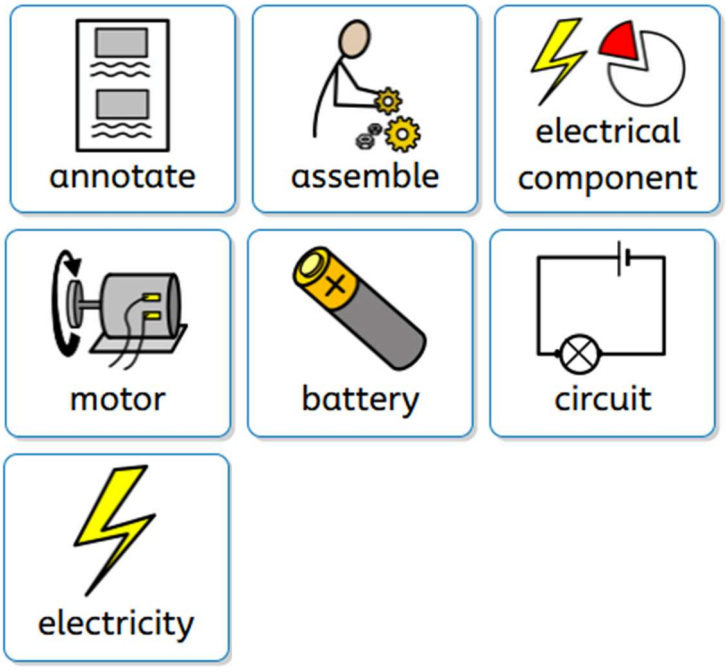
# St Roberts Catholic Primary School

## DT Knowledge Organiser- Autumn 2

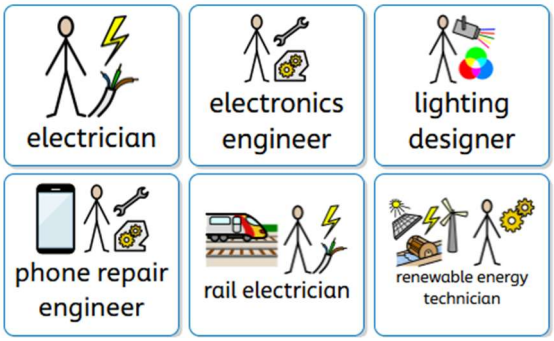
## Electrical Circuits - Wobble Bots

| What should I already know? | What will I know at the end of the Unit? |
|---|---|
| • To understand that simple circuits require a complete, unbroken loop with a power source (battery/cell) and wires for electricity to flow.<br>• Recognise basic electrical components<br>• To have confidence in basic tool use to cut, fold etc.<br>• To understand that products are designed with specific user needs and design criteria in mind.<br>• To understand the design and evaluation concepts in creating a product. | • Identify some simple elements of a circuit (battery, wires, bulb, motor and switch) and explain their function.<br>• Explain that for electricity to flow around a circuit, it must be closed.<br>• Describe a motor as an electrical circuit component that changes electricity into movement.<br>• Provide examples of motorised products that use movement to rotate or spin different parts.<br>• Make a product that uses a motor.<br>• Design a motorised product for a particular purpose.<br>• Determine appropriate design criteria based on the function of the proposed product.<br>• Explain design choices based on the desired functionality of a product.<br>• Create an innovative motorised product based on knowledge of existing products.<br>• Discuss the effectiveness of a product while considering the design criteria. |

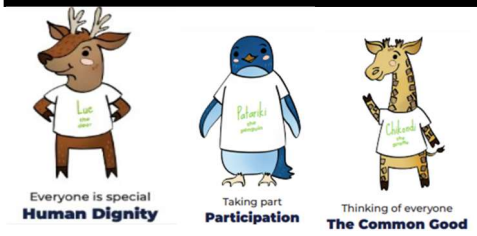
## Key Vocabulary




## Links to Careers

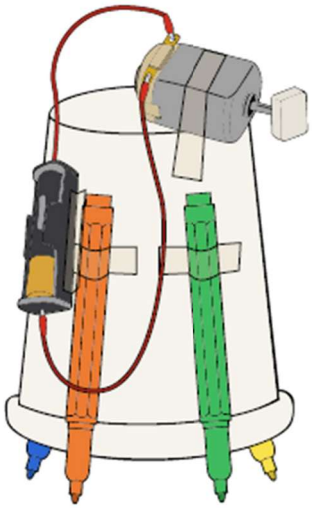



## Links to Catholic Social Teaching



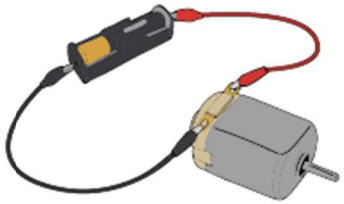
# D&T - Wobble bots

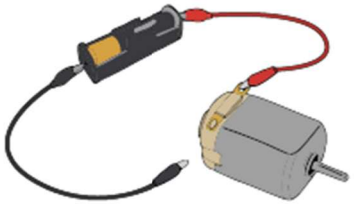
| | |
|---|---|
| **assemble** | To put parts together. |
| **charge** | An amount of electrical energy. |
| **design criteria** | The important features that a product must have or do to work correctly. |
| **evaluate** | Looking at the good and bad points about something and thinking about how to improve it. |
| **product** | Something that has been made to be used or enjoyed by someone. |



This Kapow Doodler uses a motor with an **off-centre weight** on the axle, making it wobble and draw patterns.

A **circuit** is a path that electricity can **flow** around.





**Electrical components** are parts of a circuit such as a bulb, battery, wires or a motor. A **motor** is an electrical component that uses electricity to make something move.

The motor axle turns when the circuit is a complete loop because the charge can flow around. If the circuit is not a loop, the axle will not turn.

A **diagram** is useful when designing a **product**. It can show what the product will look like. **Annotate** the diagram with labels that explain each part.

