

Knowledge Organiser – Electricity (Year 6)

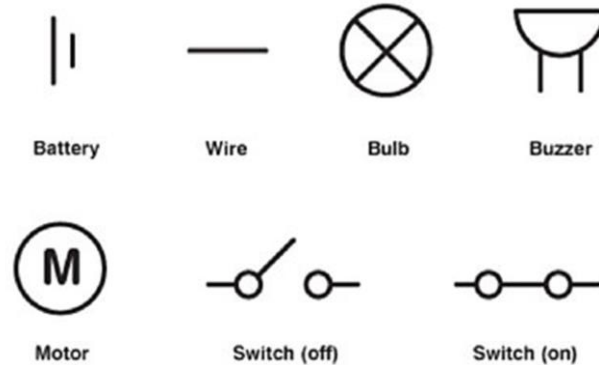


Key vocabulary – Electricity

cell/battery	A device that delivers an electric current as the result of a chemical reaction.
circuit	A path that an electrical current can flow around.
component	Components are the parts that something is made of. Examples of components in electrical circuits include: cells, bulbs, motors, wires.
conductor	A substance or material that allows electricity to flow through it.
current	The flow of electrons, measured in amps.
electricity	A form of energy resulting from the existence of charged particles.
electrons	Very small particles that travel around an electrical circuit.
insulator	A material that is a poor conductor of electricity.
resistance	The difficulty that the electric current has when flowing around a circuit.
switch	A device for making and breaking the connection in a circuit.
voltage	The force that makes the electric current move through the wires. This is measured in volts. The greater the voltage, the more current will flow.



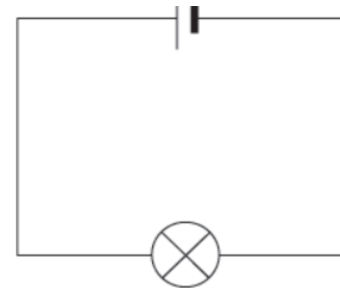
Main components of an electrical circuit



These symbols can be used to create electrical circuit diagrams.

The battery pushes electricity along the wires from positive, through the bulb and back to negative.

A simple series circuit



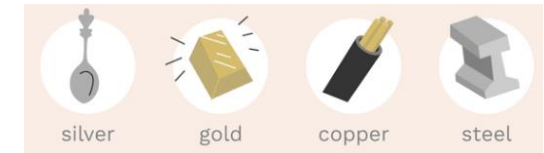
In order for electricity to flow, a circuit needs three things:

1. a source of electricity
2. no gaps in the circuit
3. conductors

A circuit that has only one route for the current to take.

If just one part of this series circuit breaks, the circuit is broken and the flow of current stops.

A **conductor** is a material that allows **electrons** to flow easily throughout the material. Metals are often good conductors. Examples include: silver, gold, copper and steel



An **insulator** is a material that does not allow **electrons** to flow easily throughout the material. Examples include: rubber, glass, diamonds, oil and dry wood.

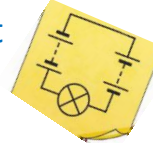


Did you know?

Water (including sea water) can conduct electricity, which is why you should never plug electrical items in, near water.

What makes a bulb brighter, a motor faster or a buzzer louder?

The answer is more energy (electricity). This can be achieved in different ways. Look at these examples for a bulb:



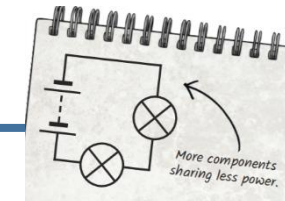
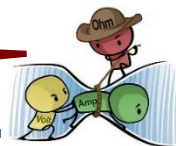
1. More **cells** or a higher **voltage** create more power to flow through the **circuit**.
2. Shortening the wires means the **electrons** have less **resistance** to flow through. This means that there is more energy to light the bulb than if the wire was longer.
3. Thicker wire has less electrical **resistance**, and as a result the light bulb burns brighter because more electricity can reach it.

What will make a bulb dimmer or a buzzer quieter?

The answer is less energy (electricity).
For example:

1. Fewer **cells** or a lower **voltage** gives less energy to the circuit.
2. The more **components** there are in a **circuit** the more the power is shared.
3. When **electrons** move through **components** they experience lots of **resistance**, which uses energy.
4. Lengthening the wires means the **electrons** have to travel further which creating more **resistance** and uses more energy.

Resistance is measured in Ohms



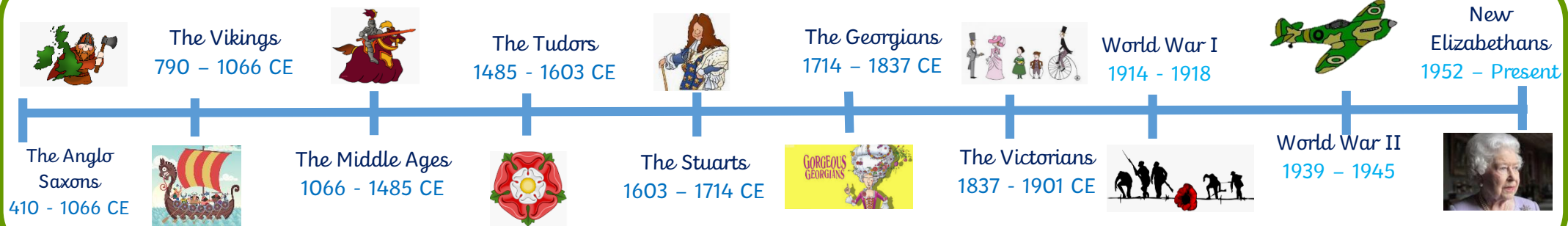
Final facts!

- Electricity can be produced by generators powered by gas, coal, oil, wind or solar.
- Electrical energy can be converted into other types of energy such as light, heat, movement or sound.
- Power is a measure of how fast electrical energy is turned into another type of energy.
- A battery stores chemical energy and converts it to electrical energy.





Knowledge Organiser – World War II (Year 6)



History Time Line (CE)

Key Vocabulary

Allies	The United Kingdom, France and Poland, later joined by other countries, including the USSR (Russia) and the United States of America.
Axis Powers	Nazi Germany, Italy and Japan.
Annex	To take another country's land and make it part of your country
Propaganda	Information designed to promote a political idea or opinion.
Rationing	To allow someone to only have a fixed amount of something
Evacuation	To take people from a dangerous place to a safer one
The Blitz	From the German 'Blitzkrieg' which means lightening war. The Blitz refers to the German bombing of Britain between September 1940 and May 1941.
Homefront	Doing things at home to support the war was called 'fighting on the home front'.
The Holocaust	The Holocaust is the term for the killing of over six million Jewish people before and during World War I

The events leading to the declaration of war

The leader of the Nazi party in Germany, Adolf Hitler, had plans to make Germany a great and very powerful country. In March 1938, Germany invaded and annexed Austria, which made other countries worried. On 29th September 1938, British, French, German and Italian leaders signed a treaty called the Munich Agreement. This allowed Hitler to annex the Sudetenland (an area of Czechoslovakia) if he agreed not to invade anywhere else. However, in August 1939, Hitler broke the agreement and invaded the rest of Czechoslovakia, followed by Poland on 1st September. Britain, France and Poland had made a pact to support each other, so Britain and France declared war on Germany.



The Blitz

It was dangerous living in a big city during the war. Cities were the target of enemy aircraft that flew over at night and dropped bombs which destroyed factories, and also over a million homes and killed over 40,000 people. When people heard the siren they would stop what they were doing and make for a shelter. One devastating raid on Coventry in November 1940 was the biggest air-raid the world had ever seen. 4,330 homes were destroyed and 554 people killed.



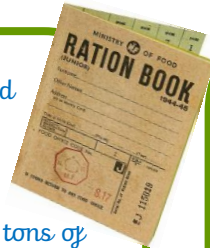
Evacuation

Nearly two million children were evacuated from their homes at the start of World War Two. They were evacuated to the countryside to escape the bombing. Children had labels attached to them, with their names on. They did not know where they were going nor if they would be split from brothers and sisters. They had to adjust to being away from their parents.



Rationing

To make the British weak, the Germans tried cut off supplies of food and other goods. German submarines attacked many of the ships that brought food to Britain. Before the war, Britain imported 55 million tons of food. A month after the war had started this figure had dropped to 12 million. Rationing was introduced to make sure that everyone had a fair share of the items that were hard to get hold of during the war. The Ration Book became the key to survival for nearly every household in Britain. Every member of the public was issued with a ration book, even the King! During World War II all sorts of essential and non-essential foods were rationed, as well as clothing, furniture and petrol.



Key Wartime leaders

Adolf Hitler - Under his leadership, the Nazis sought to make Germany the most powerful empire in the world and exterminate all they viewed as inferior. In pursuit of this, he ordered the extermination of over 11 million people who did not meet Hitler's standards for "racial purity."



Winston Churchill - Prime Minister of Great Britain during most of the war, from 1940 to 1945, Churchill led Britain to victory. During the Battle of Britain, Churchill's speeches boosted the British morale during the darkest moments.

F.D. Roosevelt - President of the United States of America (1933-1945). He declared war on Japan after the bombing at Pearl Harbour, but unfortunately he did not live long enough to celebrate the Allies' victory in September of 1945.



Joseph Stalin - Stalin was very brutal Communist leader of Russia (1928-1953). He was not a natural ally of Britain and the USA, but the allies needed the help of his army if they were to have a chance of defeating the Axis Powers.

War time Posters.

Posters provide a valuable insight into what life was like during WWII. Posters were used for propaganda, telling people what they needed to know to understand the war. That might be by telling people to wear visible clothing during black out or it might be by warning people against things that were bad for the war, such as discussing military secrets, e.g. where soldiers were fighting, or what workers were making in factories such as tanks. Posters were also created to stress the need to stop waste and unnecessary consumption, asking people to recycle materials that were in short supply. For example: tins and metal - for aircraft and tanks, weapons etc. kitchen waste - to feed pigs, goats and chickens. paper - for munitions, and rubber - for tyres. In October 1939 the Government launched 'The Dig for Victory' campaign. People were urged to use gardens and every spare piece of land, such as parks, golf clubs and tennis courts, to grow vegetables. Even the moat at the Tower of London was used to grow vegetables.



The role of women

Before the Second World War, women were expected to be 'housewives' or perhaps to do certain 'women's jobs', such as nursing or being a domestic servant or shop assistant. The war changed the world of work for women for ever. When men went to fight, women were called upon to fill their jobs and this included many jobs that were previously thought of unsuitable for women. Women were called up for war work from March 1941.



Jobs undertaken by women during the war included: intelligence, mechanics, engineers, tank drivers, building ships, pilots (taking planes from factories to RAF bases), working in factories - making bombs and aircraft parts, air raid wardens, driving fire engines, plumbers, ambulance drivers and farmers.



Anne Frank



Anne Frank is well known because of her diary. It was first published as a book, in 1947. Since then, millions of people have read the thoughts and hopes of one young girl and have been inspired by them. Through her diary "The Diary of Anne Frank", people all over the world are able to see what life as a persecuted Jew was like during World War II, helping them understand the sacrifices people made in the struggle to stay alive as she hid with her family in a tiny attic above a factory. Sadly, their hiding place is discovered and they are arrested. Anne died in March 1945, in Bergen-Belsen concentration camp, Germany, just 3 months before the end of WWII.