The Industrial Revolution

Inventions of the Industrial Revolution

Many inventors thought to improve the textile industry. John Kay's flying shuttle greatly accelerated the speed at which weaving could be performed by allowing the shuttle carrying the weft to be passed through the warp threads more quickly and over a greater width of cloth. The spinning jenny is a multi-spool spinning wheel. It was invented by James Hargreaves in England. The device dramatically reduced the amount of work needed to produce yarn, with a single worker able to work eight or more spools at once. Created by Richard Awkright the water frame is derived from the adaptation of a water wheel to the spinning frame. The water wheel provided more power to the spinning frame than human operators, reducing the amount of human labor needed and increasing the spindle count dramatically. However, unlike the spinning jenny, the water frame could only spin one thread at a time until Samuel Crompton combined the two inventions into his spinning mule. The cotton gin is a machine that quickly and easily separates the cotton fibers from the seedpods and the sometimes sticky seeds. The cotton gin was invented by Eli Whitney in 1793 and served to reinvigorate the slave economy in the United States, adding decades to its life.

Textiles were not the only area that was improved. <u>Henry Bessemer</u> improved the steel process, which lowered the cost of producing steel. The <u>dynamo</u> was the first electrical generator capable of delivering power for industry. The <u>steam engine</u> was used as the prime mover in locomotives, steam ships, traction engines; steam lorries and other road vehicles. They were essential to the Industrial Revolution and saw widespread commercial use driving machinery in factories and mills. The production of the steam engine led to the most important invention of the Industrial Revolution, the <u>railroad</u>. The railroad allowed for fast shipping of goods which allowed for the success of more industries during the revolution. Many other inventions were created during this time such as electricity, the telegraph, the telephone, the refrigerator, new medicines like anesthesia and antiseptics, and the typewriter, all of which allowed for a new time period in world history, industrialization.

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1.	How was the textile industry improved by the Industrial Revolution?
2.	What other areas did the Industrial Revolution make improvements in?
3.	Which invention is the most important and why?

Burning of the Steamboat "City of Newark".

The steamboat City of Newark, plying between this city and Newark, took fire June 10th, on her morning trip to this city, at about s quarter to 9 o'clock, when off Staten Island, just before entering the bay. The fire took place in the fire room from the boilers, and the boat was actually on fire, while the captain was giving a lady passenger assurances that in case of fire there would be no danger, the boat being well supplied with all the appliances for extinguishment. The sequel proved that no attempt was made to use them if they were on board, as the boat burned to a shell, and three passengers were drowned by their eager haste to leave the burning wreck, by a lady passenger jumping on the gunwale of a boat already full. Fortunately the fire was discovered by the Achilles, the Commodore, and the Thomas Hunt, all of whom promptly came to her assistance, and with their small boats took off all the passengers, the steamboats themselves not daring to approach near enough to take them, lest they should take fire. The Achilles came up to the bow, the flames driving aft toward the stern. But for the prompt and efficient aid afforded by these three steamboats, few of the sixty passengers would have been saved from the flames or a watery grave, and as it was, quite a number scorched by the falling cinders and the intensity of heat. The wreck was towed upon Jersey flats by the Commodore. How long will the Insurance Companies of this city take Ferry or Steamboat risks on such boats as have their boilers encased with wooden bulkheads — wooden boxes to hold fire? The City of Newark had an iron tank aboard to hold fresh water for the boilers. What a glaring inconsistency — iron tanks to hold water, and wooden tanks to hold fire!

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- 1. What were some negative aspects of early steam ships?
- 2. How can an event like this help improve the steam ships?