KS3 SCIENCE

Week Commencing:	Week 2 08/09/25	Week 3 15/09/25	Week 4 22/09/25	Week 5 29/09/25	Week 6 06/10/25	Week 7 13/10/25	Week 8 20/10/25	Week 9 03/11/25	Week 10 10/11/25	Week 11 27/11/25	Week 12 24/11/25	Week 13 01/12/25	Week 14 08/12/25	Week 15 15/12/25
T&L CPD:	Y10 Bio - Enzyme activity	Y11 Chem - Concentrations of solution	Y10 Chem - Giant covalent structures	Y11 Phys - Electromagnet ic spectrum	Y10 Phys - Energy terminology (Stores etc)	Y11 Chem – Reversible reactions	Y11 Bio - Punnet squares and alleles	Y11 Chem - Greenhouse effect	Y10 Chem – Displacement reactions	Y10 Chem - Acid reactions and pH	Y11 Phys - Electricity Molten vs Aqueous	Y11 Phys - Momentum	Y11 Chem - Water purification and life Cycle Assessments	Y10 Phys - Current vs Potential Difference
CPD Lead:	AMG	CMS	CMS	CSI	CSI	EID	MG	CMS	KPL	CMS	KPL	CSI	EID	CSI
Year 7 (9 periods per 2 weeks)	Principles of Science: Scientific enquiry			Matter			Forces				Living Matter			Project week
Outcomes	Pupils will be able to develop and demonstrate a range of safe experimental and investigative skills Pupils will be able to measure and record data using SI units and chemical nomenclature Pupils will be able to analyse and evaluate scientific data			Pupils will know the particulate nature of matter. Pupils will know that the kinetic theory of matter leads to changes of state at different temperatures. Pupils will be able to explain how gases exert pressure and the factor that can affect it. Pupils will be able to explain why diffusion occurs. KP - Particle Model			Pupils will be able to describe a variety of forces and their effects Pupils will know Hooke's Law Pupils will be able to describe motion and calculate speed				Pupils will know the structure and function of animal cells and plant cells. Pupils will be able to use a light microscope to make observations. Pupils will be able to explain the adaptations of some plant and animal cells. Pupils will be able to compare the structure of animal and plant cells with unicellular organisms. Pupils will be able to describe how substances move in and out of cells by diffusion. KP - Comparing animal and plant cells			
Year 8 (9 periods per 2 weeks)	Waves				Acids and Alkalis			Space				Project week	Health and lifestyle	
Outcomes	Pupils will know that a wave is a transfer of energy. Pupils will know the difference between transverse and longitudinal waves Pupils will know how an image is captured by the eye and a camera Pupils will know what causes different colours of light Pupils will be able to use a ray diagram to construct ray diagrams for reflection and refraction of light KP - Reflection practical				Pupils will know how to describe acids and alkalis through the use of indicators. Pupils will know a variety of indicators and be able to describe neutralisation. Pupils will be able to predict the name of soluble salts formed through a variety of chemical reactions. Pupils will know how to use the reactivity series to explain a variety of metal extraction methods. Pupils will be able to compare the different properties of ceramics, composites and polymers.			Pupils will know that planets and moons are held in orbit through gravitational field strength. Pupils will know what causes seasons on Earth. Pupils will know how to measure astronomical distances Pupils will know that the universe is vast, made up of galaxies and space and is mostly unexplored KP -				Pupils will be able to explain how different nutrients are used in the body. Pupils will be able to investigate food for the presence of different nutrients. Pupils will be able to explain how the digestive system breaks down food. Pupils will be able to explain the effects of drugs, alcohol and smoking on the body.	
Year 9 (9 periods per 2 weeks)	The Earth			Principles of Biology: Living Matter			Principles of Chemistry: Matter		Principles of Physics: Energy			Project week	Principles of Biology: Health	
Outcomes	Pupils will know the composition of the Earth and it's atmosphere. Pupils will know how to explain the rock cycle and describe the properties of different rock forms. Pupils will know how to explain the carbon cycle Pupils will be able to describe the causes and consequences of climate change. Pupils will know the importance of recycling. KP -			Pupils will know how structural differences between cells enables them to perform specific functions Pupils will know that for an organism to grow cells will divide to produce two identical cells Pupils will know that if cells are isolated at an early stage of growth they can retain their ability to grow into a range of different types of cells. Pupils will be able to compare microscope technology and use a light microscope			Pupils will know how to classify substances as atoms, elements, compounds and mixtures Pupils will know how to use symbols to represent elements and compounds in balanced equations Pupils will know how to model the atom of different elements including it's electronic structure Pupils will know the differences and similarities between the three subatomic particles Pupils will know how the periodic table is arranged based on an elements atomic structure and properties KP -			Pupils will be able to describe energy changes in systems. Pupils will know the difference between renewable and non-renewable energy. Pupils will know the factors that affect how energy is supplied in order to meet demand.			Pupils will know the causes of ill health. Pupils will know how vaccines and antibiotics work to prevent disease. Pupils will know how lifestyle choices affect health. Pupils will know how some human activities affect all living organisms. KP -

Week Commencing:	Week 16 05/01/26	Week 17 12/01/26	Week 18 19/01/26	Week 19 26/01/26	Week 20 02/02/26	Week 21 09/02/26	Week 22 23/02/26	Week 23 02/03/26	Week 24 09/03/26	Week 25 16/03/26	Week 26 23/03/26	Week 27 13/04/26	Week 28 20/04/26	Week 29 27/04/26	Week 30 04/05/26	Week 31 11/05/26	Week 32 18/05/26	Week 33 01/06/26	Week 34 08/06/26	Week 35 15/06/26	Week 36 22/06/26	Week 37 29/06/26	Week 38 06/07/26	Week 39 13/07/26
T&L CPD:	Y10 Phys - Resistance in a wire and required prac	Y11 Bio - Ecosystem terminology	Y10 Bio - Immune response	Y11 Chem - Chromatogra phy	Y11 Phys - Magnetism and Electromagnet ic key ideas	Y10 Chem - Energy profile diagrams	Y10 Phys - Density required practical	Y10 Phys - Pressure	Y10 Bio - Limiting factors	Y10 Bio - Photosynthesis required prac	T&L - Hinge Points	T&L - Key Piece feedback	T&L - Questioning	T&L - Working Scientifically	Radiation Protection training	Radiation required practical	Y10 Bio - Blood glucose control	Y10 Bio - Hormones and their effects	Y10 Chem - Pollutants and their effects	T&L – Graphs	T&L - Whiteboards			
CPD Lead:	CMS	CSI	GPR	CMS	CSI	CMS	CSI	CSI	GPR	AMG	CMS	CMS	CMS	AMG	CSI	CSI	GPR	AMG	CMS	CMS	CMS			
Year 7 (9 periods per 2 weeks)	Atoms, elements and Compounds			Energy			Body Systems			Chemical Reaction			Revision window	Reproduction				Summer Project					EOY review	
Outcomes	Pupils will know the differences between atoms, elements and compounds. Pupils will know how to write chemical formulae for elements and compounds. Pupils will be able to compare the properties of metals and non-metals. Pupils will know how to predict patterns for key groups in the periodic table.			Pupils will be able to measure fuel uses and calculate costs Pupils will know that energy can be transferred or stored Pupils will know that energy can change within a system Pupils will know that energy is the capacity or ability to do work Pupils will know that there are many forms of energy. KP -			Pupils will know how cells are organised into tissues, organs and organ systems in organisms. Pupils will be able to explain how gases are diffused across the alveoli in the human gas exchange system. Pupils will know how exercise affects the human gas exchange system. Pupils will be able to explain how blood circulates around the body to provide cells with nutrients and remove waste products. Pupils will be able to explain how the skeleton, joints and muscles allow movement of the body.			Pupils will know how to represent chemical reactions with equations. Pupils will know how to represent combustion, thermal decomposition, oxidation, and displacement reactions. Pupils will know how to explain and represent the conservation of mass through balanced equations. Pupils will be able to compare a variety of exothermic and endothermic reactions KP -			Pupils will be able to describe the changes that happen to boys and girls during adolescence Pupils will be able to explain the functions of the reproductive organs in the reproductive system in boys and girls to facilitate fertilisation and implantation. Pupils will be able to explain the menstrual cycle and the stages of pregnancy. Pupils will be able to explain how plants are adapted for reproduction and the process of fertilisation. Pupils will be able to investigate how plants seeds are adapted to increase their chances of successful dispersal.							
Year 8 (9 periods per 2 weeks)				Separating Mixtures			Electricity and Magnetism			Adaptation and Inheritance			Revision window	Pressure and Moments				Ecosystem Processes			Summer Project		EOY review	
Outcomes	Pupils will be able to explain how different nutrients are used in the body. Pupils will be able to investigate food for the presence of different nutrients. Pupils will be able to explain how the digestive system breaks down food. Pupils will be able to explain the effects of drugs, alcohol and smoking on the body.			Pupils will know the basic particle structure of elements, compounds and mixtures Pupils will know that mass is conserved Pupils will be able to describe simple techniques for separating mixtures KP -			Pupils will be able to define potential difference, current and resistance. Pupils will be able to draw and interpret a variety of circuit components and circuit diagrams Pupils will be able to define and explain static electricity Pupils will know that magnetic field lines flow from the north pole to the south pole Pupils will know that electric current has a magnetic effect and how this can be used KP -			Pupils will know how plants and animals are adapted to their environment. Pupils will know how characteristics are inherited. Pupils will know how variation can affect a species chance of survival. Pupils will know how species become extinct. KP -			Pupils will be able to describe how liquid pressure changes with depth. Pupils will be able to calculate pressure in different situations. Pupils will be able to describe what is meant by a moment. Pupils will be able to calculate the moment of a force.			Pupils will be able to describe the process of photosynthesis Pupils will be able to define and compare aerobic and anaerobic respiration. Pupils will be able to describe the interdependence of organisms in an ecosystem. KP -				
Year 9 (9 periods per 2 weeks)	Principles of Chemistry: Structure and Bonding				Principles of Physics: Forces						Revision window	Principles of Biology: Genetics			Principles of Chemistry: Reactions				Principles of Physics: Atoms			Summer Project		EOY review
Outcomes	Pupils will know the properties of the three states of matter in terms of particle kinetics. Pupils will be able to explain the bonding and properties of ionic compounds. Pupils will be able to explain the bonding and properties of covalent compounds. Pupils will know how to compare the properties of metals and alloys based on their structure and bonding.				Pupils will know names of difference types of forces. Pupils will know how forces can change the motion of objects Pupils will understand how forces can change the motion of objects Pupils will be able to interpret motion graphs KP -							Pupils will know how to compare sexual and asexual reproduction in plants and animals. Pupils will know how Darwin explained evolution by natural selection. Pupils will be able to explain how techniques including selective breeding, genetic engineering and cloning produce organisms with desired characteristics. Pupils will be able to explain how Darwin used evidence to develop the theory of evolution by natural selection and techniques to prevent extinction.			Pupils will know how to represent oxidation and reduction in terms of metal oxides. Pupils will know how to use the reactivity series to explain a variety of metal extraction methods. Pupils will be able to predict the name and formula of soluble salts formed through a variety of chemical reactions. Pupils will be able describe and explain the method to produce a soluble salt through crystallisation. Pupils will know how to use the PH scale and explain how acids can be neutralised. KP -			Pupils can explain effect of particles when changing state Pupils can describe factors affecting the density of objects. Pupils can describe types of nuclear radiation Pupils can measure the density of various objects Pupils can recall how the nucleus was discovered				

BIOLOGY

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Year 10 Triple Biology (5 periods per 2 weeks)	Organisation in animals			Organisation in plants				Disease						
Outcomes	Pupils will be able to describe the organisation of multicellular organisms and explain the adaptations of their exchange surfaces. Pupils will be able to describe and explain the structure and function of the human digestive system and the circulatory system. Pupils will be able to explain the function of enzymes and give examples of enzymes in the human digestive system. Pupils will be able to investigate the effect of temperature on enzyme activity. Pupils will be able to carry out tests for proteins, starch, glucose and lipids on samples of food.			Pupils will know how water moves in and out of cells by osmosis and its effect on plant and animal cells. Pupils will investigate the effect of solutions with different concentrations on the mass of plant tissue. Pupils will be able to describe the roots, stem and leaves as a plant organ system and explain the functions and adaptations of the xylem and phloem. Pupils will be able to use a light microscope to observe, draw and label a stomata. Pupils will be able to define transpiration and explain the factors that affect the rate of transpiration.									
Year 10 Triple Biology (5 periods per 2 weeks)	Bioenergetics						Coordination and control				Extend Coordination and Control			
Outcomes	Pupils will be able to describe photosynthesis as an endothermic reaction and explain the effects of temperature, light intensity, carbon dioxide concentration, and the amount of chlorophyll on the rate of photosynthesis. Pupils will be able to state how the products of photosynthesis are used by plants. Pupils will be able to describe cellular respiration as an exothermic reaction and compare this to anaerobic respiration in humans, plants and yeast. Pupils will be able to explain why fermentation is an exercise in order to meet respiratory demands. Pupils will be able to state what is meant by the term "metabolism" and explain its importance in the synthesis and breakdown of carbohydrates, proteins and lipids. KP - Light intensity RP (HT4)						Pupils will know how the nervous system and endocrine system work to ensure homeostasis and response. Pupils will be able to investigate human reaction times. Pupils will know how hormones are responsible for controlling blood glucose concentration and how diabetes can be treated. Pupils will know how hormones are responsible for changes in males and females during puberty and how hormones control the menstrual cycle. Pupils will know different methods used to increase and decrease fertility.								