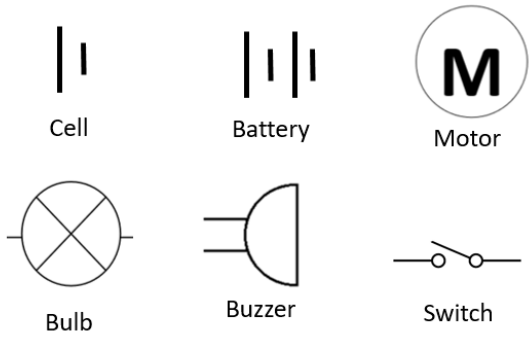
Year 3/4: Electricity Knowledge Mat

Subject Specific Vocabulary Dozen

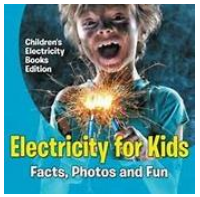
electricity	The flow of an electric current through a material, e.g from a power source through wires to an appliance.
current	The flow of electricity.
battery/ cell	A device that stores electrical energy as a chemical. A battery is multiple cells.
mains	A source of electricity from power stations.
circuit	A pathway that electricity can flow around. It includes wires and a power supply and may include bulbs, switches or buzzers.
component	Components are objects that can be connected together to form an electrical circuit. Blubs, buzzers and batteries are examples of components.
conductor	A material that would allow electricity to pass through it.
insulator	A material that would stop or slow down electricity.
switch	Switches can be used to open or close a circuit.
motor	A device that converts electricity into motion.
blub	An object that produces light from electricity.
connect connection	Every component in an electrical circuit needs to be connected to work.

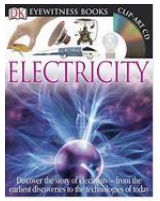
What I will know at the end of the unit:

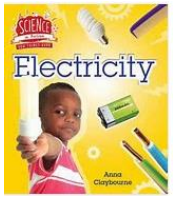
What is electricity?
What uses electricity?
What are the dangers of electricity?
What is a circuit?
What parts could you use to make a circuit?
Which material is best for a switch?
What are common conductors and insulators?
Can we light a bulb without a wire?
How we can put buzzers and motors into a circuit?

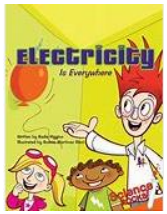


Exciting Books









Sticky Knowledge about electricity

- There are **two types** of electric current. **Mains electricity** and **battery electricity**.
- **Mains electricity**: power stations send an electric charge through wires to transformers and pylons. Then, underground wires carry the electricity into our homes via wires in the walls and out through plug sockets.
- **Battery electricity**: batteries store chemicals which produce an electric current. Eventually, even rechargeable batteries will stop producing an electric current.
- Electricity can only flow around **a complete circuit** that has no gaps.
- There must be wires connected to both the **positive and the negative** end of the power supply/battery.
- Switches can be used to open or close a circuit. When off, a switch '**breaks'** the circuit to stop the flow of electricity. When on, a switch '**completes'** the circuit and allows the electricity to flow.
- A conductor of electricity is a material that will allow electricity to flow through it. **Metals are good conductors.**
- Materials that are good insulators do not allow electricity to flow through them. **Wood, plastic and glass are good insulators.**