Striving For Excellence Together
Year 9 Transition Science Course Curriculum Map

The year 9 transition course runs until the end of the Spring term. Topics will be done in rotation so could be covered at any point during this time. Year 9 start the AQA GCSE Combined Science Trilogy course during the summer term (see the GCSE curriculum map for details).

	Topics	Assessment	Key Concepts	Key Vocabulary	Our Pillars	Knowledge tracking
Biology	Fundamental ideas in Biology	Practical skills assessment: Enzymes and rates of reaction End of topic exam style assessment: Tests knowledge of all of the topics in this unit	Prokaryotic and eukaryotic cells Photosynthesis and factors affecting the rate of photosynthesis Diffusion, osmosis and active transport Enzymes and their role in digestion Circulatory system Respiratory system Respiration Exercise DNA, genetics and sex determination Evolution Communicable and non- communicable diseases	Prokaryotic Eukaryotic Plasmid Nucleus Mitochondria Chloroplast Cell membrane Photosynthesis Diffusion Osmosis Active transport Respiration Enzyme Denatured Platelets Plasma Aerobic and anaerobic respiration Heterozygous Homozygous Allele Recessive Dominant Communicable	Literacy and oracy Life beyond school	Life processes, food and digestion and variation and inheritance topics in Y7. Plants for food and fit and healthy topics in Y8. The topics in this unit provide fundamental knowledge required to understand and access the Biology topics at GCSE.

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Chemistry	Fundamental ideas in Chemistry	Practical skills assessment: Rates of reaction End of topic exam style assessment: Tests knowledge of all of the topics in this unit	Particle kinetics and collision theory Chemical changes Endothermic and Exothermic reactions Conservation of mass Rates of reaction (effect of temperature, surface area and a catalyst) Carbon Chemistry Crude oil, alkanes and fractional distillation. Cracking alkenes Combustion Greenhouse gases, pollutants and carbon footprints Finite and renewable resources	Particle Endothermic Exothermic Conservation of mass Temperature Surface Area Catalyst Collision Proton Neutron Electron Atom Alkane Alkene Combustion Fractional distillation Carbon footprint Renewable Finite	Literacy and oracy	Particles, physical and chemical changes and rocks in year 7. Chemical reactions topic in year 8. The topics in this unit provide fundamental knowledge required to understand the Chemistry topics at GCSE.
Physics	Fundamental ideas in Physics	Practical skills assessment: Investigating resistance End of topic exam style assessment: Tests knowledge of all of the topics in this unit	Speed Distance and velocity time graphs Acceleration Forces and F=ma Work done and power Waves Electromagnetic spectrum Circuits Resistance (including resistance of a wire required practical) AC and DC Electrical Power	Velocity Acceleration Work (Physics context) Power (Physics context) Electromagnetic spectrum Infrared radiation Ultraviolet Gamma ray Current Ammeter Voltage Voltmeter Resistance (Physics context)	Literacy and oracy	Forces topic in year 7. Forces and motion and electricity and magnetism topics in year 8. The topics in this unit provide fundamental knowledge required to understand the Physics topics at GCSE.

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Year 9 Entry Level Science Curriculum Map

The year 9 entry level course runs until the end of the Spring term. Topics will be done in rotation so could be covered at any point during this time. Year 9 start the AQA GCSE Combined Science Trilogy course during the summer term (see the GCSE curriculum map for details).

	Topics	Assessment	Key Concepts	Key Vocabulary	Our Pillars	Knowledge tracking
Biology	The Human Body	Externally-set assignment (ESA) which consists of a short written test. Teacher-devised assignment (TDA) which consists of a short piece of practical work.	Cells, tissues and organs Organ systems – Circulatory, Digestive and Nervous system Components of the blood Respiration Lifestyle and Health Infectious Diseases Medicinal drugs and vaccination Menstrual Cycle	Nucleus, cytoplasm, cell membrane, mitochondria, ribosomes, tissue, organ, circulatory, digestive, respiration, plasma, platelets, haemoglobin, phagocytes, lymphocytes, enzyme, aerobic, anaerobic, pathogen, vaccination, hormone.	Literacy and oracy	Life processes and food and digestion topics in Y7. Fit and healthy topics in Y8. The topics in this unit provide fundamental knowledge required to understand the Biology topics at GCSE and to build confidence in our learners.
Chemistry	Elements, Mixtures and Compounds	Externally-set assignment (ESA) which consists of a short written test. Teacher-devised assignment (TDA) which consists of a short piece of practical work.	States of matter Elements. Mixtures and compounds Separating substances including filtration, distillation, crystallisation, and chromatography Metals and metal ores Properties of metals Alloys Polymers Diamond and graphite	'States of matter', Atom, element, compound, mixture, filtration, distillation, crystallisation, chromatography, metal ore, alloy, polymer, allotrope.	Literacy and oracy	Particles, physical and chemical changes and rocks in year 7. Chemical reactions topic in year 8. The topics in this unit provide fundamental knowledge required to understand the Chemistry topics at GCSE and to build confidence in our learners.
Physics	Energy, Forces and Structure of Matter	Externally-set assignment (ESA) which consists of a short written test. Teacher-devised assignment (TDA) which consists of a short piece of practical work.	Calculating speed, distance and time Stopping distances Reaction times Radioactivity Energy transfers Conduction and convection Insulating houses TDA Renewable energy Forces	Speed, velocity, ionising radiation, radioactive decay, alpha, beta, gamma, kinetic, gravitational potential, thermal and elastic potential, conduction, convection radiation, renewable, finite, non-renewable,	Literacy and oracy	Forces topic in year 7. Forces and motion and heat transfer topics in year 8. The topics in this unit provide fundamental knowledge required to understand the Physics topics at GCSE.