

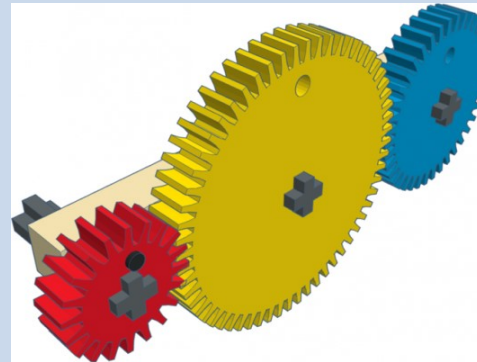
Design Technology Year 5 Summer: Heath Robinson Machines



William Heath Robinson (1872—1944) was an English cartoonist and illustrator, best-known for the complicated and outlandish inventions.

Key Knowledge to know and use

- Famed for his elaborate and overly complicated machines, Heath Robinson's contraptions transformed mundane everyday tasks into ridiculous and often hilarious rituals. He used a series of sketches and annotation to clarify his intricate ideas.
- Some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.



Gears are wheels with teeth that slot together. When one turns, the other turns too. They work in three ways:

To increase the turning force. Small gears turn quickly but with a smaller force, whereas large gears turn slowly with a greater force.

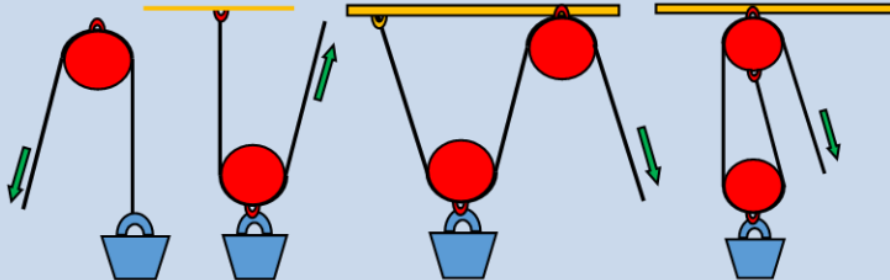
To increase the speed. If you connect a larger gear to a smaller gear, the smaller gear turns much more quickly to keep up. So on our diagram, the blue gear will be turning faster than the yellow gear, and the red gear will be turning faster than the blue one.

To change direction. When you join two gears together, the second one will always turn in the opposite direction. So if the red gear on our diagram is turning clockwise, the yellow gear will turn anticlockwise and the blue gear clockwise again.

Key Vocabulary to learn and use in your learning

Word	Definition
contraption	A device that has a specific purpose and is often overly complicated .
elaborate	The adjective elaborate is used to describe when something is planned with a lot of attention to detail or when something is intricate or detailed itself.
gears	Wheels with teeth that slot together. When one turns, the other turns too.
invention	A new thing that someone has made.
pulley	A wheel on a fixed axle with a groove in it to guide a rope or cable.

Types of Pulleys



Fixed

Moveable

Compound

Block & Tackle