Prior Learning	At KS3, students have learned about forces and their effects including pressure when force is applied on an area.			
Lesson Number	**AQA Spec**	**Title**	**Content**	**Assessment**
1	4.5.1.1 4.5.1.2 4.5.6.1.3	Forces	• Describe a force. • Recognise the difference between contact and non-contact forces. • State examples of scalar and vector quantities.	
2	4.5.1.3	Heavy or massive?	• Identify the correct units for mass and weight. • Explain the difference between mass and weight. • Understand how weight is an effect of gravitational fields.	
3	4.5.1.3 (centre of mass) 4.5.1.4	Resultant forces	• Calculate the resultant of a number of forces. • Explain what happens to an object if all the forces acting on it cancel each other out. • Understand that a force can be resolved into two components acting at right angles to each other.	

6	4.5.6.2.1 (inertia) 4.5.6.2.2	Forces and acceleration	• Explain what happens to the motion of an object when the resultant force is not zero. • Analyse situations in which a non-zero resultant force is acting. • Explain what inertia is.	**Assessment 1:** Multiple choice Quiz 25 Marks Feedback: Auto/Self-assessed
7	4.5.6.2.2	Required practical: Prac 7 Investigate the effect of varying force or mass on acceleration	• Investigating the acceleration of an object. • Analysing results to identify patterns and draw conclusions. • Compare results with scientific theory.	
8	4.5.6.2.3	Newton's third law	• Identify force pairs. • Understand and be able to apply Newton's third law.	
9	4.5.3	Forces and energy in springs	• Explain why you need two forces to stretch a spring. • Describe the difference between elastic and inelastic deformation. • Calculate extension, compression and elastic potential energy.	

10	4.5.3	Required practical: Investigate the relationship between force and the extension of a spring	• Interpret readings to show patterns and trends. • Interpret graphs to form conclusions. • Apply the equation for a straight line to the graph.	**Assessment 2:** Written assessment 15 Marks Feedback: Teacher
11	4.5.5.1.1	Pressure in a fluid	• Explain how pressure acts in a fluid.	
12	4.5	Key concept: Forces and acceleration	• To recognise examples of balanced and unbalanced forces. • To apply ideas about speed and acceleration to explain • sensations of movement. • To apply ideas about inertia and circular motion to explain • braking and cornering.	
13	4.5	Making estimates of calculations	• Estimate the results of simple calculations. • Round numbers to make an estimate. • Calculate order of magnitude.	

End of Unit test Assessment: Teacher

Where we will use these ideas again	P7 – Magnetic forces and calculating the force of a conductor P8 – Gravity, the force that binds the universe