

### Vaccinations

In 1796 Edward Jenner, a doctor from Gloucestershire, immunised eight-year-old James Phipps against smallpox by infecting cuts in his arms with pus from a milkmaid with cowpox. The idea of using disease to provide protection was very important. During the nineteenth and twentieth centuries vaccinations became the main way of preventing infectious diseases. Vaccinations have been used to protect millions of people from disease all across the world.



### Steam railway

Richard Trevithick built the first steam locomotive. Railways made mass public transport possible for the first time. They also played a vital role in transporting raw materials and goods during the Industrial Revolution.



### Electricity

Michael Faraday developed several devices capable of generating electricity during the 1830s. Electricity is essential to modern day life, powering everything from railways to computers to life support machines. Think of what life is like during power cuts! Electricity made possible other developments too, like the growth of cinema, television and the music business.



### Telephone

Alexander Graham Bell invented the telephone in the 1870s. It quickly changed the way that people communicated with each other. The telephone was used by armies to speed up communication and it changed the way that business was conducted. It also changed the lives of ordinary people. Think of how few people write letters and how many people would be lost without their mobile phone!



### Electric light

Although the American inventor Thomas Edison usually gets the credit for the invention of the electric light bulb, the British inventor Joseph Swann developed a similar filament lamp in the same year. Swann and Edison merged their lighting companies in 1882 and began to sell their light bulbs in Britain. Electric light bulbs were safer and more efficient than the gas lamps they replaced.



### Bicycle

The 'Penny-farthing' bicycle was first developed in the 1870s. The Rover safety bicycle was designed by John Kemp Starley a few years later. Modern day bicycles still follow the same design. The bicycle allowed men and women to travel cheaply and it provided a healthy and environmentally friendly way of getting around.



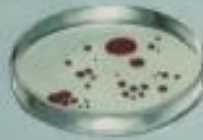
### Television

John Logie Baird invented the television in the 1920s. He used a spinning cardboard disc containing sixteen lenses to create moving pictures. There was an instant demand for television and broadcasts from the BBC began during the 1930s. Today it dominates many people's lives and is often blamed for the increase in obesity!



### Penicillin – a new wonder drug

In 1928 Alexander Fleming discovered that a strain of penicillium mould produced a substance that killed bacteria. By 1942 penicillin was available as a drug and was used to treat Allied soldiers on D-Day. Penicillin was the first antibiotic and led to a new type of drug that saved millions of lives.



### Jet engine

Frank Whittle came up with the idea of a gas turbine jet engine in 1929. The first test flights took place in 1941. The invention totally changed all types of aircraft. The world became a smaller place as the new engine allowed aircraft to fly higher and faster. Journey times were cut significantly and it became cheap, safe and quick to fly all over the world. Journeys that had taken days or even weeks could now be completed in just a few hours.



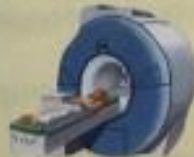
### Modern genetics

In 1953, Francis Crick and James Watson identified the double-helix structure of the DNA molecule (the basic unit of genetic inheritance). Their discovery transformed our understanding of how life works. It has led to genetic screening for disease, genetic engineering and improvements in drug design.



### Medical scanners

In 1971 Godfrey Hounsfield introduced the first computed tomography (CT) scanner that, for the first time, produced accurate images of the interior of the living brain. CT and other scanning techniques such as magnetic resonance imaging (MRI) have improved the diagnosis of disease. They allow doctors to peer inside patients' bodies to trace injury and disease.



### Computers and the World Wide Web

Charles Babbage invented the first computer early in the nineteenth century. Computers today affect everything from the world of work to medicine to transport to games. The first public website went online on 6 August 1991. The World Wide Web brought computers into people's homes. Today we communicate, shop and learn on the web.



## Inventions of the 20<sup>th</sup> Century – Year 9

**TASK 1** – Place the inventions in time order by creating a timeline. The timeline should include the date of the invention, its name and one fact about it

**TASK 2** – Colour code the inventions into different categories, you may use as many as you like. E.g. health/transport

**TASK 3** – Which invention do you think has had the biggest impact on daily life? Write a clear conclusion under the timeline