

# Design Technology: Levers and Pulleys with Max the Monkey

*Learning objective: To understand how simple machines like levers and pulleys help us lift and move objects with less effort.*

Read the front of each flashcard and try to recall the definition or concept. Flip to the back to check your answer.

**What is a lever?**

A simple machine consisting of a beam or bar that pivots on a fixed point to help lift heavy loads.

**What is a fulcrum?**

The fixed point or pivot around which a lever turns.

**In a lever system, what is the 'load'?**

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

**What is 'effort' in a mechanical system?**

The amount of force or energy you apply to a machine to move the load.

**What is a pulley?**

A simple machine made of a wheel with a groove for a rope or cable to pass through, used to lift heavy objects.

**How does a pulley make lifting easier?**

It allows you to change the direction of your force, often using your body weight to help pull the load upwards.

**If Max the Monkey uses a long lever, what happens to the amount of effort needed?**

The longer the lever, the less effort is usually needed to lift a heavy load.

**True or False: A pulley is a type of simple machine.**

True.

**Give an example of a lever found on a playground.**

A seesaw.

**Why do we use pulleys on a flagpole?**

To help raise the flag to the top of the pole easily without having to climb it.

**What does 'mechanical advantage' mean?**

It means using a machine to make a task easier by requiring less physical force.

**Max wants to lift a heavy rock. Should the fulcrum be closer to the rock or closer to his hand?**

Closer to the rock (the load) to create a better mechanical advantage.