Year 4/5 Science Knowledge Organiser – Electrical Circuits |

Vocabulary 1 components the parts of a circuit e.g. bulb, cell, buzzer 6 buzzer produces sound when electricity flows through it ┰╱╲┩ 2 circuit அ.ம the path around which electricity flows 7 switch (open) creates a gap in the circuit to stop the flow of electricity provides the power to make electricity flow 3 cell 8 switch (closed) closes the gap in the circuit to allow electricity to flow 4 battery when two or more cells are used together 9 electrical insulator an object or material which will not allow electricity to flow through itself easily e.g. plastic, wood, rubber, glass 10 electrical conductor 5 lamp provides light when electricity flows through it (also an object or material which will allow referred to as a bulb) electricity to flow through itself easily e.g. silver, gold, copper

Key knowledge

Electricity comes in two forms: static electricity and electricity in circuits

Static electricity

Happens when: two objects rub against each other

Because: the negative and positive charges in a material become unbalanced

Discharge: when the charge jumps from one object to another to balance the charge out again

Examples: rubbing a balloon on hair, socks rubbing on a trampoline, clothes spinning in a dryer, storm clouds leading to lightning

Rules for building a circuit

- 1. There must be at least one cell.
- 2. There must be a complete circuit for electricity to flow.
- 3. The wires must be plugged in (attached) to each component on one side and come out of the component on the other side.
- 4. The switch must be closed to allow the electricity to flow.

Taking measurements in a circuit

Current tells us how quickly electricity is flowing and is measured using an ammeter.

Voltage tells us the amount of energy each component uses and is measured using a voltmeter.