

Year 6: What is the effect of changing a component in a circuit?

| Subject Specific Vocabulary | | Electrical symbols | Sticky Knowledge about Electricity | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|---|--|------------------------------------|--------|---------|----------------|--|----------------------------|--------------|--|----------------------------|------|--|--------------------------|------------|--|--|-------|--|---|--------|--|--|---|
| conductor | Some materials let electricity pass through them easily. These materials are known as electrical conductors. | <table border="1"> <thead> <tr> <th>Component</th> <th>Symbol</th> <th>Purpose</th> </tr> </thead> <tbody> <tr> <td>Cell (Battery)</td> <td></td> <td>Provides electrical energy</td> </tr> <tr> <td>Power supply</td> <td></td> <td>Alternative to using cells</td> </tr> <tr> <td>Wire</td> <td></td> <td>Allows current to travel</td> </tr> <tr> <td>Bulb/light</td> <td></td> <td>Converts electrical energy into heat and light</td> </tr> <tr> <td>Motor</td> <td></td> <td>Converts electrical energy into movement energy</td> </tr> <tr> <td>Buzzer</td> <td></td> <td>Converts electrical energy into sound energy</td> </tr> </tbody> </table> | Component | Symbol | Purpose | Cell (Battery) | | Provides electrical energy | Power supply | | Alternative to using cells | Wire | | Allows current to travel | Bulb/light | | Converts electrical energy into heat and light | Motor | | Converts electrical energy into movement energy | Buzzer | | Converts electrical energy into sound energy | Electricity travels at the speed of light. That's more than 186,000 miles per second! |
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| Cell (Battery) | | Provides electrical energy | | | | | | | | | | | | | | | | | | | | | | |
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| Bulb/light | | Converts electrical energy into heat and light | | | | | | | | | | | | | | | | | | | | | | |
| Motor | | Converts electrical energy into movement energy | | | | | | | | | | | | | | | | | | | | | | |
| Buzzer | | Converts electrical energy into sound energy | | | | | | | | | | | | | | | | | | | | | | |
| insulator | Plastic, wood, glass and rubber are good electrical insulators. | Electricity comes from the power station, the wind, the sun, water and even an animal's poo! | | | | | | | | | | | | | | | | | | | | | | |
| socket | A socket is a safe device to plug your electrical items into at home. Almost every room at home will have at least one socket. | Electricity is a type of energy that builds up in one place (static), or flows from one place to another (current electricity). | | | | | | | | | | | | | | | | | | | | | | |
| series circuits | A series circuit is one that has more than one resistor, but only one path through which the electricity (electrons) flows. | Coal is the biggest source of energy for producing electricity. Coal is burned in furnaces that boil water and create steam. | | | | | | | | | | | | | | | | | | | | | | |
| cells | An electrical cell is a device that is used to generate electricity, or one that is used to make chemical reactions possible by applying electricity. | A popular way of generating electricity is through hydropower. This is a process where electricity is made by water which spins turbines attached to generators. | | | | | | | | | | | | | | | | | | | | | | |
| volts | Voltage is an electrical potential difference, the difference in electric potential between two places. | A bolt of lightning can measure up to 3,000,000 volts, and lasts less than one second! | | | | | | | | | | | | | | | | | | | | | | |
| generator | A machine that converts energy into electricity. | Electric fields work in a similar way to gravity. Whereas gravity always attracts, electric fields can either attract or repulse. | | | | | | | | | | | | | | | | | | | | | | |
| turbine | A machine that creates continuous power in which a wheel, or something similar, moves round and round by fast moving water, steam, gas or air. | <p>Important facts to know by the end of the electricity topic:</p> <ul style="list-style-type: none"> Know that the brightness of a bulb is associated with the voltage. Compare and give reasons for variations in how components function. Use recognised symbols when representing a simple circuit in a diagram. Construct simple series circuits. Be able to answer questions about what happens when they try different components, for example; switches, bulbs, buzzers and motors. | | | | | | | | | | | | | | | | | | | | | | |
| fuses | These are safety devices. A fuse is a strip of wire that melts and breaks an electric circuit if it goes over a safe level. | | | | | | | | | | | | | | | | | | | | | | | |
| Thomas Edison | He was a great inventor that came up with a way of making the electric light bulb accessible for homes, industry and outside in the streets. | | | | | | | | | | | | | | | | | | | | | | | |