

Key Vocabulary

Word	Meaning
Pulley	A grooved wheel over which a drive belt can run
Drive belt	A belt which connects & transfers movement between two pulleys
Gear	A wheel with teeth around its circumference
Rotation	Circular movement around an axis
Spindle	The rod which runs through the centre of a pulley or gear wheel
Driver	The gear or pulley that provides the input movement to the system
Follower	The gear or pulley that provides the output movement to the system
Gearing up or down	Changing the rotational speed of a product using pulleys or gears
Axis	The central point of rotation

Pulleys

Driver Follower

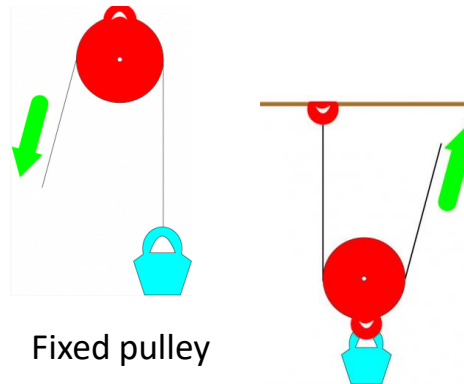


The pulleys rotate in the same direction

Driver Follower



The pulleys rotate in different directions



Fixed pulley

Moveable pulley

Gears

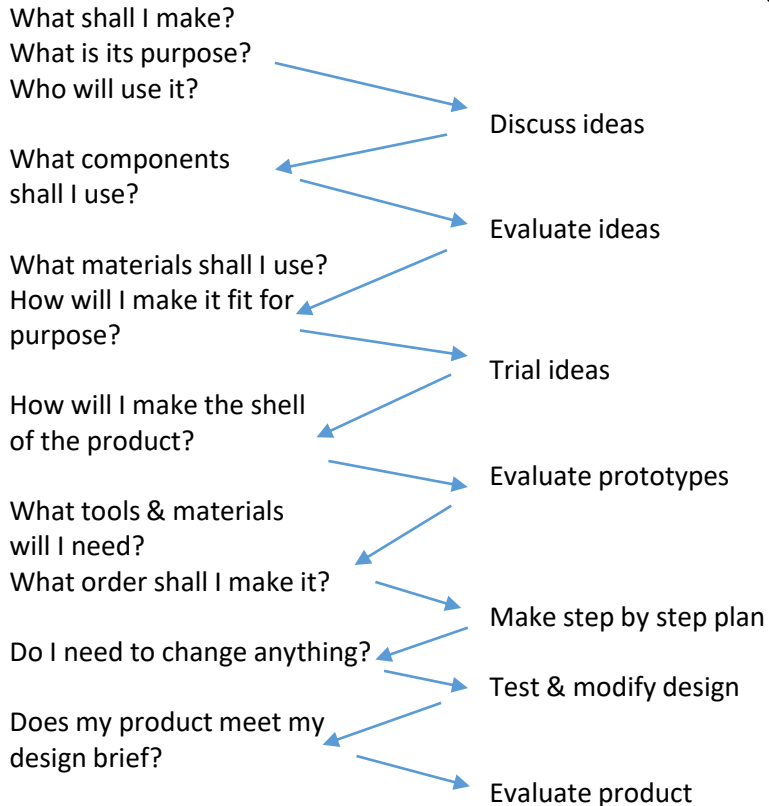


Ratios

No. teeth	Ratio
8, 16	2:1
8, 40	5:1
8, 24	3:1
40, 40	1:1



Thoughts & Actions

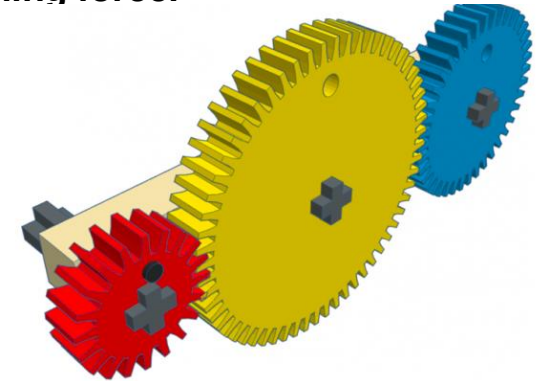


Gears

What are gears?

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

- 1.To increase the turning force.**
- 2.To increase the spe**
- 3.To change direction**



Extending your learning

Look at your bike gears
Do you have curtains or blinds that use pulleys?
Lego Technics kits
K'nex construction kits
Meccano kits
BBC Bitesize
The Science Museum London