

## Science KS3 Assessment Framework

	Beginning Grade 1	Working Towards Grade 2-3	Expected Grade 4-5	Exceeding Grade 6-7	Excelling Grade 8-9
<b>Forces</b>	I can:	I can:	I can:	I can:	I can:
	<b>Speed</b>	<b>Speed</b>	<b>Speed</b>	<b>Speed</b>	<b>Speed</b>
	Name the unit of force and the equipment to measure it	State what forces can do	Estimate and accurately measure some forces	Interpret simple force diagrams and interaction pair situations	Interpret complex/unfamiliar force diagrams and interaction pair situations
	Know that forces can be combined to work out the resultant force	Recognise when forces in simple diagrams are balanced and unbalanced	Describe what happens to an object when resultant force is zero	Compose force diagrams to describe objects in equilibrium involving gravity	Explain why unbalanced forces change an object's speed or direction
	State the unit of speed	Calculate speed using $s=d/t$	Describe the link between speed and journey time	Calculate the average speed of a journey	Use ideas about relative motion to explain why the speed of an object can appear to change
	Know that a journey can be represented on a distance-time graph	Identify areas on a d-t graph when an object is stationary	Describe how speed affects gradient on a d-t graph	Interpret and explain why d-t graphs may have curved lines	Calculate speed using a d-t graph
	<b>Gravity</b>	<b>Gravity</b>	<b>Gravity</b>	<b>Gravity</b>	<b>Gravity</b>
	State that gravity is a non-contact pulling force	Describe what factors affect the strength of the gravitational force	Calculate weight on different planets	Explain why objects remain in orbit	Rearrange the gravity equation to calculate mass or gravity in different situations
	<b>Contact Forces</b>	<b>Contact Forces</b>	<b>Contact Forces</b>	<b>Contact Forces</b>	<b>Contact Forces</b>
	Name some examples of contact forces	Sketch diagrams to show contact forces acting on objects	Describe the effect of, and how to reduce, drag forces on objects	Use ideas about particles to explain why drag forces affect motion	Use ideas about resultant force to explain why streamlining and lubrication affect the motion of objects
Realise that inert objects around us produce a reaction force when we touch them	Describe what forces can do to objects	Accurately collect and interpret data to show Hooke's Law	Explain why objects produce a reaction force	Use force-extension graphs to illustrate proportional and non-linear relationships	
Identify the pivot in simple situations	Describe a moment as the turning effect of a force	Calculate moments and deduce the law of moments for objects in equilibrium	Balance see-saws with multiple clockwise or anticlockwise moments	Use ideas about moments and centre of gravity to explain why objects may or may not fall over	
<b>Pressure</b>	<b>Pressure</b>	<b>Pressure</b>	<b>Pressure</b>	<b>Pressure</b>	
Identify some fluids	Describe how pressure in fluids is produced and what factors affect pressure	Use ideas about particles to explain observations and phenomena	Calculate pressure	Explain why atmospheric pressure can change	
Know that liquids cannot be compressed	Describe how liquid pressure changes with depth	Use ideas about arrangement of particles to explain how hydraulic machines work	Calculate pressure	Use ideas about particles, pressure and upthrust to explain why objects float or sink	
State what is meant by stress	Describe how force and area affect stress	Complete a valid investigation into stress	Calculate stress	Use ideas about stress to suggest how the following objects work: knives, snowshoes, boot studs, bed of nails.	