## Topic 3.1 How is electrical energy part of your world?

$\square$ Electrical energy has many applications.
$\square$ Many different types of energy can be transformed into electrical energy.
$\square$ Electrical energy is generated in different ways from different sources.
Topic 3.2 How do electrical charges behave?
$\square$ Electrons carry a negative charge, and protons carry a positive charge.
$\square$ Opposite charges attract each other, and like charges repel each other.
$\square$ Charged object can attract neutral objects
Topic 3.3 How do charges flow through the components of a circuit?
$\square$ Chemical energy separates electrical charges in cells.
$\square$ Charges can flow through conductors, but not insulators.
$\square$ Moving electrical charges form an electric current.
$\square$ A load resists the flow of current.
$\square$ Conductors must form a closed loop to allow current to flow.
Topic 3.4 How are circuits used in practical applications?
$\square$ Voltage, current, and resistance in a circuit are related by Ohm's law.
$\square$ Loads can be connected in series or in parallel in a circuit.
$\square$ Parallel loads are practical for circuits in the home.
Topic 3.5 How can electrical energy be generated and used sustainably?
$\square$ Sustainable use of electrical energy begins with understanding how its use is measured.
$\square$ Making informed choices helps you use electrical energy sustainably.
$\square$ Renewable energy sources provide sustainable options for generating electrical energy.

