Curriculum Map 2024 – 2025 – KS5 Science

OCR A-Level Biology

Year 12

Term	Assessments	Topics	Skills	Personal Development
Autumn	**One test at the end of each topic** Teacher assessed (non-examined) Practical Endorsement in Physics. This is assessed throughout the course and monitors whether students routinely meet the Common Practical Assessment Criteria (CPAC).	**2. Basic components of cells** Microscopy Magnification and calibration More microscopy Eukaryotic cell structure The ultrastructure of cells Prokaryotic and eukaryotic cells	Safely and correctly use a range of practical equipment and materials Follow written instructions Make and record observations/measurements Make representations of cell structures as seen under the light microscope using drawings and annotated diagrams of whole cells or cells in sections of tissue Use and manipulate of the magnification formula, including the use of an eye piece graticule and stage micrometer	Develop and demonstrate a deep appreciation of the skills, knowledge and understanding of scientific methods Develop competence and confidence in a variety of practical, mathematical and problem solving skills
		3. Biological molecules Biological elements Water Carbohydrates Testing for carbohydrates Lipids The structure of proteins Types of proteins Nucleic acids DNA replication and the genetic code Protein synthesis ATP	Practical skills Modelling skills Using mathematical skills to calculate biological values. Processing, analysing and interpreting qualitative and quantitative experimental results Using ICT such as computer modelling, or a data logger to collect data, or use of software to process data Separation of biological compounds using paper chromatography Use of appropriate instrumentation to record quantitative measurements, using a colorimeter	Opportunities for computer-modelling training. Using mathematical skills to calculate biological values. Opportunities to develop interleaving skills to apply understanding of concepts in novel situations,
		4. Plasma membranes The structure and function of membranes Factors affecting membrane structure Diffusion Active transport Osmosis	Use of appropriate instrumentation to record quantitative measurements, such as a colorimeter Use of laboratory glassware apparatus for a variety of experimental techniques to include serial dilutons	Recognise the role of membranes as a binding site for medicinal and recreational drugs and develop ideas around how the movement of molecules across membranes can lead to the development of novel solutions to the movement of natural and synthetic molecules in and out of cells. Develop a deeper appreciation of the limitations in experimental procedures.

		5. Enzymes Enzyme action Factors affecting enzyme action Enzyme inhibitors Cofactors, coenzymes and prosthetic groups	**Modelling skills using various media.** Measurement of gradients and intercepts The identification of anomalies in experimental measurements and the limitations in experimental procedures Using a range of laboratory glassware apparatus for a variety of experimental techniques to include serial dilutions	Identifying how diet and innate ability allow all organisms the ability to carry out all the chemical reactions needed to sustain life. This can be related to healthy lifestyle in humans and high-level nutrition of crops, Recognising the importance of variables and sequential thinking to problem-solve and investigate the various ways to affect enzyme action. This contains links to farming/fishing industries and healthcare and research. Using mathematical skills to calculate biological values.
		6. Nucleic acids and Cell division Cell cycle Mitosis Meiosis The organisation and specialisation of cells Stem cells	Production of scientific drawings from observations with annotations	Recognising the importance and potential of various types of stem cells in medical and research-based contexts. Recognising that animals and plants contain stems cells and identifying the key similarities and differences.
		7. Exchange surfaces Specialised exchange surfaces Mammalian gaseous exchange system Measuring the process Ventilation and gas exchange in other organisms	Using mathematical skills to calculate biological values. Processing, analysing and interpreting qualitative and quantitative experimental results	Using mathematical skills to calculate biological values. Analysing and interpreting various examples of primary and secondary data sets. Using animals/human samples to study life processes with respect and the understanding of the value of life.
Term	**Assessments**	**Topics**	**Skills**	**Personal Development**
Spring	**One test at the end of each topic** Teacher assessed (non-examined) Practical Endorsement in Physics. This is assessed throughout the course and monitors whether students routinely meet the Common Practical Assessment	**8. Transport in animals** Transport systems in multicellular animals The blood vessels Blood, tissue fluid and lymph Transport of oxygen and carbon dioxide The heart	Using mathematical skills to calculate biological values. Processing, analysing and interpreting qualitative and quantitative experimental results Measurement of gradients and intercepts Safe and ethical use of instruments for dissection of an animal or plant organ Production of scientific drawings from observations with annotations	Using mathematical skills to calculate biological values. Using animals/human samples to study life processes with respect and the understanding of the value of life. Using biological data to discuss differences between a foetus and an adult
		9. Transport in plants Transport systems in dicotyledonous plants Water transport in multicellular plants Transpiration Translocation Plant adaptations to water availability	Use of appropriate instrumentation to record quantitative measurements, such as a potometer Communicate information and ideas in appropriate ways using appropriate terminology	Develop essential knowledge and understanding of different areas of the subject and how they relate to each other Understand how society makes decisions about scientific issues and how the sciences contribute to the success of the economy and society
		10. Communicable diseases Animal and plant pathogens Animal and plant diseases	Using mathematical skills to calculate biological values.	Recognising the need and value of vaccinations, morally and economically, both routine and epi/pandemic related.

		The transmission of communicable disease Plant defence against communicable diseases Nonspecific animal defences against pathogens The specific immune system Preventing and treating disease	Processing, analysing and interpreting qualitative and quantitative experimental results Using online and offline research skills including websites, textbooks and other printed scientific sources of information and correctly cite sources of information	Recognising the need for high levels of biodiversity in the advent of personalised medicines and discovery of new medicines for new/existing diseases. Understanding the history of medicines and recognising the speed of progress since the 1920s and the modern-day hazards of antibiotic resistance. Recognising what variables influence disease transmission, and how to live healthily to prevent disease and how we can aid other communities to prevent disease (example: Malaria).
Term	**Assessments**	**Topics**	**Skills**	**Personal Development**
Summer	**One test at the end of each topic** Teacher assessed (non-examined) Practical Endorsement in Physics. This is assessed throughout the course and monitors whether students routinely meet the Common Practical Assessment	**11. Classification and evolution** Classification The five kingdoms Phylogeny Evidence for evolution Types of variation Representing variation graphically Adaptations Changing population characteristics	Use knowledge and understanding to pose scientific questions, define scientific problems, present scientific arguments, and scientific ideas. Analyse and interpret data to provide evidence, recognising correlations and causal relationships Evaluate methodology, evidence, and data, and resolve conflicting evidence	Use knowledge and understanding to pose scientific questions, Define scientific problems, present scientific arguments and scientific ideas Develop an understanding of how the contributions of Darwin and Wallace helped to formulate the theory of evolution by natural selection and how new theories can be developed over time through collaborative thinking.
		12. Biodiversity Biodiversity Sampling Sampling techniques Calculating biodiversity Calculating genetic biodiversity Factors affecting biodiversity Reasons for maintaining biodiversity Methods for maintaining biodiversity	Using mathematical skills to calculate specific biological values: • Simpson's index of Diversity • Genetic Diversity (proportion of polymorphic gene loci) • Population size	Recognise the need for high levels of biodiversity in the advent of personalised medicines and discovery of new medicines for new/existing diseases. Consider ethical issues in the treatment of humans, other organisms, and the environment, with specific reference to conservation. Evaluate the ways in which society uses science to inform decision making.

OCR A-Level Biology

Year 13

Term	Assessments	Topics	Skills	Personal Development
Autumn	**One test at the end of each topic** Teacher assessed (non-examined) Practical Endorsement in Physics. This is assessed throughout the course and monitors whether students routinely meet the Common Practical Assessment Criteria (CPAC).	**13. Energy for Biological processes and respiration** Energy cycles ATP synthesis	Using mathematical skills to calculate biological values. Processing, analysing and interpreting qualitative and quantitative experimental results The identification of anomalies in experimental measurements and the limitations in experimental procedures The refining of experimental design by suggestion of improvements to the procedures and apparatus. Using online and offline research skills including websites, textbooks and other printed scientific sources of information and correctly cite sources of information	Recognising the similarities in the physiological processes in animals and plants, respecting the life of both phyla. Potential to conduct a study on insects, respecting their life and comfort, along with the Science. An opportunity to use sensors, data loggers and software to process data.
		14. Homeostasis The principles of homeostasis Thermoregulation Thermoregulation in ectotherms Thermoregulation in endotherms Excretion, homeostasis and the liver The structure and function of the mammalian kidney The kidney and osmoregulation Urine and diagnosis Kidney failure	Make representations of cell structures as seen under the light microscope using drawings and annotated diagrams of whole cells, cells in sections of tissue or more general organisation of structures within organs Transverse dissection of mammalian kidney to identify key structures and regions.	Carry out simple experimental and investigative activities in relation to thermoregulation. Consider ethical issues in the treatment of humans, with specific reference to dialysis techniques, transplantation of human organs and use of stem cells.
		15. Neuronal communication Coordination Neurones Sensory receptors Nervous transmission Synapses Organisation of the nervous system Structure and function of the brain Reflexes Voluntary and involuntary muscles Sliding filament model	Make representations of cell structures as seen under the light microscope using drawings and annotated diagrams of whole cells or cells in sections of tissue Extraction of muscle tissue from chicken wings using practiced dissection methods	Understanding of how the erosion of neuronal communication structures within humans can lead to acute disease (e.g. multiple sclerosis) Use appropriate methodology, including information and communication technology (ICT), to answer scientific questions and solve scientific problems

		16. Hormonal communication Hormonal communication Structure and function of the pancreas Regulation of blood glucose Diabetes and its control Coordinated response Controlling heart rate	Using mathematical skills to calculate statistical values. Carry out experimental and investigative activities relating to heart rate and variable affecting heart rate such as drugs.	Relating lifestyle choices to non-communicable diseases – diabetes mellitus. Alongside distinguishing between lifestyle and genetic/autoimmune causes of disease. Identify advantages and disadvantages of insulin produced by pigs and bacteria.
		17. Plant responses Plant hormones and growth in plants Plant responses to abiotic stress Plant response to herbivory Tropisms in plants The commercial use of plant hormones	Carry out experimental and investigative activities relating to phototropism and responses to abiotic stress.	Analyse and interpret data to provide evidence, recognising correlations and causal relationships. Development of investigative design with specific focus on control of key variables (photo/ geotropism) Recognising that specific chemicals which facilitate responses to abiotic stress in plants can be used within a medicinal or recreational context.
Term	**Assessments**	**Topics**	**Skills**	**Personal Development**
Spring	**One test at the end of each topic** Teacher assessed (non-examined) Practical Endorsement in Physics. This is assessed throughout the course and monitors whether students routinely meet the Common Practical Assessment	**18. Genetics of living systems & patterns of inheritance and variation** Mutations and variation Control of gene expression Body plans Variation and inheritance Monogenic inheritance Dihybrid inheritance Phenotypic ratios Evolution Speciation and artificial selection	Using mathematical skills to calculate biological values. Processing, analysing and interpreting qualitative and quantitative experimental results	Recognising the causes of many genetic conditions and that there is usually no "fault" by either parent. Analysing how life controls genetic issues and the implications if a mutation is ignored by these mechanisms. Relating all species that have ever (and will ever) exist in relation to "Hox" genes, to show the highly conserved nature of these genes throughout history. Relating cell death and development from conception and the factors that influence this. Using mathematical skills to calculate biological values. Recognising the role of geographical mechanisms of evolving new species over time. Considering the ethics of artificial selection (dogs) from wolves, to working dogs, to competition style dogs (Crufts and Alsatians as an example).
		19. Manipulating genomes & AMGEN DNA profiling DNA sequencing and analysis Using DNA sequencing Genetic engineering Gene technology and ethics	Using mathematical skills to calculate biological values. Processing, analysing and interpreting qualitative and quantitative experimental results Separation of biological compounds using electrophoresis	Recognising the fast improvement in genetics since the 90s and the development of the Human Genome Project. Relating this development to at-home DNA testing and data management of DNA. Further opportunity to discuss computational biology to map epidemiology and evolutionary relationships. Discussing the ethics of using the genes of one organism being placed in a vector for genetic engineering.

				Opportunity to use university-level equipment (from the University of Hertfordshire and the AMGEN Biotechnology Experience).
		20. Cloning and biotechnology Natural cloning in plants Artificial cloning in plants Cloning in animals Microorganisms and biotechnology Culturing microorganisms in the laboratory Culturing microorganisms on an industrial scale Using immobilised enzymes	Using mathematical skills to calculate biological values. Processing, analysing and interpreting qualitative and quantitative experimental results	Recognising the risks of natural clones (including multiple births), and the economic impacts of these risks (bananas and *Fusarium* wilt (aka Panama disease)). Evaluating the uses of animal cloning in agriculture and medicine. To include longevity and quality of life of these animals). Evaluate the use of microorganisms in biotechnology and how these may influence future food/medicine security or sewage treatment (Quorn, cheese-making, penicillin production, bioremediation,). Using mathematical skills to calculate biological values. Evaluate the benefits of enzyme immobilisation, in both wastage and economic terms.
		21. Ecosystems, populations and sustainability Ecosystems Biomass transfer through an ecosystem Recycling within ecosystems Succession Measuring distribution and abundance of organisms Population size Competition Predatory prey relationships Conservation and preservation Sustainability Ecosystem management – Masai Mara Ecosystem management – Terai region of Nepal Ecosystem management – peat bogs Environmentally sensitive ecosystems	To be able to use (and recall the formulas for) a range of mathematical skills to determine: - Efficiency of biomass transfer, - Distribution and abundance of organisms in a variety of ecosystems, and - The application of the student "t" test to determine statistical significances between given factors	Recognise the need for high levels of biodiversity in the advent of personalised medicines and discovery of new medicines for new/existing diseases. Consider ethical issues in the treatment of humans, other organisms, and the environment, with specific reference to ecosystem management in a areas with varied environmental pressures. Evaluate the ways in which society uses science to inform decision making.
Term	**Assessments**	**Topics**	**Skills**	**Personal Development**

Summer	**One test at the end of each topic** Teacher assessed (non-examined) Practical Endorsement in Physics. This is assessed throughout the course and monitors whether students routinely meet the Common Practical Assessment	**Revision**

OCR A. A-level Chemistry

Year 12

Term	Assessments	Topics	Skills	Personal Development
Autumn	**One test at the end of each topic** Teacher assessed (non-examined) Practical Endorsement in Chemistry. This is assessed throughout the course and monitors whether students routinely meet the Common Practical Assessment Criteria (CPAC).	**Foundations in chemistry –** • Atoms, ions and compounds. • Amount of substance. • Acids and redox. • Electrons and bonding. • Shapes of molecules and intermolecular forces.	Using and manipulating formulae. Reacting masses and moles. Volumetric analysis. Representing chemical structures. Redox equations.	Historical development of scientific ideas (atomic structure) Big Bang theory and the origin of elements in outer space.
		Periodic table and energy – • Periodicity. • Reactivity trends. • Enthalpy. • Reaction rate and equilibrium.	Using and manipulating formulae. Representing chemical structures. Measuring enthalpy changes inn reactions. Determining rates of reaction.	Polluting affects of combustion of fossil fuels. Comparing fuels and consideration of alternatives to fossil fuels. Selecting materials for different uses. The sea as a source of a range of chemicals.

Term	Assessments	Topics	Skills	Personal Development
Spring	**One test at the end of each topic** Teacher assessed (non-examined) Practical Endorsement in Chemistry. This is assessed throughout the course and monitors whether students routinely meet the Common Practical Assessment	**Periodic table and energy –** • Periodicity. • Reactivity trends. • Enthalpy. • Reaction rate and equilibrium.	Using and manipulating formulae. Representing chemical structures. Measuring enthalpy changes inn reactions. Determining rates of reaction.	Polluting affects of combustion of fossil fuels. Comparing fuels and consideration of alternatives to fossil fuels. Selecting materials for different uses. The sea as a source of a range of chemicals.
		Core Organic Chemistry - • Basic concepts of organic chemistry • Alkanes • Alkenes • Alcohols • Haloalkanes • Organic Synthesis	Representing chemical structures. Using analytical skills to	Manufacturing processes in the chemical industry. Consideration of best conditions for an industrial process. Green chemistry Consideration of medicines from nature.

		• Spectroscopy	identify compounds.	Stages in synthesis of a medicine. Uses of polymers.
Term	**Assessments**	**Topics**	**Skills**	**Personal Development**
Summer	Teacher assessed (non-examined) Practical Endorsement in Chemistry. This is assessed throughout the course and monitors whether students routinely meet the Common Practical Assessment Criteria (CPAC).	**Core Organic Chemistry -** • Basic concepts of organic chemistry • Alkanes • Alkenes • Alcohols • Haloalkanes • Organic Synthesis • Spectroscopy	Representing chemical structures. Using analytical skills to identify compounds.	Manufacturing processes in the chemical industry. Consideration of best conditions for an industrial process. Green chemistry Consideration of medicines from nature. Stages in synthesis of a medicine. Uses of polymers.
		REVISION		

OCR A-level Chemistry

Year 13

Term	Assessments	Topics	Skills	Personal Development
Autumn	**One test at the end of each topic** Teacher assessed (non-examined) Practical Endorsement in Chemistry. This is assessed throughout the course and monitors whether students routinely meet the Common Practical Assessment Criteria (CPAC).	**Organic chemistry and analysis -** • Aromatic chemistry • Carbonyls and carboxylic acids • Amines, amino acids and polymers • Organic synthesis • Chromatography and spectroscopy	Preparation and purification of organic compounds (solids & liquids) Qualitative analysis of organic compounds. Interpreting IR spectra mass spectra and NMR spectra.	Manufacturing processes in the chemical industry. Consideration of best conditions for an industrial process. Green chemistry Consideration of medicines from nature. Stages in synthesis of a medicine.
Term	**Assessments**	**Topics**	**Skills**	**Personal Development**
Spring	**One test at the end of each topic** Teacher assessed (non-examined) Practical Endorsement in Chemistry. This is assessed throughout the course and monitors whether students routinely meet the Common Practical Assessment	**Physical chemistry and transition elements -** • Rates of reactions • Equilibrium • Acids, bases and pH • Buffers and neutralisation • Enthalpy and entropy • Redox and electrode potentials • Transition elements	Measuring rate of reaction and determining order of reaction. Graph plotting. Redox titrations Measurements of electrochemical cell potentials and pH	Transition metal catalysts.

			Determination of quantities present in a mixture at equilibrium.	
Term	**Assessments**	**Topics**	**Skills**	**Personal Development**
Summer		Revision	Independent learning.	Creating and following revision plans.

AQA A-level Physics

Year 12

Term	Assessments	Topics	Skills	Personal Development
Autumn	**One test at the end of each topic** Teacher assessed (non-examined) Practical Endorsement in Physics. This is assessed throughout the course and monitors whether students routinely meet the Common Practical Assessment Criteria (CPAC).	**Maths Skills**	Using and manipulating equations, estimating, working with large and small numbers	Maths as the basis for physics
		Practical Skills	How to write and carry out A-level practicals	The relevance of the scientific method to careers in STEM and outside of STEM.
		1. Particles and Radiation Atomic Structure, Stable and Unstable Nuclei, Antiparticles and Photons, Hadrons and Leptons, Strange Particles and Conservation of Properties, Quarks and Antiquarks, Particle Interactions	Analysing models	Particle Physics and discussions / research of CERN being a truly international collaboration of scientists and how common terminology allows them to work together.
		2. Electromagnetic Radiation and Quantum Phenomena The Photoelectric Effect, Energy Levels in Atoms, Wave-Particle Duality	Using and manipulating formulae Evaluating evidence	New and developing ideas about the quantum world and how they are accepted etc. This is an area of physics that is still new and students could potentially go on to study this field and make new discoveries.
		6. Electricity Circuit Diagrams, Current and Potential Difference, Resistance, I-V Characteristics, Resistivity, Determining the Resistivity of a Wire, Power and Electrical Energy, E.m.f. and Internal Resistance, Conservation of Energy and the Charge in Circuits, The Potential Divider	Using and manipulating formulae Practical skills: setting up circuits from diagrams	Relevance of circuits to daily life and as components in devices to protect them from harm.
Term	**Assessments**	**Topics**	**Skills**	**Personal Development**
Spring	**One test at the end of each topic** Teacher assessed (non-examined) Practical Endorsement in Physics. This is assessed throughout the course and monitors whether students routinely meet the	**3. Waves** Progressive Waves, Wave Speed, Transverse and Longitudinal Waves, Superposition and Interference, Stationary Waves, Investigating Resonance, Diffraction, Two-Source Interference, Young's Double-Slit Experiment, Diffraction Gratings, Refractive Index, Critical Angle and TIR	Practical skills, writing and following risk assessments	Use of TIR in every day objects, e.g. car windscreens for automatic windscreen wipers.
		4. Mechanics Scalars and Vectors, Forces in Equilibrium, Moments, Centre of Mass	Using and manipulating formulae	

	Common Practical Assessment Criteria (CPAC).	and Moments, Uniform Acceleration, Displacement-Time Graphs, Velocity-Time Graphs, Acceleration-Time Graphs, Newton's Laws of Motion, Acceleration Due To Gravity, Projectile Motion, Drag, Lift and Terminal Speed, Conservation of Momentum, Force, Momentum and Impulse, Work and Power, Conservation of Energy	Practical Skills: Determining gravitational field strength	
		5. Materials Density, Hooke's Law, Stress and Strain, The Young Modulus, Stress-Strain and Force-Extension Graphs, Brittle Materials	Practical skills and safety.	
Term	**Assessments**	**Topics**	**Skills**	**Personal Development**
Summer	**One test at the end of each topic** **Mock Examinations based on past AS and A-Level Papers** Teacher assessed (non-examined) Practical Endorsement in Physics. This is assessed throughout the course and monitors whether students routinely meet the Common Practical Assessment Criteria (CPAC).	**7. Further Mechanics** Circular Motion, Centripetal Force and Acceleration, Simple Harmonic Motion, Calculations with SHM, The Mass-Spring System as a Simple Harmonic Oscillator, The Simple Pendulum and Other Types of SHM, Free and Forced Vibrations	Using and manipulating formulae Practical Skills: Testing equations for SHM	
		12. Nuclear Physics Rutherford Scattering, Measuring Nuclear Radius and Density, Properties of Nuclear Radiation, Background Radiation and Intensity, Exponential Law of Decay, Half-life and its Applications, Nuclear Decay, Mass Defect and Binding Energy, Nuclear Fission and Fusion	Practical skills, writing risk assessments Using and rearranging formulae	Opportunities for discussion of the effects of radiation e.g. from Chernobyl or the atomic bomb and their effects on societies.

AQA A-level Physics

Year 13

Term	Assessments	Topics	Skills	Personal Development
Autumn	**One test at the end of each topic** Teacher assessed (non-examined) Practical Endorsement in Physics. This is assessed throughout the course and monitors whether students routinely meet the Common Practical Assessment Criteria (CPAC).	**12. Nuclear Physics (continued)** Rutherford Scattering, Measuring Nuclear Radius and Density, Properties of Nuclear Radiation, Background Radiation and Intensity, Exponential Law of Decay, Half-life and its Applications, Nuclear Decay, Mass Defect and Binding Energy, Nuclear Fission and Fusion	Practical skills, writing risk assessments Using and rearranging formulae	Opportunities for discussion of the effects of radiation e.g. from Chernobyl or the atomic bomb and their effects on societies.
		7. Further Mechanics (continued) Circular Motion, Centripetal Force and Acceleration, Simple Harmonic Motion, Calculations with SHM, The Mass-Spring System as a Simple Harmonic Oscillator, The Simple Pendulum and Other Types of SHM, Free and Forced Vibrations	Using and manipulating formulae Practical Skills: Testing equations for SHM	
		8. Thermal Physics Thermal Energy Transfer, The Three Gas Laws, The Ideal Gas Equation, Kinetic Theory and the Pressure of an Ideal Gas, Kinetic Energy of Gas Molecules, Development of Theories	Using and manipulating formulae Deriving formulae Practical Skills: determining specific heat capacity	
		9. Gravitational Fields Gravitational Fields, Gravitational Field Strength, Gravitational Potential, Orbits		
Term	**Assessments**	**Topics**	**Skills**	**Personal Development**
Spring	**One test at the end of each topic** Teacher assessed (non-examined) Practical Endorsement in Physics. This is assessed throughout the course and monitors whether students routinely meet the Common Practical Assessment	**11. Magnetic Fields** Magnetic Flux Density, Investigating Force on a Current-Carrying Wire, Forces on Charged Particles, Electromagnetic Induction, Investigating Flux Linkage, Faraday's Law and Lenz's Law, Alternating Current, Transformers		
		9. Electrical Fields Electric Fields, Electric Potential, Comparing Electric and Gravitational Fields		
		10. Capacitors Capacitors, Energy Stored by Capacitors, Dielectrics. Charging and Discharging, Time Constant and Time to Halve		
		13 A. Astrophysics Lenses, Optical Telescopes, Comparing Telescopes, Non-Optical Telescopes, Parallax and Parsecs, Magnitude, Stars as Black Bodies, Stellar Spectral Classes, The Hertzsprung-Russell Diagram, Evolution of Sun-like Stars, Supernovae, Neutron Stars and Black Holes, Doppler Effect and Red Shift, The Big Bang Theory, Detection of Binary Stars, Quasars and Exoplanets.		Looking at how exoplanets are discovered and the implications for us. Commonality between all life on Earth – we are all made from stardust! (the elements produced when a star dies). Opportunities for discussion of responsible space travel, including the environmental and economic consequences of launching.

Term	**Assessments**	**Topics**	**Skills**	**Personal Development**
Summer		**Revision**		