The Story of James Watt

Cut the pictures out and put them in order

19 January 1736 James Watt was born in the Scottish town of Greenock	Watt did not attend school regularly because of ill health. He was taught at home by his mother and father. His mother taught him how to read and draw. His father taught him maths and how to use tools.	When he was eighteen, Watt travelled to London to study mathematical instrument-making for a year. He returned to Scotland to set up his own business making and repairing mathematical instruments.	In 1757 Watt set up a small workshop at Glasgow University repairing mathematical instruments.
In 1759 Watt began to experiment with steam engines.	In May 1765 Watt improved the design of the steam engine. But, he did not have enough money to make a real model that he could test.	Between 1776 – 1881 Watt's first steam engines were installed and working in coal and tin mines. They were used to pump the water out of the mine so that the mine workers could collect material from deep under the ground. Soon Watt's pump was in almost all the mines in England and Scotland.	James Watt made improvements to the steam engine that were very important. Steam engines allowed lots of tasks, which would otherwise have been done by hand, to be done by machine. This made manufacturing quicker in factories, and made more coal and tin available from mines than ever before.

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Steam engines at this time and today use fossil fuels as an energy source. Burning the coal, heats water to boiling point, and this creates steam. This steam is then used to power a piston, which can cause movement (e.g. steam trains) or today – generates electricity.	Before the invention of the steam engine everything was made by hand, such as production of food, clothing, and homes. Cattle and horses were used to cultivate the fields. Windmills and water wheels were used to grind corn and wheat.	Coal and tin mining had for a long time been important industries of Great Britain. Men and women carried out the coal or tin ore from the mine in buckets, by winding stairs. The deeper the mine, the harder it was to lift out the coal or tin ore. Water also flooded many of the mines.	When James Watt started to sell his steam engine he told farmers and miners that it could give more power than a horse. He said that his machine could do the work of 1.5 horses. This is where we get the term horsepower today.
But not everyone was happy with Watt's new steam engine. When the engine was put into a flour mill it attracted a lot of attention. The workers were angry and afraid they would loose their jobs. The flour mill was set on fire and burned to the ground.	In the 1780's factories in France, Italy and America placed orders for Watt's steam engine. They replaced water mills which stopped in the summer by the lack of water, and in the winter by frost. The steam engines in mills worked at all times of day, in all weather and at all times of year.	Watt died in 1819	The Watt was recognized in British as the unit of power in 1882. In 1960 the rest of the world adopted the Watt as the measurement of power into the International System of Units (SI).