












# Y4 Knowledge organiser Autumn 1

## Electricity

Key Vocabulary		Components (Parts) Vocabulary		
<b>electricity</b>	The flow of an electric current through a material, e.g. from a power source through wires to an <b>appliance</b> .	<b>cell:</b> Normally, we would call this a <b>battery</b> but scientifically, this is a cell. Two or more cells joined together form a <b>battery</b> .	<b>bulb:</b> Lights up in a complete <b>circuit</b> .	<b>buzzer:</b> Makes a noise in a complete <b>circuit</b> .
<b>appliances</b>	A piece of equipment or a device designed to perform a particular job, such as a washing machine or mobile phone.			
<b>battery</b>	A device that stores electrical energy as a chemical. Two or more cells joined together form a <b>battery</b> .	<b>wires:</b> Used to connect the different components in the <b>circuit</b> together.	<b>motor:</b> Produces movement in a complete <b>circuit</b> .	<b>switch:</b> Used to turn other components in the <b>circuit</b> on or off.
<b>circuit</b>	A pathway that <b>electricity</b> can flow around. It is based around wires and a power supply. Examples of components (parts) you can add in to a <b>circuit</b> are bulbs, switches, buzzers and motors.			

<b>Series Circuit</b> A <b>circuit</b> where the components are connected in a loop. <b>Electricity</b> flows through each component in a single pathway. 	<b>Complete Circuit</b>  <b>Electricity</b> can flow. The components will work.	<b>Incomplete Circuit</b> There is a break in the <b>circuit</b> that prevents the <b>electricity</b> from flowing. The components will not work. 	Switches can be used to open or close a <b>circuit</b> . When off, a switch 'breaks' the <b>circuit</b> to stop the flow of <b>electricity</b> . When on, a switch 'completes' the <b>circuit</b> and allows the <b>electricity</b> to flow.  push button switch  slide switch
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## Ancient civilisations

### Maya Numbers

The Maya developed an advanced number system for their time. They were one of only two cultures in the world to develop the concept of zero as a placeholder. The number system used three symbols in different combinations.



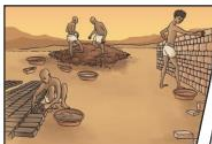
=0  
 =1  
 =5



The Maya built cities, pyramids and ornate sculptures in the rainforest.

### Building City States

The Sumerians built their cities on isolated areas of fertile land, separated by desert. Each city became its own self-governed unit of **civilisation** or 'city state' centred around a temple to the gods. People were roughly divided into the **free classes** and the enslaved, who were forced to serve them.



Buildings in Sumer were mostly made out of sun-baked mud bricks. Over time, wooden moulds were developed to make bricks a uniform shape and size. They used **bitumen** to waterproof the bricks and fill in any gaps in the buildings.

### Farming

One of the main benefits of settling between the Tigris and Euphrates rivers was that the land would regularly flood, fertilising the soil and bringing water. The Sumerian farmers dug canals and irrigation channels to manage the water and direct it where needed. The Sumerians invented a seeder plough that was pulled by oxen and created a furrow in the ground which seeds were dropped into. This was far more efficient than planting by hand. The rake, sickle and shovel were also invented in ancient Sumer. Early writing shows that the Sumerians were among the first to keep animals, as a supply of food. Oxen were used to work in fields and donkeys were used as transport. Animals were also used for their wool or hair to make clothes and rugs.



### Food

The Maya people mainly ate **maize** (corn). **Maize** was very important to them as they believed that the first humans were made from **maize** dough by the gods. The Maya made a bitter chocolatey drink from **cacao beans** that was enjoyed by the rich. It was used for medicines and in ceremonies. The **cacao beans** were highly valued and even used as a form of money.



### Writing

The Maya writing system was used to write several different Maya languages. It was made up of many symbols called glyphs. Logograms are glyphs representing whole words. Syllabograms are glyphs representing units of sound (syllables). The glyphs were carved on stone buildings and monuments and painted on pottery. Maya **scribes** also wrote books called **codices**.

