Design and Technology -Mechanisms

Key Vocabulary

lever	A mechanism consisting of a bar that moves around a fixed pivot.
linkage	A mechanism consisting of two or more bars joined together by pivots
mechanism	A system of components that work together in a machine.
pivot	A fixed point on which something turns or balances.
slider	A mechanism consisting of a slider and slider guide that moves in a straight line

Machines and mechanisms

Machines make work easier. They can help us to move or lift objects. Machines are made up of different parts called components.

A group of components that work together make a mechanism. Mechanisms usually make something move. Mechanisms include sliders, levers and linkages.

Prior Knowledge

y rl	**Mechanisms and movement**	Use wheels and axles to make a simple moving model. Most vehicles that move on land have axles and wheels that are fixed to a chassis. An axel fixed to a chassis has freely moving wheels.

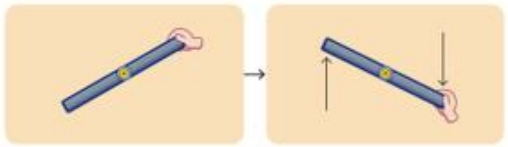
Key Information

1	A machine is made up of parts that work together to perform a task. Parts of a machine are called components and the part that brings about movement is called the mechanism
2	A slider mechanism moves in a straight line. Real-life examples of slider mechanisms include door bolts and drawers
3	A lever mechanism is a bar that moves around a fixed point called a pivot. Real-life uses of levers include scissors and seesaws
4	A linkage mechanism combines levers and sliders. Real-life uses of linkages include toolboxes and scissor lifts. Models can have moving parts that use levers, sliders, wheels and axles
5	Products can be adapted and improved to suit its purpose
6	Appropriate components and materials can be joined together to make a desired effect

Lever mechanism

A lever mechanism is a bar that moves around a fixed point called a pivot.

When one end of the bar is pushed or pulled in one direction, the other end moves in the opposite direction.

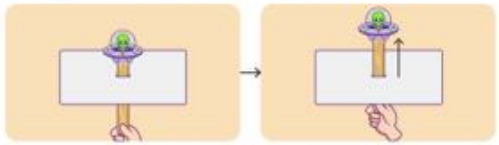


Scissors and seesaws use lever mechanisms.

Slider mechanism

A slider is a mechanism that moves in a straight line. This can be from side to side or up and down. It is made up of a slider and a slider guide to direct the movement.

A push or pull at one end of the mechanism makes the other end move in the same direction.

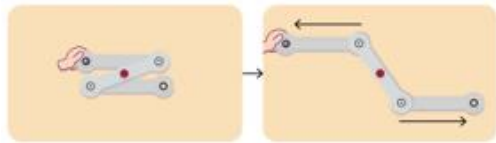


Door bolts and drawers use slider mechanisms.

Linkage mechanism

A linkage mechanism combines levers and sliders. It consists of two or more bars joined together by pivots.

Moving one bar can make the other bars move in different directions.



Toolboxes and scissor lifts use linkage mechanisms.