Foxford Learning Plan

Year 7

Summer 1

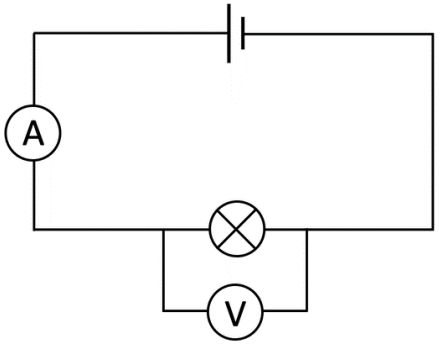
Electricity and Magnetism

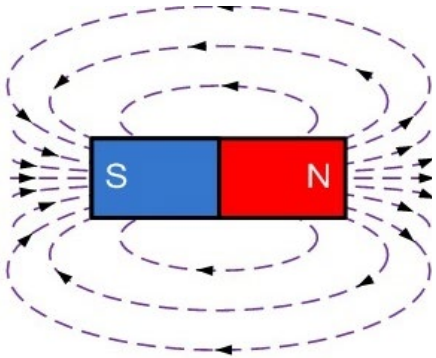
Key Vocabulary	
Ampere	The current is measured in ampere (A)
Attract	Objects that tend to move together because of a force between them attract each other
Current	The flow of negatively charged electrons from negative to positive
Electrical conductor	A material which allows charges (electric current) to move easily through it
Electrical insulator	Materials that do not allow electricity to pass through them
Electromagnet	A magnet made by wrapping a coil of wire around an iron bar and passing an electric current through the coil
Electrostatic force	A non-contact forces: they pull or push on objects without touching them
Magnetic Field	Is the region around a magnet where a force acts on another magnet or on a magnetic material
Resistance	The opposition in an electrical component to the movement of electrical charge through it. Resistance is measured in ohms
Solenoid	A wire coiled up into a spiral shape
Voltage	The potential difference (or voltage) of a supply is a measure of the energy given to the charge carriers in a circuit. Units = volts (V)

Over this course I will be able to

Key Skills

- Build draw and test electrical circuits using the correct circuit symbols.
- Measure, record and compare current, potential difference and resistance using scientific equipment to analyse results.
- Apply, use and rearrange the Ohm's law equation.
- Use scientific models to explain electrical concepts, communicating my ideas using scientific vocabulary.
- Apply my knowledge to solve real-life problems, including electrical safety, plugs and uses of electromagnets.





I will understand

- How electrical circuits work including the difference between current, potential difference and resistance.
- How current and potential difference behave in series and parallel circuits
- How resistance can be calculated and changed, including the effect of wire length.
- How static electricity can be produced, how electrical charges interact and how a Van de Graaff generator works.
- How magnetic fields are produced and how electromagnets are used in everyday technologies.