



Physics KS4 Curriculum Overview 2019 – 20
Science is life, life is science. Explore science. Discover science. Explain science.

Exam board and syllabus name: Pearson Edexcel		Coursework % None		Final examination % 100%	
Year 9					
Term	Unit/topic	Knowledge	Skills	Assessment	
Spring term 1	N/A		AO1 Demonstrate knowledge and understanding of: Scientific ideas Scientific techniques and procedures.	SP1 End of Unit Test	
Spring term 2	SP1 Motion	Vectors and scalars Distance/time graphs Acceleration Velocity/time graphs			
Summer term 1	N/A				
Summer term 2	SP2 Motion and Forces	Resultant Forces Newton's Laws Mass and Weight Momentum Crash Hazards Core Practical 1 - Acceleration	AO2 Apply knowledge and understanding of: Scientific ideas Scientific enquiry techniques and procedures. AO3 Analyse information and ideas to: Interpret and evaluate. Make judgements and draw conclusions. Develop and improve experimental procedures.	SP2 End of Unit Test	



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Year 10				
Term	Unit/topic	Knowledge	Skills	Assessment
Autumn term 1	SP3 Conservation of Energy	Energy stores and transfers. Efficiency Renewable and non-renewable resources.	AO1 Demonstrate knowledge and understanding of: Scientific ideas Scientific techniques and procedures. AO2 Apply knowledge and understanding of: Scientific ideas Scientific enquiry techniques and procedures.	SP3 End of Unit Test
Autumn term 2	SP4 Waves	Wave Basics Refraction Ears and Hearing Ultra and infrasound Core Practical 2 – Investigating Waves		SP4 End of Unit Test
Spring term 1	SP5 Light and the Electromagnetic Spectrum	Ray Diagrams Colour Lenses Properties, uses and dangers of EM radiation. Radiation and temperature. Core Practical 3 – Investigating refraction. Core Practical 4 – Investigating radiation.	AO3 Analyse information and ideas to: Interpret and evaluate. Make judgements and draw conclusions. Develop and improve experimental procedures.	SP5 End of Unit Test
Spring term 2	SP6 Radioactivity	Atomic Structure Background Radiation Types of Radiation Decay Half-life		SP6 End of Unit Test



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		Nuclear Fission Nuclear Fusion Uses and dangers of radioactivity including medical applications.		
Summer term 1	SP7 Astronomy	The Solar System Gravity and Orbits Star Life Cycles Origins of the Universe with supporting evidence.		SP7 End of Unit Test
Summer term 2	SP8 Energy – Forces Doing Work. SP9 Forces and their Effects.	Work and Power Fields Vectors Rotational Forces		Year 10 Exam SP8/9 End of Unit Test
Year 11				
Term	Unit/topic	Knowledge	Skills	Assessment
Autumn term 1	SP10 Electricity and Circuits	Circuit Rules Potential difference, current, charge, resistance. Energy transfers in circuits. Electrical Safety Core Practical 5 – Investigating resistance	AO1 Demonstrate knowledge and understanding of: Scientific ideas Scientific techniques and procedures. AO2 Apply knowledge and understanding of: Scientific ideas Scientific enquiry, techniques and procedures.	
Autumn term 2	SP11 Static Electricity	Charges and Static Electricity. Dangers and uses.		Year 11 Paper 1 Mock AO1 40% AO2 40%



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		Electric Fields	AO3 Analyse information and ideas to: Interpret and evaluate Make judgements and draw conclusions. Develop and improve experimental procedures.	AO3 20%
Spring term 1	SP12 Magnetism and the Motor Effect SP13 Electromagnetic Induction	Magnetic Fields Electromagnetism Forces in Magnetic Fields EM Induction The National Grid Transformers		SP10/11 End of Unit Test SP12/13 End of Unit Test
Spring term 2	SP14 Particle Model SP15 Forces and Matter	Density Energy Changes – SHC SLH Gas Temperature, pressure and volume. Extension and Energy Pressure in fluids and up thrust. Core Practical 6 – Investigating Density Core Practical 7 – Investigating Water Core Practical 8 – Investigating Springs		Year 11 Paper 2 Mock AO1 40% AO2 40% AO3 20% SP14/15 End of Unit Test
Summer term 1	Revision			
Summer term 2	Most of this half term is made up of study leave and GCSEs.			