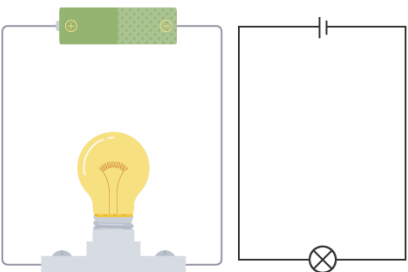
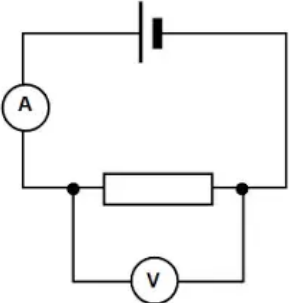
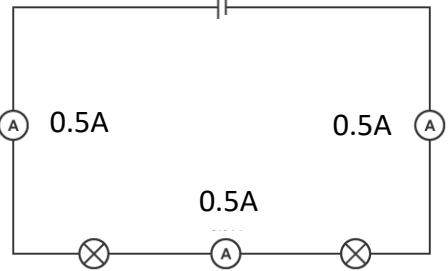
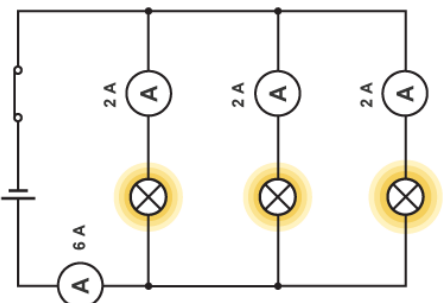
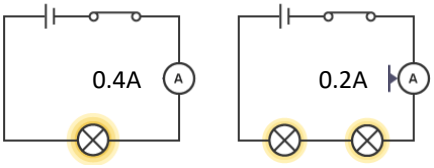


Rationale

Electric charge is a fundamental property of matter. Understanding the difference between **conductors** and **insulators** makes it possible to design and build electric circuits. Many circuits are powered with mains electricity, but portable electrical devices must use batteries of some kind. Electrical power fills the modern world with artificial light and sound, information and entertainment, remote sensing and control.

Diagrams	Keywords	Definitions
<p>1</p> 	<p>Complete circuit</p> <p>Circuit diagram</p> <p>Electrons</p>	<p>Circuit with no breaks and a power source.</p> <p>Drawn with circuit symbols, straight lines using a pencil/ruler.</p> <p>Small negatively charged sub-atomic particles free to move in metals.</p>
<p>2</p> 	<p>Current</p> <p>Potential difference</p>	<p>Measure of the flow of electrons in a circuit measured in Amps (A) using an ammeter in series.</p> <p>Potential difference is a measure of the difference in energy between two parts of a circuit. Measured in Volts (V) using a voltmeter in parallel.</p>
<p>3</p> 	<p>Series Circuit</p>	<p>Circuit with all component on one loop. If a component is disconnected, the circuit is broken and all the components stop working.</p> <p>Current is the same in all parts of a series circuit.</p>
<p>4</p> 	<p>Parallel Circuit</p>	<p>Circuit where different components are connected on different branches of the wire.</p> <p>Current in a parallel circuit is shared between the branches.</p>
<p>5</p> 	<p>Resistance</p> <p>Ohm (<math>\Omega</math>)</p>	<p>Components in a circuit reduces the flow of charge through them. This is called <b>resistance</b>.</p> <p>Unit of resistance.</p> <p>Adding components in series increases resistance.</p>