	**Interchangeable Parts** By: ___ _____		
	**Steamboat** By: ___ _____		
	**Steel Plow** By: ___ _____		
	**Mechanical Reaper & threshing machine** By: ___ _____		
	**Cotton Gin** By: ___ _____		
	**Telegraph/Morse Code** By: ___ _____		

KEY	Invention and inventor	What did it do?	What impact did it have?
	**Interchangeable Parts** By: Eli Whitney	**Parts are exactly the same (unlike those made by craftsmen)**	• Made repairs easier • Less skilled workers could be used • Sped up production
	**Steamboat** By: Robert Fulton	Steam engine was placed in the boat, ***Clermont***) and made travel upstream (against the current) possible	• Could move supplies, goods and people at a faster rate
	**Steel Plow** By: John Deere	Helped the Midwest soil not stick to the blade	• Made preparing the ground much easier • More farmers move to the Midwest
	**Mechanical Reaper & threshing machine** By: Cyrus McCormick	Improved harvesting (cut ripe grain & separated kernels of wheat from husks)	• Increased farm production • Made farming easier • More farmers moved West
	**Cotton Gin** By: Eli Whitney	Separated the seeds from the plant	• Faster production increased the need for slavery • Native Americans kicked off land for King Cotton
	**Telegraph/Morse Code** By: Samuel Morse	Sent short pulses of electricity along a wire – these were translated into messages	• Brought the nation closer together • Increased communication • Allowed business to grow

Exit Ticket

I think the invention that had the biggest impact on America was _____ because _____ _____. If it hadn't been invented _____ _____ _____.

Name: _____ Class: _____

Exit Ticket

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Active History – Elizabeth Cumbie