

What are forces?	
1	They can cause things to move, change direction and change shape.
2	They are measured in Newtons (N), using a newtonmeter.
3	Forces are either contact or non-contact forces.
4	Contact E.g. friction and air resistance.
	Non-contact E.g. gravity and magnetic forces.

Balanced and unbalanced forces	
1	<p>Balanced</p> <p>Forces acting on an object are the same size but in opposite directions. The object is stationary or moving at a constant speed.</p>
2	<p>Unbalanced</p> <p>When the two forces that are acting in opposite directions on an object are not the same size. The object is accelerating or decelerating.</p>
3	To determine the resultant force subtract forces if they act in opposite directions. Add them if they act in the same direction.

Interaction pairs	
1	Forces always act in pairs called interaction pairs.
2	The forces in interaction pairs are always the same size as one another and act in opposite directions.
3	<p>Example: When you walk you push down on the ground. The ground pushes you back with an equal force in the opposite direction.</p>

Key equations	
1	<p>Weight (N) = mass (kg) x gravitational field strength (N/kg)</p> $W = m \times g$
2	<p>Speed (m/s) = distance (m) ÷ time (s)</p> $s = d \div t$

Speed	
1	Speed is measured in meters per second (m/s).
2	When using the equation $s = d \div t$ distance should be in meters and time in seconds.
3	Relative motion compares how quickly one object is moving compared to another.
4	If two objects are moving at the same speed in the same direction they will always be the same distance apart. Their relative speed is zero.

Distance-time graphs	
1	Time goes on the x-axis and distance on the y-axis.
2	Average speed = total distance ÷ total time
3	

Key Vocabulary		
1	Contact force	A force that acts when two objects are physically touching.
2	Non-contact force	A force that acts when two objects are not touching.
3	Newton	The unit used to measure force.
4	Gravity	A non-contact force that acts between two objects.
5	Weight	The downward force caused by gravity acting on an object's mass.
6	Mass	The amount of matter in an object.
7	Resultant force	The overall force acting on an object.
8	Equilibrium	When the resultant force on an object is zero.
9	Speed	A measure of how quickly an object is moving.
10	Stationary	An object that is not moving.
11	Accelerate	When an object is getting faster.
12	Decelerate	When an object is getting slower.

Gravity	
1	Gravity is a non-contact force that pulls objects together.
2	The size of the gravitational attraction between two objects depends on their mass and separation.
3	Gravitational field strength varies from planet to planet so your mass is always the same but your weight varies from planet to planet.