

½ TERM TOPIC	TAUGHT CURRICULUM	TAUGHT SKILLS	SUMMATIVE ASSESSMENT TITLE/TYPE	ASSESSMENT CRITERIA	LEARNED CURRICULUM
1-3	<p>Forces</p> <ul style="list-style-type: none"> ● Combining vectors ● Use distance and displacement as examples of scalars and vectors ● Calculating weight ● Free body diagrams ● Using vector diagrams to calculate resultant forces ● Resolving forces (HT) ● Calculating work done ● Hooke's Law definition and calculations ● Elastic potential energy calculations ● Moments calculations ● Explanations of gears used to transmit rotational forces ● Pressure calculations ● Calculating 	<p>Using and rearranging formulae to perform calculations.</p> <p>Accurate use of ruler to measure extension of a spring</p> <p>Using a balance bar to calculate moments</p>	20 Marks of exam style questions in the final week of each half term. Full topic/progress lists available in pupils' exercise books.	<p>AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.</p> <p>AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures.</p> <p>AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.</p>	<p><i>Forces</i></p> <ul style="list-style-type: none"> ● <i>Which quantities are scalars and which are vectors</i> ● <i>List which forces are contact and which are non-contact</i> ● <i>Mass and weight definitions</i> ● <i>Calculating simple resultant forces</i> ● <i>Changing the shape of objects</i> ● <i>Examples of everyday moments in action</i> ● <i>Properties of pressure in fluids</i>

Curriculum Assessment Map

Year: Year 10

Subject + Course details: <Combined Science Physics [AQA](#)>

	<ul style="list-style-type: none"> pressure in fluids (HT) Upthrust on submerged objects (HT) Theory on atmospheric pressure Moments Gears 				
4-6	<ul style="list-style-type: none"> Motion Difference between speed and velocity. Equations of uniform acceleration. Free fall and terminal velocity. Newton's laws of motion. Stopping distances. Momentum. <p><i>Coverage of the 'GCSE Physics only' topics that are linked to content covered in year nine (whilst these topics are</i></p>	<p>Using and rearranging formulae to perform calculations.</p> <p>Interpreting graphs: specifically the difference between distance-time graphs and velocity-time graphs and being able to convert between the two.</p> <p>Understand how a change in velocity affects the thinking distance and the stopping distance of a vehicle. .</p>	<p>20 Marks of exam style questions in the final week of each half term. Full topic/progress lists available in pupils' exercise books.</p>	<p>AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.</p> <p>AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures.</p> <p>AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures</p>	<p>Motion</p> <ul style="list-style-type: none"> Measure a set distance out in a safe outdoor space near your home. Time yourself riding, running, walking, rollerblading etc the distance. Calculate the average speed of each mode of transport. Create a distance-time and velocity-time graph for your journey into school. Research real life examples of each of Newton's three laws.

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	<p><i>reviewed throughout the year). These topics include:</i></p> <ul style="list-style-type: none">• Static electricity and electric fields when recapping electricity.• A more indepth look at the behaviour of glasses (including Boyle's law) when recapping the particle model of matter.• Nuclear fission, fusion and the uses of nuclear radiation when recapping atomic structure.				<p>Useful links:</p> <p><u>Physics and Maths Tutor</u> https://www.physicsandmathstutor.com/</p> <p><u>SENECA Learning</u> https://senecalearning.com/en-GB/</p> <p><u>BBC Bitesize</u> https://www.bbc.co.uk/bitesize/examspecs/z8r997h(Combined) https://www.bbc.co.uk/bitesize/examspecs/zsc9rdm(GCSE Physics)</p>
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1-3	<p>Waves</p> <ul style="list-style-type: none"> ● Difference between longitudinal and transverse waves ● Calculate using the wave equation ● Calculating $T = 1/f$ ● Composition of an electromagnetic wave ● How radio signals are transmitted and received ● How waves travel through the atmosphere/different mediums ● Effects of ultraviolet, x-rays and gamma rays on the body ● Radiation dosages ● Reflection of waves ● Sound waves ● Infra red and black body radiation. <p>Magnetism</p>	<p>Using and rearranging formulae to perform calculations.</p> <p>Drawing/identifying features of a wave</p> <p>Measuring wave speed using a ripple tank</p> <p>Using a Leslie cube to measure the emission and absorption properties of various surfaces</p> <p>Plotting a magnetic field with a magnet and plotting compass.</p> <p>Investigating ways to determine to what extent a given factor influences the strength of a magnetic field.</p>	<p>Mock: 70 minute paper (paper 1) in formal conditions as part of mock week.</p>	<p>AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.</p> <p>AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures.</p> <p>AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.</p>	<p>Waves</p> <ul style="list-style-type: none"> ● <i>List which waves are longitudinal and which are transverse</i> ● <i>Labelling amplitude, wavelength and frequency</i> ● <i>Measuring wave</i> ● <i>Uses and dangers of electromagnetic waves</i> ● Create a research task on the properties and uses of magnets. ● Research the uses of electric motors and recent developments in motor technology and what this has enabled. ● Research the use of waves for detection and exploration.

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	<ul style="list-style-type: none"> • The difference between permanent and induced magnetic fields. • The magnetic field around a current carrying conductor. • Fleming's left hand rule and the motor effect. • Electric motors and ways to make them more. • Generators • Transformers <p><i>Space</i></p> <ul style="list-style-type: none"> • The galaxy • The formation of stars • Lifecycle of stars • Satellites and their mechanics • Red shift 				<ul style="list-style-type: none"> • Research the differences between a microphone and a loudspeaker. <p><i>Space</i></p> <ul style="list-style-type: none"> • Recap of the solar system from KS3. • Research the big bang and how the images received from NASA's new James Webb telescope will contribute to our knowledge of the Big Bang.
<p>4-6</p>			<p>Second 75 mock paper (paper 2) - conditions tba.</p>	<p>AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.</p> <p>AO2: Apply knowledge</p>	<p>Useful links:</p> <p><u>Physics and Maths Tutor</u></p> <p>https://www.physicsandmathstutor.com/</p>

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				<p>and understanding of: scientific ideas; scientific enquiry, techniques and procedures.</p> <p>AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.</p>	<p>athstutor.com/</p> <p>SENECA Learning</p> <p>https://senecalearning.com/en-GB/</p> <p>BBC Bitesize</p> <p>https://www.bbc.co.uk/bitesize/examspecs/z8r997h(Combined)</p> <p>https://www.bbc.co.uk/bitesize/examspecs/zsc9rdm(GCSE Physics)</p>
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