Nobel

Year: KS4

Subject: Combined Science: Physics

By following the AQA GCSE science qualifications, we are building on the hard work our students have completed during their key stage 3 studies. Students follow either AQA Combined Science: Trilogy or AQA Separate Sciences. This allows us to ensure the students follow the best path for them.

	Foci	Assessment	Knowledge Organiser
Unit 1 (Yr9)	**Energy (AQA Unit P1)** The role of energy in the universe and the transfer of energy within and between different stores • Types of energy stores • Conservation of energy • Transfer of thermal energy • Power • Efficiency • Power generation types	• Continuous assessment via knowledge recall • Required practical – Specific heat capacity • End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with black copies to practice recall.
Unit 2 (Yr10)	**Particle Model of Matter (AQA Unit P3)** The standard particle model of matter and its role in phenomena such as changes of state and pressure • Particle model • Density • Specific heat capacity • Specific latent heat • Pressure	• Continuous assessment via knowledge recall • Required practical – Measurement of density • End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with black copies to practice recall.
Unit 3 (Yr10)	**Electricity (AQA Unit P2)** Energy transfer via electric circuits, electric circuit design and electricity in the home • Electric charge • Direct current • Potential difference • Resistance • Component characteristics • Alternating current • National Grid • Electrical power	• Continuous assessment via knowledge recall • Required practical – Resistance of a wire • Required practical – Component characteristics • End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with black copies to practice recall.

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Unit 4 (Yr10)	**Radiation (AQA Unit P4)** The structure of the atom and how isotopes cause unstable nuclei and hence ionising radiation. The advantages and risks of nuclear power in the modern world. • Structure of the atom • Isotopes • Alpha, beta and Gamma radiation • Nuclear equations and half life • Radiation dose • Uses of radiation	• Continuous assessment via knowledge recall • End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with black copies to practice recall.
Unit 5 (Yr10)	**Waves (AQA Unit P6)** Waves as a form of energy transfer. Mechanical and electromagnetic waves and their importance in the world. • Transverse and longitudinal waves • Frequency, period and wavelength • Reflection and refraction • Electromagnetic waves • Ionising Waves	• Continuous assessment via knowledge recall • Required practical – Measurement of wave parameters • Required practical – Investigating infrared radiation • End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with black copies to practice recall.
Unit 6 (Yr11)	**Forces Part 1 (AQA Unit P5)** A consideration of forces on static objects. Displacement, velocity and acceleration of objects in motion. • Scalars and vectors • Contact and non-contact forces • Resultant forces • Resolution of forces • Moments • Centre of mass • Graphs of displacement, velocity • Acceleration	• Continuous assessment via knowledge recall • End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with black copies to practice recall.
Unit 7 (Yr11)	**Forces Part 2 (AQA Unit P5)** A consideration of forces on objects in motion. Pressure in solids, liquids and gasses. • Force and acceleration • Weight and terminal velocity • Momentum • Forces and braking • Impact forces • Forces and elasticity	• Continuous assessment via knowledge recall • Required practical – force and acceleration • Required practical – force and extension • End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with black copies to practice recall.

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Unit 8 (Yr11)	**Magnetism and Electromagnetism (AQA Unit P7)** Magnetism, electromagnetic induction and the motor effect. • Magnetism • Electromagnetism • The motor effect	• Continuous assessment via knowledge recall • End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with black copies to practice recall.