

## Vocabulary: Mechanical Devices

### Different types of movement

Mechanical device	A machine or tool that has one or more parts. They use and manipulate energy to perform tasks and specific actions.
Linear movement	A motion along a straight line.
Rotary movement	A motion which round in a circle.
Reciprocating movement	A repetitive up-and-down or back-and-forth linear motion.
Oscillating movement	Swinging from side to side, like a pendulum in a clock.

Vocabulary: Mechanical Devices	
Changing magnitude and direction force	
Magnitude	The great size or extent of something.
Force	Strength or energy as an attribute of physical action or movement.
Lever	A rigid bar resting on a pivot, used to move a heavy or firmly fixed load with one end when pressure is applied to the other.
Leavers: first order	First order levers have the turning point (fulcrum) between the load and the effort. A well-known first order lever is the see-saw.
Leavers: second order	A lever that has the load between the fulcrum and the effort is known as a second order lever.
Leavers: third order	Third order levers have the effort is between the load, at the top, and the fulcrum.
Linkages	Linkages are mechanisms which allow force or motion to be directed where it is needed. They can be used to change: The direction of motion, The type of motion, The size of a force
Bell crank	If an 'L'-shaped lever is pivoted at its centre, the direction of the input movement or force would be turned through 90° at the output.
Push/pull	Also called parallel motion. The output travels in the same direction as the input.
Rotary system	A circular motion.
CAMs	A cam is a shaped piece of metal or plastic fixed to a rotating shaft. A cam mechanism has three parts: cam, slide and follower.
Followers	The part of a machine in sliding or rolling contact with a rotating cam and given motion by it.
Simple gear trains	A gear train is a mechanical system formed by mounting gears on a frame so that the teeth of the gears engage.
Pulley	A wheel with a grooved rim around which a cord passes, which acts to change the direction of a force applied to the cord and is used to raise heavy weights.
Belt	A continuous band of material used in machinery for transferring motion from one wheel to another.