**** **Lights! Sounds! Circuits! LKS2 Knowledge Organiser**

Diagrams/pictures/annotated diagrams etc





Key events and dates

**1752** – Benjamin Franklin, an American politician, proved that lightning is a form of electricity.

**1800** - Volta created the first battery when he built his voltaic pile. The pile was made of up of zinc and copper plates with vinegar dampened pieces of leather placed in between each plate.

**1821** - Michael Faraday discovered that when a magnet is moved inside a coil of copper wire, a tiny electric current flows through the wire. This discovery later led to the invention of electric motors.

**1838** - Samuel Morse sent 10 words a minute by his new telegraph machine, which later became known as Morse code.

**1876** - Alexander Graham Bell used electricity to transmit speech for the first time, creating the telephone.

**1878** - Joseph Swan, a British scientist, made the first electric light. Thomas Edison made the same discovery in America. Also, the first music was put on record.

**1898** - Miller Reese Hutchison created the first electric hearing aid. His design used an electric current to amplify weak signals.

**1913** - The first commercially manufactured hearing aids came to market.

**1918** – Washing machines and refrigerators first became available.

**1936** - John Logie Baird invented the television.

**1977** – The first home computers became available.

Key events/vocabulary/terms with diagrams



**electricity** - an energy that can be used to create power.

**circuit** – a complete closed pathway for electricity to flow through.

**switch** – a switch will open a circuit (stopping the flow of electricity), or close a circuit (continuing the flow of electricity).

**conductor** - a material that electricity can flow through easily. Many metals are good electrical conductors.

**insulator** – a material that electricity does not flow through. Plastic, wood, glass and rubber are good insulators.

**light** – natural (the sun) or man-made (torch) light makes things visible.

**dark** – where there is no light to make things visible.

**reflection** – light is reflected from surfaces to our eyes.

**shadow** – formed when a solid object blocks light.

**sound** – sounds are vibrations in the air. Our ears pick up the sound and our brain tells us what it is.

**volume** – the loudness of a sound; how loud or quiet the sound is.

**pitch** – how low or high a sound is. A high pitch has fast moving vibrations, and a low pitch has slow moving vibrations.