

Max and Kit's Levers and Pulleys Flashcards

Learning objective: To understand the mechanical functions of levers and pulleys and how they help us lift or move loads with less effort.

Read the front of the card to test your knowledge of mechanical systems. Flip the card to check your answer. Use these to revise for your Design Technology quiz!

What is a lever?

A simple machine consisting of a rigid bar that pivots on a fixed point to help lift a heavy load.

What is a fulcrum?

The fixed point or pivot around which a lever turns.

Define 'Load' in the context of levers.

The object or weight that you are trying to move or lift.

What do we call the force applied to a lever to make it move?

Effort.

What is a pulley?

A simple machine that uses a wheel with a groove and a rope to lift heavy objects more easily.

How does a pulley change the direction of a force?

It allows you to pull downwards to lift an object upwards, using gravity to help.

What is a 'Fixed Pulley'?

A pulley that is attached to a support, like a ceiling or beam, and does not move while in use.

Max is using a seesaw. If he sits at the end, what is the seesaw acting as?

A lever.

What is mechanical advantage?

The benefit gained by using a machine to make a task easier, requiring less force to move a load.

Kit needs to lift a heavy box to the top shelf. Why is a pulley better than lifting it by hand?

A pulley can make the load feel easier to lift and allows the user to pull downwards, which uses body weight to assist.

True or False: The closer the load is to the fulcrum, the harder it is to lift.

False. It is easier to lift when the load is closer to the fulcrum.

Give an example of a common lever found in a classroom.

A pair of scissors or a stapler.