



**Overview:**

We will learn about the different mechanisms that are used to make moving toys and decide on a mechanism that is best suited to create our final project based on the mechanics.

We will apply our knowledge and design, plan and create a moving toy using one of the mechanisms.

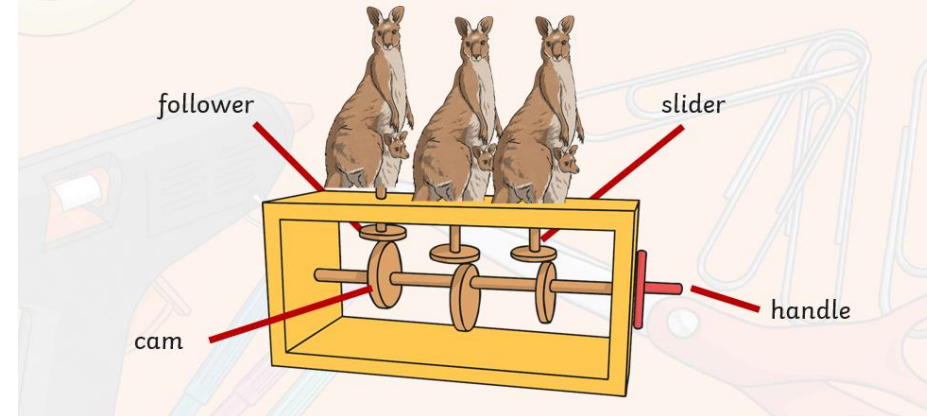
Key words	Definition
<b>mechanics</b>	The way something works.
<b>mechanism</b>	Parts that work together to make something move.
<b>movement</b>	The process of moving.
<b>pulley</b>	A wheels over which a belt, rope or chain is pulled to lift or lower a heavy object.
<b>levers</b>	A simple machine which helps us to lift objects.
<b>Linkages</b>	One or more lever joined together.
<b>Wheels and axels</b>	A simple machine where a wheel turns around a bar to move objects.

## Different Types of Movements

**Linear movement** – moving in a straight line, up or down  
**Rotary movement** – turning around in a circle, like a wheel turning

### Making Toys Move

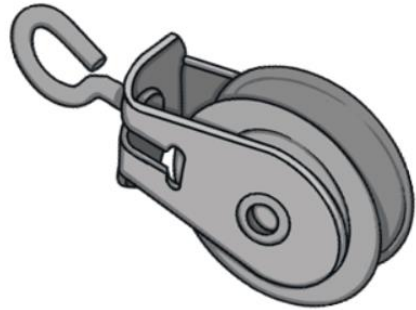
A cam mechanism is made up of three components: a cam, slider and follower. The mechanism causes components to move. Cams can be made out of metal, plastic or wood.





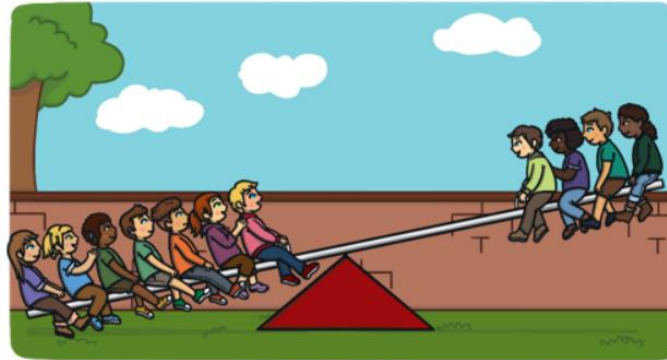
### Pulley

A pulley is a rope or chain with a wheel and axle.  
It helps to lift heavy loads without needing much effort.



### Levers

Levers also help us to lift up objects.



### Linkages

A linkage is one or more levers joined together to change or help movement.



### Wheels and Axles

The wheels on the toy car move at the same time and speed because each pair of wheels is attached to a pole called an axle. Real vehicles, such as cars and vans, also have axles.



### Mechanisms Word Mat

#### Making Words



- cut
- fasten
- finish
- join
- saw
- shape
- stick

#### Sliders and Levers



- lever
- pull
- pulley
- push
- slot
- slider
- bridge/guide
- fastener
- linkage
- pivot

#### Wheels and Axles



- wheels and axle
- body
- cab
- dowel
- gear
- chassis

#### Process



- design
- criteria
- evaluate
- function
- ideas
- investigate
- make
- product