

Brentside Knowledge Organiser - Science

Year:
6

Topic: Could you be the next Nintendo apprentice?

National curriculum: Electricity– use correct symbols, explore circuits systematically and design useful circuits

What I should already know:

Identify common appliances that run on electricity
Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
Understand how a switch works
Recognise some common conductors and insulators,

What I should know at the end of the topic:

Variables in circuits	Brightness or loudness is affected by the number of cells.
Symbols	Recognise and use electrical symbols
Explanation of circuits	Explain why circuits will/won't work in different situations. Give reasons for how components may function differently,
Investigate	Investigate the effect of changing a component in a circuit.
Design and create a circuit	Design and create useful circuit, e.g. burglar alarm, traffic lights

Investigations

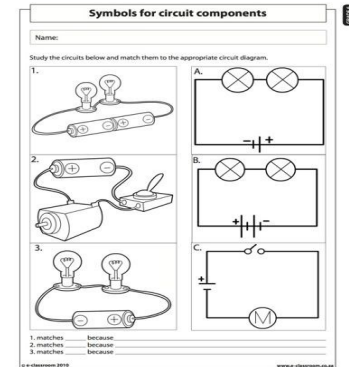
What happens to the brightness of a bulb when more are added?
How can changing components affect a circuit?
What happens to bulb/buzzer when more cells are added?
Can I create a useful circuit?

Diagrams:

Match the symbol to the correct name and use.

	cell	Transfers chemical energy to electrical energy.
	motor	Two cells in series.
	closed switch	Transfers electrical energy to sound energy.
	battery	Transfers electrical energy to movement.
	buzzer	Completes the circuit.
	open switch	Transfers electrical energy to light energy.
	bulb	Breaks the circuit.

Match the symbol to the correct name and use.



Vocabulary

Component	An electrical circuit is comprised of components such as cell, wire, switches
battery	Provides power to work the circuit
bulb,	Produces light in a circuit
circuit	Route for electricity to travel along powering appliance as it travels a long.
appliance	A device which using electricity such as motor, bulb or buzzer.
conductor	Materials which allows electricity to move through it.
electrons	particle with a charge of negative electricity
Positive/negative	Terminals of a cell.
Variables/factors	An element or feature which affects the outcome