

AQA Trilogy Physics Paper 2		Covered in Lesson	Diagnosis			Revised		
P4.5. Forces			R	A	G	1	2	3
4.5.1 Forces and their interactions	Identify and describe scalar quantities and vector quantities							
	Identify and give examples of forces as contact or non-contact forces							
	Describe the interaction between two objects and the force produced on each as a vector							
	Describe weight and explain that its magnitude at a point depends on the gravitational field strength							
	Calculate weight by recalling and using the equation: [$W = mg$]							
	Represent the weight of an object as acting at a single point which is referred to as the object's 'centre of mass'							
	Calculate the resultant of two forces that act in a straight line							
	HT ONLY: describe examples of the forces acting on an isolated object or system							
	HT ONLY: Use free body diagrams to qualitatively describe examples where several forces act on an object and explain how that leads to a single resultant force or no force							
	HT ONLY: Use free body diagrams and accurate vector diagrams to scale, to resolve multiple forces and show magnitude and direction of the resultant							
HT ONLY: Use vector diagrams to illustrate resolution of forces, equilibrium situations and determine the resultant of two forces, to include both magnitude and direction								
4.5.2 Work done and energy transfer	Describe energy transfers involved when work is done and calculate the work done by recalling and using the equation: [$W = Fs$]							
	Describe what a joule is and state what the joule is derived from							
	Convert between newton-metres and joules.							
	Explain why work done against the frictional forces acting on an object causes a rise in the temperature of the object							
4.5.3 Forces and elasticity	Describe examples of the forces involved in stretching, bending or compressing an object							
	Explain why, to change the shape of an object (by stretching, bending or compressing), more than one force has to be applied – this is limited to stationary objects only							
	Describe the difference between elastic deformation and inelastic deformation caused by stretching forces							
	Describe the extension of an elastic object below the limit of proportionality and calculate it by recalling and applying the equation: [$F = ke$]							
	Explain why a change in the shape of an object only happens when more than one force is applied							
	Describe and interpret data from an investigation to explain possible causes of a linear and non-linear relationship between force and extension							
	Calculate work done in stretching (or compressing) a spring (up to the limit of proportionality) by applying, but not recalling, the equation: [$E_e = \frac{1}{2}ke^2$]							
	Required practical 6: investigate the relationship between force and extension for a spring.							

