

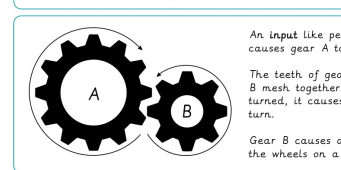
Year 5 - Mechanical Systems - Gears and Pulleys - Term 2

Key Vocabulary

Gear	A wheel with teeth.
Gear system	Gears that work together to transfer motion.
Mesh	When the teeth of gears fit together.
Input	The movement or force put into a system.
Output	The movement or force produced.
Pulley	A grooved wheel with a rope or belt.
Force	A push or pull.
Market research	Collecting information from likely users.
Problem statement	An explanation of a problem to solve.
Sustainable	Using resources with less environmental harm.

How gears work

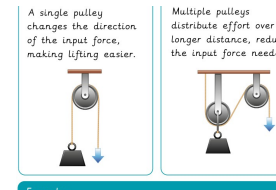
Meshed gears transfer movement. Neighbouring gears rotate in opposite directions.



Different gear sizes change speed and force.

What is a pulley?

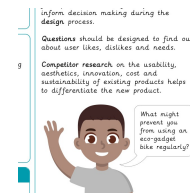
Pulleys use a grooved wheel with a rope or belt to transfer force and movement.



Several pulleys can reduce effort.

Research a real problem

Ask potential users what they need before designing an eco-gadget to meet the brief.



Design criteria help evaluate a solution.

To know statements

To create a working gear system and explain its function.

To improve a working gear system and suggest some applications.

To create a working pulley system and explain its function.

To conduct market research to discover useful tasks an eco-gadget bike could perform.

To design and evaluate an eco-gadget bike using design criteria.

What can you remember from previous units?

How did axles help your mechanical cars?

Where have you seen gears or pulleys in daily life?

Anything else you have learnt?

What have you enjoyed?