Mechanisms & Mechanical Systems, Electrical Systems: Fairgrounds

Key Knowledge
Learn this information

Understanding the functional properties and aesthetic qualities of different materials and components

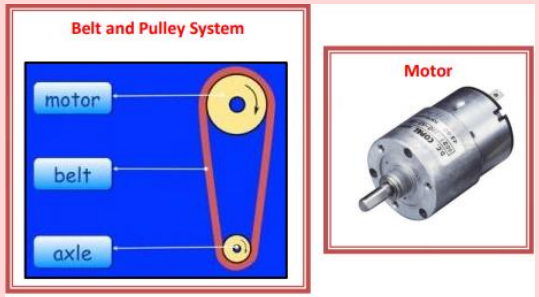
That mechanical and electrical systems have an input, process and output

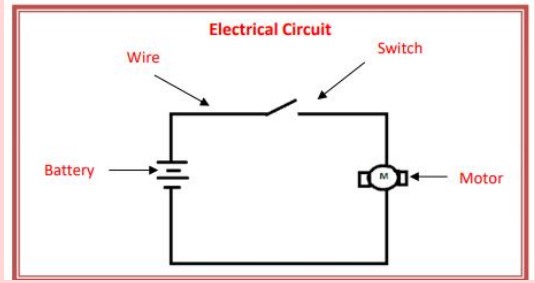
How mechanical systems such as cams or pulleys or gears create movement

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





Keys Skills
Practice and perform these skills

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

Learning objectives
Combine all your learning

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

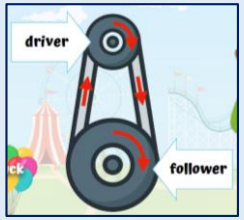
Key Vocabulary
Understand these keywords

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

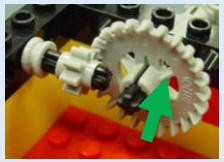
Belt and pulley system- a mechanical system used to transfer movement from one axle (driver) to another (follower).

Framework- a supporting structure around which something can be built

Gears/cogs - Gears or cogs can be used to change the speed, force or direction of a motion. When two gears are connected, they always turn in the opposite direction to each other.

Spur Gear: a standard gear and can come in many sizes.

Crown Gear: similar to a bevel gears they allow rotation to 'turn a corner'.



Crown gear