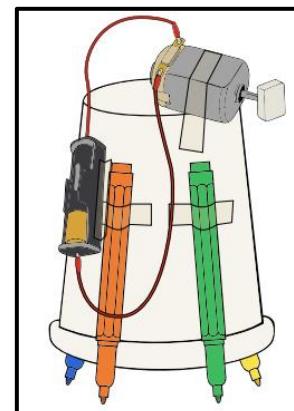


What I should already know

- Electrical conductors are materials which electricity can pass through.
- Electrical insulators are materials which electricity cannot pass through.
- A battery contains stored electricity that can be used to power products.



Sticky Knowledge

Design:

- Annotations are detailed labels and comments on diagrams.
- Improving on prototypes can help improve the final design.

Make:

- Research can help decide which materials are best for both aesthetics and functional properties.

Evaluate:

- Looking at other designers' work can help inform designers.
- The final product can still be improved.
- Feedback should be positive, helpful and specific.

Technical knowledge:

- An electric motor converts electricity into rotational movement.
- A motorised product is one which uses a motor to function.

Technical skills

Design:

- Creating more complex design criteria that requires considering detailed user needs, environmental impact, material and costs.
- Developing more independence in generating ideas.
- Using a series of prototypes to refine and improve my designs.

Make:

- Producing lists of equipment, materials and tools that I need for a task.
- Creating a step-by-step plan for making.
- Selecting materials and components based on research.
- Explaining their choices.

Evaluate:

- Reflecting on the usability, aesthetics, innovation and sustainability of products and discussing how design choices impact these aspects.
- Considering alternative materials, tools or techniques that could enhance a product.

Vocabulary

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.

Sir James Dyson



Sir James Dyson is a British inventor, engineer, and businessman. He is best known for inventing modern bag-less vacuum cleaners.

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.

