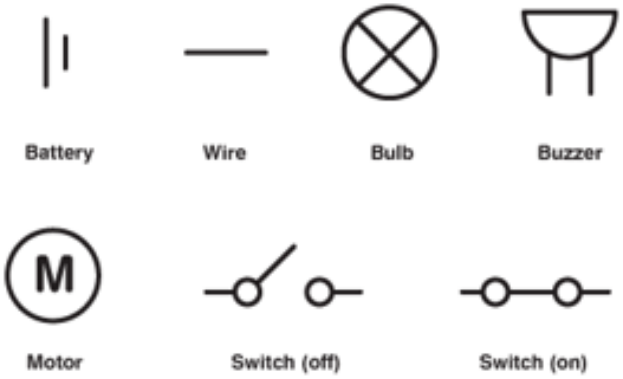
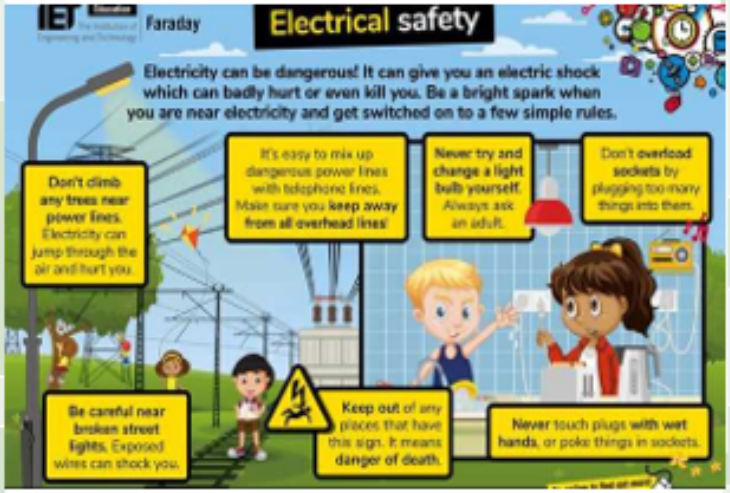
I-Robot

Physics

Subject Specific Vocabulary

Electricity	**Is the flow of tiny particles called electrons and protons**
Electrical Appliance	**Electrical or mechanical machines which help in the household such as cooking, cleaning or food preservations.**
Volts	**Voltage is what makes electric charges move.**
Component	**A part of a circuit e.g. battery, bulb, wire.**
Circuit	A **circuit** is a complete path around which **electricity** can flow. It must include a source of **electricity**, such as a battery.
Conductor	**Allows electricity to flow through** In general, the best electrical conductors are metals. Metals tend to have electrons in the outer layer of their atoms that are freely shared. Today, the most commonly used electrical conductor is copper. Copper is used in electrical wiring and electrical circuits throughout the world.
Insulator	The opposite of a conductor is an insulator. An insulator opposes the flow of electricity. Insulators are important to keep us safe from electricity. The wire that carries electricity to your computer or television is covered with a rubber-like insulator that protects you from getting electrocuted. Good insulators include glass, the air, and paper.
Battery driven	**Using power from batteries e.g. torch**
Mains driven	**Using power from mains electricity e.g microwave**





Sticky Knowledge about electricity

- ❑ To identify a list of common electrical appliances found in a wide range of situations (e.g. home, school, local community) and sort these into those which use mains power and those which are battery driven.
- ❑ To understand that mains electric is much more powerful than household batteries.
- ❑ To explain basic safety precautions for using electrical appliances.
- ❑ To know that electrical power in a circuit is measured in volts.
- ❑ To identify and name common components of electrical circuits: wire, battery, bulb, switch, buzzer.
- ❑ To know how to construct a series of simple circuits containing different components e.g. bulb, buzzer, more/less batteries, and record their observations e.g. *When the circuit had a buzzer and a bulb the bulb was dimmer because the power was also going to the buzzer as well as the bulb.*
- ❑ To correctly predict whether a bulb will light in a variety of simple series circuit diagrams.
- ❑ To know how to add a number of switches to their circuits and understand that all switches need to be closed for a bulb to light.
- ❑ To understand and use the terms conductor and insulator in relation to electricity.