

Max's Mechanical Marvels: Design Technology Flashcards

Learning objective: To understand and identify key components of mechanical systems including levers, linkages, and gears.

Read the front of the card and test your knowledge of mechanical systems. Flip to the back to check your answer against the definitions used by Max the Monkey.

What is a mechanism?

A mechanism is a device that changes an input force or movement into a different output movement.

Define a lever.

A lever is a simple machine consisting of a beam or bar that pivots around a fixed point to move a load.

What is a fulcrum?

A fulcrum is the fixed pivot point upon which a lever rests or rotates.

What is a linkage?

A linkage is a series of rods or bars connected together by joints to transmit movement from one place to another.

What is the function of a gear?

A gear is a toothed wheel that works with other gears to alter the speed, direction, or force of a movement.

Explain 'Input' in a mechanism.

Input is the force or movement that is applied to a mechanism by a person or a motor.

Explain 'Output' in a mechanism.

Output is the resulting movement or action that the mechanism produces.

What is a pivot?

A pivot is a point or pin on which a part of a mechanism turns or oscillates.

What is 'Effort' in a lever system?

Effort is the amount of force applied to the lever to move an object.

What is a 'Load' in a mechanical system?

The load is the object or weight that the mechanism is designed to move or lift.

What happens when two gears mesh?

When two gears mesh, the teeth lock together; if one turns, the other is forced to turn, usually in the opposite direction.

How can you change the direction of motion using linkages?

You can use a linkage to convert a push or pull movement into a different direction or a different type of motion, such as turning a straight push into a circular movement.