

## Topic

Mechanisms & Mechanical Systems  
Electrical Systems:

### Fairgrounds



**Holy Family Halewood**  
Year 5 and 6 Design Technology



### Learning Objectives

- To look at familiar products that use rotating parts
- To investigate ways of using electrical motors to create rotating parts
- To design a fairground ride with a rotating part
- To make a fairground ride following a design
- To evaluate a finished product and suggest improvements

### Key Vocabulary

**Motor**- a motor is a mechanical or electrical device that creates **motion**

**Motion**- the action or process of moving or being moved

**Mechanical**- made or operated by a machine

**Electrical**- using electricity for power

**Circuit**- a closed path through which an electric current flows

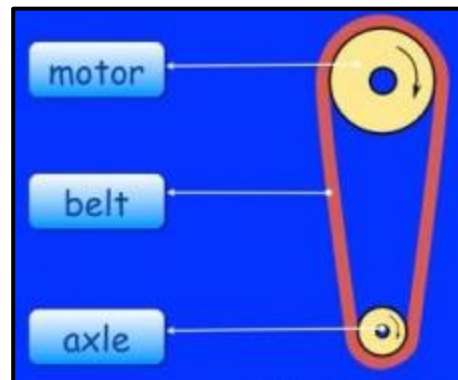
**Axle**- a bar connected to the centre of a circular object such as a wheel that allows or causes it to **rotate**

**Rotate**- turns with a circular movement

**Belt and pulley system**- a mechanical system used to transfer movement from one axle to another

**Framework**- a supporting structure around which something can be built

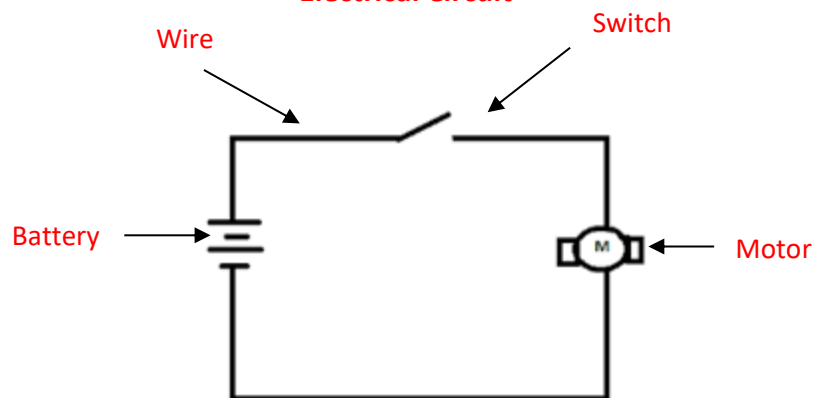
### Belt and Pulley System



### Motor



### Electrical Circuit



### Knowledge We Will Acquire

- Understanding the functional properties and aesthetic qualities of different materials and components
- That mechanical and electrical systems have an input, process and output
- How mechanical systems such as cams or pulleys or gears create movement
- How more complex electrical circuits and components can be used to create functional products
- How to reinforce and strengthen a 3D framework
- Technical vocabulary relating to mechanical systems and electrical systems

### Skills We Will Acquire

- Using a wide range of tools, materials and components
- Using electrical circuits to create moving parts
- Using a belt and pulley system to transfer motion
- Accurately measuring, marking out, cutting and shaping materials and components
- Accurately assembling, joining and combining materials and components
- Accurately applying a range of finishing techniques, including those from art and design