



I Can Statement - Year 8

Electricity

Unit/Topic Overview	Pre-taught Vocabulary	
In this topic you will discover that electricity is the flow of energy caused by the movement of tiny, invisible particles called electrons. You will explore how this energy travels through a circuit, a closed loop that allows an electrical current to power everything from a simple lightbulb to a smartphone. You will learn to build and compare series circuits, where components are connected in a single loop, and parallel circuits, which offer multiple paths for the current to flow. By measuring current (the speed of the flow) and potential difference (the push behind it), you will discover how different materials can either easily conduct electricity or block it entirely to keep us safe.	Current	Component
	Voltage	Circuit
	Resistance	Charge
	Parallel	Potential difference
	Series	Mains

RAG Rating:		Start	End
1.	I can accurately draw and interpret circuit diagrams using standard symbols (cell, switch, bulb, ammeter, voltmeter, resistor, and fuse)		
2.	I can construct series and parallel circuits from a diagram and troubleshoot why a circuit might not be working (e.g., breaks or short circuits).		
3.	I can describe current (I) as the rate of flow of charge and demonstrate that it is conserved at junctions in a parallel circuit.		
4.	I can define potential difference Voltage, (V) as a measure of the energy transferred per unit charge as it moves between two points.		
5.	I can use an ammeter and voltmeter correctly in a circuit (noting that ammeters are placed in series and voltmeters in parallel).		
6.	I can define resistance (R) as the opposition to current flow and identify how different components (like a thin wire vs. a thick wire) affect it.		
7.	I can calculate unknown values for Voltage, Current, and Resistance using the formula: $V=IR$		
8.	I can explain what static electricity is in terms of free electrons moving from one insulator to another and a flow of charge.		
9.	I can compare circuit models to electricity, identifying the components and stating the limitations of such models.		
10.	I can calculate the power and cost of domestic electricity using the relationship between energy, power, and time, and explain why household appliances are wired in parallel.		