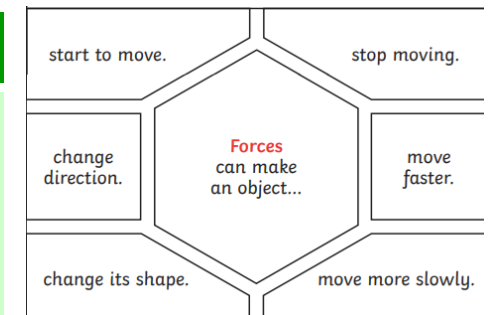


# Science- how do forces affect us?

Vocabulary	Definition
forces	Pushes or pulls that act on an object that can change its speed, shape or direction.
gravity	A pulling force exerted by the Earth (or anything else which has a mass).
air resistance	A force that acts on an object when it moves through the air, causing it to slow down.
water resistance	A force that acts on an object when it moves through water, causing it to slow down.
weight	The measure of the force of gravity acting on an object.
mass	A measure of how much matter is inside an object. Our mass is the same anywhere in the universe.
friction	A force that acts between two surfaces or moving objects.
velocity	An objects speed in a particular direction.
acceleration	How much an objects velocity changes.

## What are forces and what can forces do?

- Gravity
- Air resistance
- Water resistance
- Friction



## Air resistance and water resistance



- Air and water resistance are forms of friction.
- Air resistance- air particles hit an object and slow it down.
- Water resistance- water particles hit an object and slow it down.
- Streamlined objects cause less resistance. and move quicker through air or water.

## What is gravity?

- Gravity pulls everything towards the centre of Earth
- It exists everywhere on Earth and the force of gravity is the same everywhere on Earth.
- Gravity keeps all of the planets (including Earth) in orbit around the Sun. It also keeps the Moon in orbit around the Earth.



## What are pulleys, gears and levers?

Pulleys	Gears/Cogs	Levers
Pulleys can be used to make a small <b>force</b> lift a heavier load. The more wheels in a pulley, the less <b>force</b> is needed to lift a <b>weight</b> .	Gears or cogs can be used to change the speed, <b>force</b> or direction of a motion. When two gears are connected, they always turn in the opposite direction to each other.	Levers can be used to make a small <b>force</b> lift a heavier load. A lever always rests on a pivot.