

Key Knowledge:

Friction is a contact force that is caused by one object being pushed across the surface of another. Friction can stop or slow down a moving object.

Air resistance is a type of friction force on an object moving through air. The greater the surface area of an object, the greater the air resistance.

Gravity is a non-contact force caused by objects with mass pulling each other.

Water resistance is a type of friction force on an object moving through water. The more streamlined an object is, the less water resistance will act upon it.

Mass is how much matter is inside an object. It is measured in kilograms (kg)

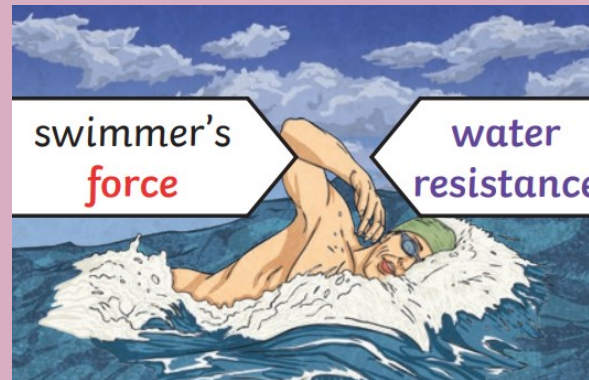
Weight is how strongly gravity is pulling an object down. It is measured in newtons (N).

Levers, pulleys and gears are all mechanisms that will allow a smaller force to have a greater effect.

Forces can make an object:

- start to move.
- change direction.
- move faster.
- change its shape.
- stop moving.
- move more slowly.

Forces



Vocabulary:

force - a push or pull.

contact force - a push or a pull that affects objects which are touching

non-contact force - a push or pull that affects objects which are not touching

frictional force - a contact force that is caused by one object being pushed across the surface of another

motion - the change in the position of an object

air resistance - a type of friction force on an object moving through air

parachute - a piece of material which uses air resistance to slow something down

surface area - the total area of the surface of an object

water resistance - a type of friction force on an object moving through water

streamlined - having a shape which reduces air or water resistance

gravitational force - a non-contact force caused by objects with mass pulling each other

weight - the downwards gravitational pull on an object

lever - a rigid object that can rotate around a pivot

gear - a wheel with teeth

pulley - a cable on one or more wheels

machine - a device with moving parts that does a particular task