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| **I:\Cross Gates Primary\Cross Gates Primary LOGO.jpg** | **Electricity** | | | **I:\Cross Gates Primary\Cross Gates Primary LOGO.jpg** |
| **Year Group: 6** | **Subject Focus: Science** | **Term: Autumn 1** |
| **Key facts**   * Electricity was not invented - it was discovered by humans. The energy was always there on Earth but needed someone to find that spark. * The brightness of a bulb is affected by the voltage in the circuit - the lower the voltage, the dimmer the bulb. * Changes to components in a circuit has an effect on the brightness of its bulb or the volume of its buzzer. * Electricity comes from the power station, the wind, the sun, water and even an animal’s poo! * Electricity is a type of energy that builds up in one place (static), or flows from one place to another (current electricity). | | Components of a circuit and their symbols. | **Key words:**   |  |  | | --- | --- | | battery | A device that stores chemical energy until it is needed. A battery is a collection of cells. | | Bulb / lamp | Converts electricity to light or heat. | | buzzer | A component that can create an audible tone or make a sound. | | cell | A device that stores chemical energy until it is needed. A cell is a single unit. | | circuit | A path that an electrical current can flow around. | | component | A part or device within a circuit. | | motor | Converts electricity to movement. | | resistance | The difficulty that the electric current has when flowing around a circuit. | | switch | Opens and closes the circuit. | | voltage | The force that makes the electric current move through the wires. The greater the voltage, the more current will flow. | | |
| **Did you know?**   * Lightning is caused by the discharge of electricity in the atmosphere. * Electricity travels at the speed of light. That's more than 186,000 miles per second! * **Alessandro Volta** – Italian physicist who is credited with inventing the battery * **Edith Clarke** – American scientist who was the first woman to be professionally employed as an electrical engineer in the United States * **Benjamin Franklin** - most credited for discovering electricity in 1752. In an experiment, he attached a wire to a kite in a thunderstorm, which showed that lightning consists of electricity. | |
| **Exciting books / web links:**  <https://www.makerspaces.com/squishy-circuits/>  <https://www.bbc.co.uk/bitesize/topics/zj44jxs>  <https://www.stem.org.uk/resources/community/collection/12390/year-6-electricity> | **Parents as partners:**   * Investigate how much the electricity for school or home costs and how we could save money. * Write a persuasive letter to parents or others in the community encouraging them to use less electricity. * Discover how life different in times before electricity? What electrical devices do we have now that weren’t around in the past? * Create electrical games such as an ‘Operation’ style game or a steady hand game where a hoop must be moved without touching a metal wire. * Encourage your child to research how electricity is used in the modern world * Create a fact file about Alessandro Volta, Edith Clarke or Benjamin Franklin. | |