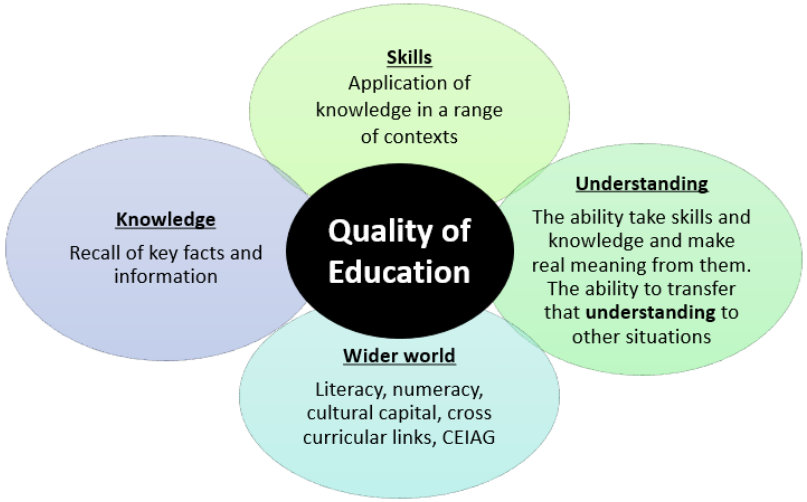
CIM - Curriculum Intent Map Physics
Exam board - GCSE: AQA Exam board - A'Level: OCR (y13) AQA (y12)

Curriculum objectives
To inspire a love of scientific discovery that empowers learners to meet the challenges of education, work and life.

Curriculum values and context
Developing an understanding of where the topic fits in to everyday life and career opportunities.

Knowledge and understanding being developed
Providing the opportunity for skills to be introduced at KS3 and built upon, allowing for practice and revisiting with further complexity.



Curriculum sequencing and structure
A spiral structure, which allows skills to be introduced at KS3 and worked on and revisited throughout KS3 and into KS4. Retrieval practice across all year groups, random topics starter quiz. Recall assessments at the start of lessons as a 'non-negotiable'. Looking at topics from previous key stages and building on this knowledge. Knowing the spec and linking current topics to previous topics

Development of students' cultural capital, FBV's, personal development
Discussions on energy resources, calculating electricity bills, following electricity usage.

Curriculum equality and access
Opportunity to support students, making the content accessible and relatable through giving wider world scenarios that students can understand and see the relevance in. KS3 Focus around 10 big ideas each with big questions covered across the topic.

Meeting the needs of SEND students within the classroom

Intent:
- Identification of key fundamental building blocks based on student need

Implementation:
- Knowledge of SEND need - knowing who they are, targeted T&L and classroom strategies to meet need.
- Staff trained to meet needs of SEND students specifically to their subject area
- Differentiated teaching and resources based on identified needs
- Targeted live marking and questioning
- Deploying TA's to support wider group to allow subject specialist support for SEND (helicopter approach)

Extra curricular activities **Careers links** **Curriculum links**

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- Personalised home learning
- Access arrangements – identification and application
- **Impact:**
- Grading below Grade 1 to monitor progress
- Structured accessible assessments.

	Knowledge	Skills	Understanding	Wider world
Year 13	**Module 5 Newtonian World and Astrophysics** • **Thermal physics** – temperature; solids, liquids and gases; internal energy; specific heat capacity; specific latent heat • **Ideal gases** – the kinetic theory of gases; gas laws; root mean square speed; The Boltzmann constant • **Circular motion** – angular velocity and the radian; centripetal acceleration; exploring centripetal acceleration • **Oscillations** – oscillations and simple harmonic motion; analysing simple harmonic motion; simple harmonic motion and energy; damping and driving; resonance • **Gravitational fields** – gravitational fields; Newton's Law of gravitation, gravitational field strength for point mass; Kelper's laws, Satellites; Gravitational potential, Gravitational potential energy • **Stars** – objects in the Universe; life cycle of stars; The Hertzsprung-Russell diagram; energy levels in atoms; spectra; analysing star light; stellar luminosity • **Cosmology (The Big Bang)** - astronomical distances, Doppler effect, Hubble's law, The Big Bang Theory, Evolution of the Universe	**Module 1 – Development of practical skills in physics** 1. Planning 2. Implementing 3. Analysis 4. Evaluation **PAGs completed in y13** • PAG 7 Investigating ionising radiaiton • PAG 8 Investigating gases • PAG 9 Investigating capacitors • PAG 10 Investigating simple harmonic motion • PAG 11 - Investigation • PAG 12 – Research skills **PAGs completed in y12** • PAG 1 – Investigating motion • PAG – Investigating properties of materials • PAG 3 – Investigating electrical properties • PAG 4 – Investigating electrical circuits • PAG 5 – Investigating waves • PAG 6 - Investigating quantum effects • Demonstrate knowledge and	• How physical quantities, S.I. units, scalars and vectors helps physicists to effectively communicate their ideas within the scientific community. • Physical measurements and treatment of errors and uncertainties. • Key ideas used to describe and analyse the motion of objects in both one-dimension and in two-dimensions. • The motion of an object when it experiences several forces and also the equilibrium of an object. • How to apply the important principle of conservation of energy to a range of situations. • The fundamental laws that can be used to predict the motion of all colliding or interacting objects. • The link between environmental damage from power stations and the impetus to use energy saving devices in the home. • Electrical circuits, internal resistance and potential dividers, LDRs and thermistors. • Wave properties, electromagnetic waves, superposition and stationary waves. • Photons, the photoelectric effect, de Broglie waves and wave–particle duality. • Temperature, matter, specific heat capacity and specific latent heat with contexts involving heat transfer and change of phase.	• Correct use of scientific terminology in a range of contexts. • Logical and coherent structuring of verbal and written responses. • Use and application of a wide range of mathematical techniques including standard form, exponentials and logarithms and significant figures. • Cross curricular links with maths throughout and with chemistry, biology and technology in some areas. • Excellent foundation for progression to higher education and advanced apprentices. Extra-curricular activities • Physics Olympiad

Extra curricular activities **Careers links** **Curriculum links**

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	Module 6 Particles and Medical physics • **Capacitance** –capacitors; capacitors in circuits; energy stored by capacitors; discharging capacitors; uses of capacitors • **Electric fields** – electric fields; Coulomb's Law; uniform electric fields and capacitance; charged particles in uniform electric fields; electric potential and energy; electrical potential energy • **Magnetic fields** – magnetic fields, understanding magnetic fields, charged particles in magnetic fields, electromagnetic induction; Faraday's Law and Lenz's Law; Transformers • **Particle physics** – alpha particle scattering experiment; the nucleus; antiparticles, hadrons and leptons; quarks; beta decay • **Radioactivity** - radioactivity; nuclear decay equations; half life and activity; radioactive decay calculations; modelling radioactive decay; radioactive dating • **Nuclear physics** – Einstein's mass energy equation; Binding energy; Nuclear fission; Nuclear fusion • **Medical imaging** – X-rays; interaction of x-rays with matter; CAT scans; the gamma camera; PET scans; ultrasound; acoustic impendence; doppler imaging	understanding of scientific ideas, processes, techniques and procedures. • Apply knowledge and understanding of scientific ideas, processes, techniques and procedures: • in a theoretical context • in a practical context • when handling qualitative data • when handling quantitative data • Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to issues, to: ➔ make judgements and reach conclusions ➔ develop and refine practical design and procedures **Maths skills** • Arithmetic and numerical computation • Handling data • Algebra • Graphs • Geometry and trigonometry	• The analysis of objects travelling at constant speed in circles, e.g. planets, artificial satellites, charged particles in a magnetic field, etc. • Simple harmonic motion, forced oscillations and resonance. • Newton's law of gravitation, planetary motion and gravitational potential and energy. • Stars, Wien's displacement law, Stefan's law, Hubble's law and the Big Bang. • Capacitors and exponential decay. • Coulomb's law, uniform electric fields, electric potential and energy. • Magnetic fields, motion of charged particles in magnetic fields, Lenz's law and Faraday's law. • The atom, nucleus, fundamental particles, radioactivity, fission and fusion. • X-rays, CAT scans, PET scans and ultrasound scans.	
Year 12	**Measurements and errors** • SI base and derived units; Prefixes and powers of ten; Random and systematic errors; Absolute, fractional and percentage uncertainty; Significant	**Practical** • Select appropriate measuring instruments and apparatus. • Use instruments with suitable precision and resolution.	• Distinguish between accuracy, precision, repeatability and resolution • Explain why all measurements have uncertainty • Judge whether evidence supports a proposed relationship	• Quality control in manufacturing • Calibration of medical and industrial equipment • Reliability of scientific evidence

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	figures; Combining uncertainties; Estimation of physical quantities **Particles and radiation** • Constituents of the atom; Stable and unstable nuclei; Particles and antiparticles; Hadrons, baryons and mesons; Leptons and quarks; Conservation laws; Particle interactions; Photons and the photoelectric effect; Energy levels and line spectra; Wave-particle duality **Waves** • Progressive and stationary waves; Amplitude, wavelength, frequency, period and phase; Longitudinal and transverse waves; Polarisation; Refraction, diffraction and interference; Superposition; Young double-slit interference; Diffraction gratings; Refractive index and total internal reflection **Mechanics** • Scalars and vectors; Moments and equilibrium; Kinematics and motion graphs; Projectile motion; Newton's laws; Momentum and impulse; Conservation of momentum; Work, energy and power; Efficiency	• Construct electrical circuits safely from circuit diagrams. • Use ammeters, voltmeters, oscilloscopes, light gates and motion sensors. • Measure length, time, mass, force, current and potential difference accurately. • Repeat measurements and calculate mean values. • Identify anomalous results. • Identify and control independent, dependent and control variables. • Assess risks and work safely. • Record observations and results systematically. • Plot graphs and draw appropriate lines or curves of best fit. • Determine gradients and intercepts. • Use error bars where appropriate. • Identify random and systematic errors. • Estimate uncertainties in measurements. • Evaluate the accuracy, precision, repeatability and reproducibility of results. • Suggest realistic improvements to experimental methods. • Investigate motion, forces and conservation of momentum. • Investigate force-extension relationships and determine Young modulus.	• Recognise the difference between experimental uncertainty and mistakes • Explain how particle interactions provide evidence for particle structure • Understand pair production and annihilation • Explain why the photoelectric effect supports the photon model • Relate atomic transitions to emission and absorption spectra • Understand that matter and radiation can show both particle-like and wave-like behaviour • Explain how stationary waves are formed • Distinguish progressive from stationary waves • Explain interference in terms of superposition and path difference • Understand how diffraction depends on wavelength and aperture size • Explain polarisation as evidence that electromagnetic waves are transverse • Explain total internal reflection • Connect resultant force with changes in motion • Understand the independence of horizontal and vertical motion in projectiles • Explain force as the rate of change of momentum	• Measurement in engineering, construction and space exploration • Particle accelerators and detectors • CERN and fundamental-particle research • Spectroscopy in astronomy and chemical analysis • Solar cells, digital imaging and light sensors • Electron microscopes • Fibre-optic communication and endoscopes • Noise-cancelling technology • Musical instruments and acoustics • Radio, mobile-phone and satellite communication • Spectrometers and analysis of starlight • Polarising filters and stress analysis • Vehicle stopping distances and crash safety • Sports science and performance analysis • Transport and aerospace engineering • Lifting machinery and cranes • Energy efficiency and

Extra curricular activities **Careers links** **Curriculum links**

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		• Investigate wave behaviour, stationary waves, interference and diffraction. • Investigate current-voltage characteristics, resistivity, emf and internal resistance. • Investigate oscillations, simple harmonic motion, resonance and damping. • Compare experimental results with theoretical predictions. **Numerical skills** • Use SI base and derived units. • Convert between units and prefixes. • Use standard form and orders of magnitude. • Use an appropriate number of significant figures. • Rearrange and substitute into equations. • Check the units and dimensions of calculated quantities. • Calculate absolute, fractional and percentage uncertainties. • Combine uncertainties in calculated quantities. • Calculate percentage differences. • Estimate physical quantities. • Use ratios, fractions and proportional reasoning. • Interpret direct and inverse proportionality. • Resolve vectors into perpendicular components.	• Distinguish between elastic and inelastic interactions • Apply conservation principles to unfamiliar situations • Understand energy transfers and dissipative forces • Explain deformation using forces between particles • Distinguish elastic from plastic behaviour • Relate stiffness to the Young modulus • Understand why material choice depends on several physical properties • Interpret the area under a force-extension graph as work done • Explain current as a rate of flow of charge • Distinguish emf from terminal potential difference • Understand resistance through energy transfer by charge carriers • Explain non-ohmic behaviour • Relate internal resistance to lost volts • Understand how sensing circuits respond to environmental changes • Explain why circular motion requires a resultant force towards the centre • Understand SHM as motion in which acceleration is proportional and opposite to displacement • Explain energy transfers during	sustainable transport • Accident reconstruction • Selection of construction materials • Bridge and building design • Prosthetics and medical implants • Sports equipment • Composite materials • Testing materials for aircraft and vehicles • Batteries and electric vehicles • Domestic electrical energy use • Sensors, alarms and automatic lighting • Temperature-control systems • Renewable-energy circuits • Electronic devices and power supplies • Vehicle cornering and fairground rides • Satellites and rotating machinery • Suspension systems • Seismic protection in buildings • Musical instruments • Resonance in bridges and engineering structures

Extra curricular activities **Careers links** **Curriculum links**

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		• Add vectors graphically and mathematically. • Use trigonometry, including sine, cosine and tangent. • Interpret gradients, intercepts and areas under graphs. • Convert data into a linear form. • Use logarithms and exponential relationships where appropriate. • Apply conservation of energy, momentum, charge, baryon number and lepton number. • Use equations relating to photons, waves and particle behaviour. • Analyse displacement, velocity and acceleration. • Apply constant-acceleration equations. • Analyse projectile and circular motion. • Calculate force, momentum, impulse, work, energy, power and efficiency. • Calculate density, stress, strain, Young modulus and elastic energy. • Analyse series and parallel circuits. • Apply Kirchhoff's laws. • Calculate resistance, resistivity, electrical power, emf and internal resistance. • Analyse potential-divider circuits. • Calculate wave speed, phase difference, refractive index and critical angle.	oscillation • Distinguish natural frequency from driving frequency • Explain resonance and the effects of damping	• Timekeeping using pendulums and oscillators

Extra curricular activities **Careers links** **Curriculum links**

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		• Apply interference and diffraction equations. • Use angular quantities and simple harmonic motion equations. • Interpret and analyse experimental data. **Literacy skills** • Use scientific terminology, symbols and conventions accurately. • Define physical quantities clearly. • Distinguish between related terms, such as accuracy and precision or emf and potential difference. • Interpret written, numerical, graphical and diagrammatic information. • Extract relevant information from unfamiliar contexts. • Describe patterns and trends in data. • Compare results, models, materials or physical systems. • Explain observations using physical principles. • Link cause and effect in scientific explanations. • Construct logical, sequential explanations. • Justify the choice of apparatus, method, equation or model. • State assumptions clearly. • Explain the limitations of assumptions and models.		

Extra curricular activities **Careers links** **Curriculum links**

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		• Use evidence to support conclusions. • Judge whether data support a proposed relationship. • Evaluate the validity and reliability of evidence. • Identify limitations in experimental methods. • Suggest and justify improvements. • Annotate diagrams, graphs and free-body diagrams clearly. • Interpret particle equations, energy-level diagrams, circuit diagrams and motion graphs. • Communicate multi-stage calculations clearly. • Use appropriate units and symbols throughout written responses. • Explain conclusions in the context of the question. • Apply familiar physics to unfamiliar real-world situations. • Evaluate scientific claims and distinguish evidence from opinion.		
Year 11	**Separate Sciences Physics** **P3 – Energy resources** • Energy demands, wind and water energy, power from the Sun, Energy and environment, energy issues **P11 Forces and Pressure** • Pressure and surfaces, pressure in a liquid at rest, atmospheric pressure, upthrust and flotation	**Practical skills** • Use of specialised physics equipment - lenses, radioactive sources • Collecting results • Making observations • Analysing results **Numeracy** • Numbers in standard form • Units	• Magnets and magnetic forces • Particles and pressure • Forces and Motion • Waves	• Careers in science - linking science to the wider world • Literacy - extended response questions - structuring answers • Numeracy - using the 21 equations, knowing how to rearrange the equations • Numeracy - using standard form/calculations

Extra curricular activities **Careers links** **Curriculum links**

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	P15 Magnetism and Electromagnetism • Magnetic fields, electromagnetism, the motor effect, using the motor effect, the Generator effect, transformers **P14 Light** Reflection of light, refraction of light, light and colour, lenses **P16. SEPARATES Space Physics** • The life cycle of stars, the solar system and orbits, red shift and the Big Bang **Combined science Physics** **P12 Wave Properties** • The nature of waves, the properties of waves, reflection and refraction, sound waves, uses of ultrasound **P13 Electromagnetic Waves** The EM spectrum, light, infrared, microwaves, radio waves, communications, UV waves, X-rays and gamma rays, X-rays in medicine **P3 – Energy resources** • Energy demands, wind and water energy, power from the Sun, Energy and environment, energy issues	• Calculations and using formula triangles • Drawing graphs **Literacy** • Using scientific vocabulary • Developing writing long answers for 6 mark questions		• Numeracy - graph drawing skills and analysis of data • Electrician - wiring a plug • Links to engineering Extra-curricular activities • Physics Challenge
Year 10	**P2 Energy** • conduction and convection, reducing unwanted energy transfers, **P4 Electric circuits** • Electrical charges and fields; current and charge; PD and resistance; component characteristics; series circuits, parallel circuits	**Practical skills** • Use of specialised physics equipment - circuits, lenses, radioactive sources, trolleys, data loggers, slits, power packs, radioactive sources • Following a method • Collecting results • Making observations	• Electricity how it works/dangers of it • Magnets and magnetic forces • Particles and pressure • Forces and Motion • Atomic structure • Radiation • EM spectrum	• Careers in science - linking science to the wider world • Literacy - extended response questions - structuring answers • Numeracy - using the 21 equations, knowing how to rearrange the equations

Extra curricular activities **Careers links** **Curriculum links**

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	• **P6 Particle Model of Matter** • Density and states of matter, internal energy and changes of state, specific latent heat, particle motion in gases **P7 Atomic Structure** • The history of the atom, the structure of the atom, radioactivity, activity and half life, irradiation and contamination, background radiation, risks and uses of radiation, nuclear fission and fusion **P10 Forces** • Forces and acceleration, weight and velocity, forces and braking, momentum (HT), conservation of momentum (HT), impact forces (HT), safety first (HT), forces and elasticity **P5 – Electricity in the home** • Alternating current, cables and plugs, electrical power and PD, electrical current and energy transfer, appliances and efficiency	• Analysing results **Numeracy** • Numbers in standard form • Units • Calculations and using formula triangles • Drawing graphs **Literacy** • Using scientific vocabulary • Developing writing long answers for 6 mark questions		• Numeracy - using standard form/calculations • Numeracy - graph drawing skills and analysis of data • Electrician - wiring a plug • Links to engineering Extra-curricular activities • Silverstone Museum Trip
Year 9	**P9 Motion** • Speed and distance-time graphs, velocity and acceleration, velocity time graphs, analysing motion graphs **P1 Energy** • Energy stores and transfers, energy dissipation, kinetic and potential energy, specific heat capacity, electrical appliances, power **P11 Wave Properties** • The nature of waves, the properties of waves, reflection and refraction, sound waves, uses of ultrasound **P8 Force in balance**	**Practical skills** • Use of specialised physics equipment - circuits, stopwatches, masses and weights, retort stands • Following a method • Collecting results • Making observations • Analysing results **Literacy** • Using scientific vocabulary • Developing writing long answers for 6 mark questions	• Electricity how it works/dangers of it • Particles and pressure • Radioactivity - dangers • Astronomy - big bang theory	• Careers in science - linking science to the wider world • Literacy - extended response questions - structuring answers • Numeracy - using the 21 equations, knowing how to rearrange the equations • Numeracy - using standard form/calculations • Numeracy - graph drawing skills and analysis of data • Electrician - wiring a plug • Links to engineering

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	• Vectors and scalars, forces between objects, resultant forces, centre of mass	**Years 9, 10 and 11 Maths skills** **Combined and Separate Sciences** **1 Arithmetic and numerical computation** a Recognise and use expressions in decimal form b Recognise and use expressions in standard form c Use ratios, fractions and percentages d Make estimates of the results of simple calculations **2 Handling data** a Use an appropriate number of significant figures b Find arithmetic means c Construct and interpret frequency tables and diagrams, bar charts and histograms d Understand the principles of sampling as applied to scientific data (biology questions only) e Understand simple probability (biology questions only) f Understand the terms mean, mode and median g Use a scatter diagram to identify a correlation between two variables (biology and physics questions only) h Make order of magnitude calculations **3 Algebra** A Understand and use the symbols: =, <, <<, >>, >, ∝ , ~ b Change the subject of an equation c Substitute numerical values into algebraic equations using appropriate units for physical quantities (chemistry and physics questions only) d Solve simple algebraic equations (biology and physics questions only) **4 Graphs** a Translate information between graphical		Extra-curricular activities • Silverstone Museum Trip

Extra curricular activities **Careers links** **Curriculum links**

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		and numeric form b Understand that y = mx + c represents a linear relationship c Plot two variables from experimental or other data d Determine the slope and intercept of a linear graph e Draw and use the slope of a tangent to a curve as a measure of rate of change (chemistry and physics questions only) f Understand the physical significance of area between a curve and the x-axis and measure it by counting squares as appropriate (physics questions only) **5 Geometry and trigonometry** a Use angular measures in degrees (physics questions only) b Visualise and represent 2D and 3D forms including two dimensional representations of 3D objects (chemistry and physics questions only) c Calculate areas of triangles and rectangles, surface areas and volumes of cubes **Working scientifically** covered in y9, 10 and 11 in combined science and separate sciences 1 Development of scientific thinking 2 Experimental skills and strategies 3 Analysis and evaluation 4 Scientific vocabulary, quantities, units, symbols and nomenclature		
Year 8	1. **Forces (part 2)** • Contact forces, squashing and stretching and pressure • Pressure in solids, liquids and gases 2. **Electromagnets (part 2)**	**Practical skills** • Collecting results • Making observations • Analysing results **Literacy** • Using scientific vocabulary • Developing writing long answers for 6	• Types of forces – contact/non-contact • Magnetic fields, compasses and magnetic Earth • Energy transfers • How waves transfer energy, wave properties	• Numeracy - measuring angles, calculating/drawing sankey diagrams • Literacy - researching space and planets

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	• Magnets and magnetic fields, electromagnets, uses if electromagnets **3. Energy (part 2)** • Work, heating and cooling • Energy and temperature, energy transfer (particles), energy transfer (radiation and insulation) **4. Waves (part 2)** • Wave effects and wave properties • Sound waves, water waves and energy • Radiation and energy • Modelling waves	mark questions **Numeracy** • Calculations and using formula triangles • Units • Drawing graphs • Recall of answers **Enquiry process** **1. Asking scientific questions** ▫ Explain how and why some questions can be investigated and why some cannot ▫ Suggest examples of independent, dependent, and control variables in an unfamiliar situation ▫ Explain in detail why a specific question cannot be investigated, suggesting alternative questions that can be investigated **2. Planning investigations** ▫ Write a detailed plan for a hypothetical investigation ▫ Explain the effect of experimental error, and of not controlling all the variables adequately ▫ Identify risks in an experiment and write an appropriate risk ▫ assessment for an investigation and explain why the experiment can, or cannot, be conducted in a science laboratory ▫ Recording data ▫ Explain how to collect and record accurate and precise data ▫ Calculate a mean for repeat readings in a range of situations ▫ Explain the choice of graph or chart for different types of data, and plot them		Careers • Enrichment •
Year 7	**1. Forces part 1** Intro, balanced and unbalanced, speed, Distance-time graph, gravity **2. Electromagnets (part 1)** • PD, resistance, series and parallel circuits, current, charging up **3. Energy (part 1)** • Food and fuels, energy resources, energy and power, energy adds up, energy dissipation **4. Waves (part 1)** • Sound waves and speed, loudness and amplitude, frequency and pitch, ear and hearing, light, reflection, refraction, the eye and vision, colour		• Electrical currents, PD and circuits • Energy and dissipated energy • Alternative sources of energy to fossil fuels • How sound and light travels	• Cross curricular links with Geography (energy) • Numeracy - calculating electricity usage/using data loggers to measure sound • Cross curricular links with art - making periscopes Careers * Electrician * Sound engineer * Links to STEM Enrichment • Science club • Enrichment slot

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		3. <u>Analysing patterns</u> ▫ Plot data on a graph and draw the line of best fit ▫ Analyse data from an investigation to draw up a detailed conclusion, describe relationships, and suggest alternative explanations where appropriate **4. <u>Evaluating data</u>** ▫ Compare and contrast data, suggesting reasons why the data may be different ▫ Explain ways of improving data in a practical investigation		

At The Elizabethan Academy we offer a curriculum that:

- is broad, balanced, inspiring and inclusive
- builds confidence, independence and **resilience**
- encourages students to develop the **skills, knowledge and understanding** required to succeed academically
- encourages students to participate in a wide variety of activities which extend beyond the classroom
- places creativity and imagination at the heart of learning to develop enquiring minds
- enables students to understand the connections and links between different subjects
- raises students' aspirations through promoting academic excellence
- develops students' **social and cultural knowledge**, skills and understanding
- develops students' **respect for spiritual and moral values**, and tolerance towards other races, religions and ways of life.
- gives students the opportunities to put theoretical skills into practice and expand their knowledge beyond the exam specification
- prepares students for the world of work in a rapidly changing world.

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2026-2027	Year 12					
	Half term 1	**Half term 2**	**Half term 3**	**Half term 4**	**Half term 5**	**Half term 6**
Knowledge, Skills and Understanding 	Particles and Radiation Forces in Balance	Waves On The Move	Optics Newton's Laws and Momentum	Electricity Work, Energy and Power	Electricity Materials	Further Mechanics (Circular motion and simple harmonic motion)
	Baseline assessment November assessment		March mock exam		End of year PPE	
 **Embed your knowledge**	**Flashcards:** Make cards for definitions, formulas, and units. **Mind Maps**: Create one for each topic showing key concepts and links. **Past Papers:** Practice with real exam questions and mark schemes. **Group Quiz:** Test each other on formulas and concepts.		Make **mind maps** for each topic (e.g., Forces, Electricity, Waves). Draw **free-body diagrams** for different motion scenarios. Create **summary posters** with formulas, graphs, and key concepts.		• Use **past paper questions** sorted by topic (e.g., from AQA). • Focus on **command words** like *explain*, *calculate*, *describe*. • Practice **multi-step problems** that combine concepts (e.g., energy + motion).	
Extend your learning 	Regularly review your notes and summarise them after every lesson - Read ahead on the next chapter to identify misconceptions - Access past papers from the AQA website and review the mark schemes and examiners reports to improve your exam technique. - Write a literature review of an article from the New Scientist magazine - Attend the after-school revision sessions **Watch YouTube channels like:** - Physics Online - MinutePhysics - GCSE and A-Level Physics Online **Use simulations from:** - PhET Interactive Simulations - Isaac Physics					

Extra curricular activities **Careers links** **Curriculum links**

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2026-2027	Year 13					
	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Knowledge, Skills and Understanding 	18 Gravitational fields 19 Stars 20 Cosmology	21 Capacitance 22 Electric fields 24 Particle physics	23 Magnetic fields 25 Radioactivity Revision 26 Nuclear physics	27 Medical imaging Revision Revision	Revision	
	November PPE x1 paper		March PPE x1 Paper		External exams x3	
 **Embed your knowledge**	**Flashcards:** Make cards for definitions, formulas, and units. **Mind Maps**: Create one for each topic showing key concepts and links. **Past Papers:** Practice with real exam questions and mark schemes. **Group Quiz:** Test each other on formulas and concepts		Make **mind maps** for each topic (e.g., Forces, Electricity, Waves). Draw **free-body diagrams** for different motion scenarios. Create **summary posters** with formulas, graphs, and key concepts.		• Use **past paper questions** sorted by topic (e.g., from OCR). • Focus on **command words** like *explain*, *calc ulate*, *describe*. • Practice **multi-step problems** that combine concepts (e.g., energy + motion).	
Extend your learning 	Regularly review your notes and summarise them after every lesson - Read ahead on the next chapter to identify misconceptions - Access past papers from the AQA website and review the mark schemes and examiners reports to improve your exam technique. - Write a literature review of an article from the New Scientist magazine - Attend the after-school revision sessions **Structured Planning** • Use a **revision timetable** to cover all topics before exams. • Do **weekly topic reviews** to keep older material fresh. • Set **SMART goals** (Specific, Measurable, Achievable, Relevant, Time-bound) for each session. **Practical Revision** • Review **required practical's**: understand the setup, variables, and analysis. • Practice **drawing and interpreting graphs** from experiments. • Explain a practical to someone else as if you're the teacher.					

Extra curricular activities **Careers links** **Curriculum links**