

Key Vocabulary

gears	Wheels with teeth around the outside, which can interlock to create movement.
motor	A machine powered by electricity
cams	A cam is a specially shaped piece of material, usually metal or hard wearing plastic, which is fixed to rotating shaft.
Pulley	A pulley is a wheel on a fixed axle with a groove in it to guide a rope or cable.
prototype	A sample of a final product.
diagram	A drawing of a product with labels



Ornery- A model that moves and shows the order of the planets

Overview

Gears and Pulleys




Mechanisms are the parts that make something work.

-Mechanisms are all around us. A set of related mechanisms used to create movement is called a mechanical system.




-Gears are toothed wheels (cogs) that lock together and turn one another. When one gear is turned the other turns as well.

The wheels are usually different sizes, so that one gear speeds up to slow down the next gear. They therefore increase the power of a turning force.

-Pulleys are like gears, but the wheels do not lock together. The wheels are instead joined together by a drive belt. Pulleys can be used to affect the speed, direction or force of a movement.

Example Mechanisms

	Flag/Flagpole	<p><u>-A flag being raised/ lowered on a flagpole is a prime example of a pulley mechanism in action.</u> The rope or belt pulled by the user fits into a groove in wheels at the top and bottom of the flagpole. This switches the direction of the force needed to lift/ lower the flag up and down the post.</p>
	Can Opener	<p><u>-A can opener is an example of a gear mechanism in action.</u> When you turn the handle, it turns a small, round, metal traction gear. The notches in the gear allow it to grip onto the lip of the can. As the wheel moves around the rim of the can, the cutting wheel on the other side of the lip opens the can.</p>
	Bicycle Gears	<p><u>-Bicycle gears</u> are an example of a multiple gear and pulley mechanism in action. The size of the gears (and number of teeth) determines how many times the rear wheel turns for every pedal stroke. A lower, easier gear (small chain ring, big cog) helps the user to accelerate faster, whilst a higher, harder gear (big chain ring, small cog)</p>