

# Who were the greater engineers: Ancient Britons or Victorians?

Essential vocabulary	
<b>architecture</b>	The art and technique of designing and building.
<b>criteria</b>	A principle or standard by which something may be judged or decided.
<b>invention</b>	The creation or design of something that has not existed before.
<b>raw materials</b>	The input materials a company needs to manufacture its products.
<b>resources</b>	Something that can be used for a purpose.
<b>smelting</b>	The extraction of metal from its ore by a process involving heating and melting.
<b>structure</b>	A building or other object constructed from several parts.
<b>engineering</b>	The branch of science and technology concerned with the design, building, and use of engines, machines, and structures.
<b>industrialisation</b>	The process of transforming the economy of a nation or region from a focus on agriculture to a reliance on manufacturing.

Industrial Revolution
In the 18th and 19th centuries, Britain changed from a mainly agricultural society into a society based on larger scale manufacturing in mills and factories. We call this industrialisation. This was due to the development of machinery that could do jobs more quickly than humans.

### Stone Age Engineering

Stone Age people discovered fire and invented containers as well as different types of clothing that varied from the Paleolithic Age to the Neolithic Age. Most tools and weapons were made from stone, wood, or other basic materials.

**How Stone Age Humans Made Hand Axes**

1. The process started with a large piece of rock.
2. The humans roughly shaped the rock with a stone hammer.
3. Using a hammer made of wood, stone, or antler, they sharpened the edge.
4. They trimmed the edge by prying off tiny flakes with a pointed stick.

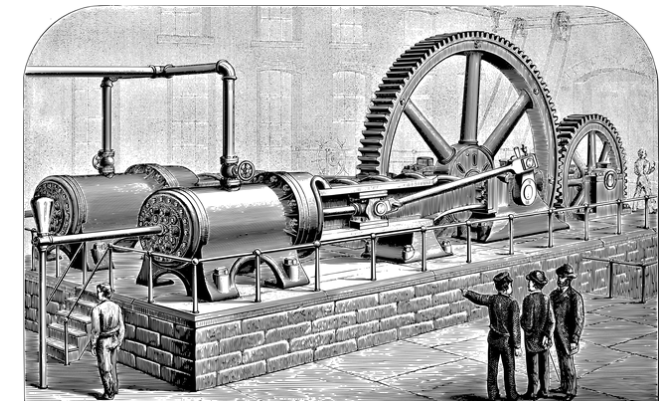
### Iron Age Engineering

The Iron Age is the name given to the time period (from approximately 500 BC to 43 AD in Britain) where iron became the preferred choice of metal for making tools. In Europe, The Iron Age marks the end of prehistory after the Stone Age and the Bronze Age. Iron was tougher than bronze and could be shaped into finer and sharper objects. It required smithing (heating and hammering) to make into tools and implements.

MAKING LINKS TO PREVIOUS LEARNING GOLDEN VOCABULARY	
<b>Levers</b>	Levers are the simplest type of mechanism. They make objects easier to lift, by pushing down on one side of the beam, whilst the other side lifts. Did you know that a seesaw is a lever?
<b>Gears</b>	Gears are toothed wheels that lock together and turn one another, the wheels are all different sizes so that one great speeds up to slow down the next gear!
<b>Pulleys</b>	Pulleys are similar to gears but the two wheels don't lock together. Instead, the wheels are joined by a belt. Pulleys can be used to change the speed, direction or force of a movement.
<b>Strengthen</b>	When working with structures, it is vital to make something strong or effective

### Bronze Age Engineering

The Bronze Age, which lasted approximately 2500-700 BCE, saw the first use of metal for tools. An alloy of 90% copper and 10% tin produced bronze, a material stronger than stone and wood and able to be formed into many different tools. This period saw a revolution in agriculture.



### Significant Victorian inventions

Here are just a handful of inventions created during the Victorian era.

- Electric lighting
- Telephone
- Underground railway
- Combustible engine
- Bicycle
- X ray machines