

P2 Physics forces and space

Contact forces	include friction, drag, up thrust and reaction.
Non-contact forces	include weight, magnetic force, electrostatic forces and gravitational forces
Representing forces	The size of the arrow represents the size of the force
Friction	Friction is the force that opposes movement caused by contact between two surfaces
Factors affecting forces	Mass of the object, shape of the object and the surface that it is on can affect the friction forces
Streamlining	Streamlining reduces friction and drag forces
Resultant force	The resultant force is a single force that has the same effect as all the forces acting on the object.
	Arrows in the same direction are added and arrows in the opposite direction are subtracted.
Zero resultant force	A resultant force of zero can mean the object is stationary or moving at a constant speed.
Not zero resultant force	A resultant force that is not zero can mean the object is accelerating or decelerating.
Hooke's Law	Hooke's law states that the extension of a spring is proportional to the force applied unless the elastic limit has been reached
Spring Constant	the spring constant (K) describes the stretchiness of the springs, the higher the number the stiffer the spring
	Force = spring constant x extension
Work Done	Work done = distance x force
	Work is done on an elastic object when its shape changes and it stores elastic potential energy.
Weight	Weight is a force and is measured in Newton's and mass is measured in kg
Day and Night	A Day and night is 24 hours long it is the amount of time for the earth to rotate once fully on its axis
Year	A year 365.24 days long, it is the amount of time for the earth to complete one full orbit around the sun
Seasons	The summer is hotter because the sun's rays are spread over a smaller area when the earth is tilted towards the sun.
Luminous objects	The sun and stars are the only luminous objects, everything else reflects light
Phases of the moon	The moon appears to change shape as the amount of the moon visible from the earth changes
Solar eclipse	A solar eclipse is when the sun's light is blocked by the moon
Lunar eclipse	A lunar eclipse is when the moon cannot be seen because it is in the earth's shadow
Objects	Objects in our universe in size order is Comet, moon, planet, star, solar system, galaxy, and universe.
The planets	The planets in order are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune
	The further from the sun the planet is the colder the planet surface is, except from Venus that is the hottest planet.