Hillcross Primary School

Year 6 Knowledge organisers

# Everybody Wants To Rule The World

## How does a burglar alarm work?

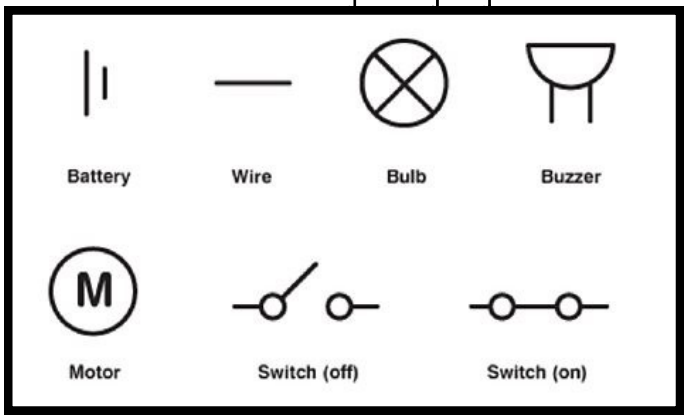
### How will I keep safe when using electricity?

| Do's | Don'ts |
|---|---|
| • Use the equipment safely and appropriately.<br>• Place your water bottle away from electricity.<br>• Turn off mains electricity before removing a plug.<br>• Adhere to any warning signs. | • Use the equipment with wet hands.<br>• Place anything into a mains plug socket.<br>• Walk around the classroom with equipment. |

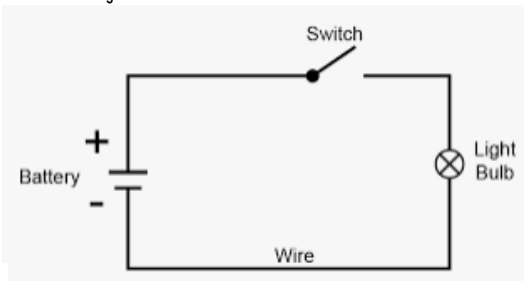
### Key Vocabulary:

- **Electrical circuit**- A path or line through which an electrical current flows.
- **Mains**- electrical supply from power stations to households.
- **Complete circuit**- a complete loop of electricity
- **Circuit diagram**- graphical representation of an electrical circuit.
- **Symbol** - a mark or character used to represent a component.
- **Components**—a part or element of the circuit.
- **Cell**—a device which generates electricity.
- **Battery**—a container consisting of one or more cells.
- **Voltage**—the electrical force that drives the current.
- **Current**— the movement of an electrical charge.

### How can I draw a diagram of my circuit?




- **Symbols** are used for the different components **(parts)** of a circuit. They are recognised across the world to ensure everyone is safe.
- The circuit is drawn with a **ruler** using **straight lines** for the **wires**.




### How can I make a bulb brighter or buzzer louder in my circuit?

The number and voltage of cells in the circuit will change the brightness of a bulb or the volume of a buzzer. **The more cells or a higher voltage will make the bulb brighter or the volume of sound a buzzer makes louder.**

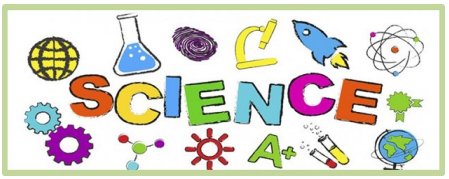
### Science Capital:

Lynn Conway was an American electrical engineer who designed microchips (used in electronic devices).

### Applying Past Knowledge

This learning links with the lessons in year 4:

- Identifying appliances that use electricity.
- Creating a simple circuit to light a bulb or sound a buzzer.
- Understanding what happens when the circuit is broken.




### How does a burglar alarm work?

- A burglar alarm works by using a **switch**.
- An alarm **doesn't** sound when there is a break in the circuit (the switch is off) and the current is unable to flow. The alarm sounds when there is a full circuit (the switch is on) and the current can flow around the circuit.
- The switch must be made using both **conductors** and **insulators** of electricity.