Combined Science - Physics - Key Stage 4 - Electricity

Drawing Electrical Circuits

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Independent Task

Match the component to its description and draw the circuit symbols next to each row.

Component	Description
Cell	Measures the current.
Battery	The value of the resistance affects the size of the current.
Switch	Two or more cells in series.
Lamp	Measures the potential difference.
Fixed Resistor	This breaks or reconnects a circuit, turning the current on and off.
Variable Resistor	This has a store of chemical energy. The longer line shows the positive terminal and the shorter line shows the negative terminal.
Voltmeter	This lights and heats up when a current flows.
Ammeter	This rotates when a current flows.
Motor	This can vary the size of the current.

Series and Parallel

1) Copy and complete the sentences below.

   In a series circuit all components are in _____ loop.
   In a parallel circuit the components are in _____ loops.

1) Draw an example of each. Your circuit should have one cell and two lamps.

Drawing Electrical circuits

1) Draw an electrical circuit that contains one cell with a resistor and a lamp in series. Add a voltmeter across the resistor.

1) Draw an electrical circuit from the image on the below.