

Curriculum Overview Templates– Holly Lodge Girls' College

		Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
<b>Year 7</b>	Title	Introduction to Science at Holly Lodge	Particle Model of Matter	Cells and Reproduction	Waves	Organisation	Gas exchange and Respiration
	Curriculum Content	Health and Safety Scientific Diagrams Obtaining results Analysing data	States of matter Changes of State Diffusion Expansion and contraction	Animal and plant cells Organelles Specialisation Single-celled organisms Sexual and asexual reproduction Reproduction in humans	Characteristics of waves Sound waves- frequency and amplitude Measuring the speed of sound	Cells, tissues, organs and organ systems Digestion and the digestive system Skeletomuscular system and locomotion	Respiratory system Breathing Aerobic and anaerobic respiration
	Assessment	Core assessment PC1	DIRT Assessment	DIRT assessment	PC2 Assessment	DIRT assessment	DIRT assessment
	Title	Forces and Energy Changes					
	Curriculum Content	Resultant Forces Weight Work Done Gravitational stores of energy Kinetic stores of energy					
	Assessment	Core assessment PC1					

<b>Year 8</b>		Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
	Title	Elements, Mixtures and compounds	Energy Transfers	Chemical Reactions	Photosynthesis and plant organisation	Electricity and Energy Resources	Ecology
	Curriculum Content	Definitions Chemical formulae Characteristics of chemical and physical changes Chemical equations Exo and endothermic reactions	Conduction, convection and radiation Conservation of energy Transfers between kinetic and gravitational stores of energy	Reactions of acids and bases Reactions of metals Representing reactions with equations	Describing photosynthesis Maximising photosynthesis Plant organs and their functions Reproduction in plants Seed dispersal	Charge, current and potential difference Series and parallel circuits Making electricity using different resources	Ecosystems Energy flow through habitats Adaptations Competition Sampling habitats
	Assessment	PC1 Assessment		DIRT assessment	PC2 Assessment	DIRT assessment	DIRT assessment
	Title		Earth and Space				
	Curriculum Content		Rock classification Weathering Rock cycle Earth's place in space Days and seasons				
	Assessment		DIRT Assessment				

<b>Year 9</b>		Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
	Title	Atomic Structure and the Periodic Table	Kinematics and Moments	Variation, Genetics and Evolution	Waves and the Electromagnetic Spectrum	Bonding and structure	Cells and Microscopy
	Curriculum Content	Sub atomic particles The atomic model Electronic configuration Formation of Ions Development of the periodic table Reactions and trends in groups 1 and 7 The noble gases	Equations of motion Distance time graphs Velocity time graphs Newton's Laws of motion Calculating moments Using levers	Inherited and environmental variation Distributions within characteristics Structure of DNA Simple genetics Theories of evolution Natural selection and Darwinian evolution	Transverse and longitudinal waves The wave equation The electromagnetic spectrum Uses and hazards of different ranges of the electromagnetic spectrum.	Ionic, covalent and metallic bonding Drawing dot and cross diagrams Ionic, covalent and metallic structures Linking properties of materials to their bonding and structures	Eukaryotic and prokaryotic cells Specialised cells Using microscopes to view cells Different types of microscope Magnification calculations
	Assessment	DIRT assessment	DIRT Assessment	PC1 Assessment	DIRT assessment	PC2 assessment	
	Title		Energy Transfers				Photosynthesis
	Curriculum Content		Transfers between energy stores Conservation of Energy Efficiency Transfers between kinetic, gravitational and elastic potential stores.				Photosynthesis equation Investigating factors affecting the rate of photosynthesis Limiting factors on the rate of photosynthesis
	Assessment						DIRT assessment

Year 10		Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
	Title	Cell Division	Reaction Rates	Atomic Structure and Radioactivity	Electricity Part 1	Electricity Part 2	Chemical Changes Part 2- Electrolysis
	Curriculum Content	Mitosis and meiosis The cell cycle Differentiation Stem cells	Factors affecting reaction rates Collision theory Measuring and calculating rate of reaction	Development of the atomic model Subatomic particles and Isotopes Radioactive decay Properties of radiation Radioactive half life Hazards of radiation	Circuit components Charge, potential difference and current. Resistance and different resistors Properties of series and parallel circuits	Energy resources for generating electricity	Electrolysis of molten and dissolved ionic compounds Rules of ion discharge Extraction of aluminium from alumina
	Assessment	DIRT assessment	DIRT Assessment	DIRT assessment	DIRT assessment		Examination
	Title	Particle Theory of matter	Quantitative Chemistry	Organisation Part 2		Chemical Changes	Infection and Response
	Curriculum Content	States of matter Thermal energy stores Internal energy Changes of state Specific heat capacity Latent Heat	Conservation of mass Balancing equations Calculating formula mass	Circulatory system Structure and function of the heart Coronary artery disease The impact of lifestyle choices on health		Reactions of acids Reactivity Series Metal extraction Reactions of acids and bases pH	Pathogens and diseases Immune system Vaccinations Developing new drugs
	Assessment		DIRT Assessment	DIRT assessment		DIRT assessment	DIRT assessment
	Title	Cell Transport	Organisation Part 1			Bioenergetics	
	Curriculum Content	Diffusion Osmosis Active Transport	Levels of organisation Digestion and the digestive system Enzyme action Investigating factors that affect the rate of enzyme reaction			Respiratory System Aerobic and anaerobic respiration Effects of exercise on the cardiovascular system	
	Assessment						

Year 11		Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
	Title	Infection and Response	Homeostasis	Chemical Analysis and Chemistry of the Atmosphere	Using Resources	Variation and Evolution Part 2	
	Curriculum Content	Pathogens and diseases Immune system Vaccinations Developing new drugs	Nervous system and reflexes Endocrine system Control of blood glucose Hormones and fertility	Gas tests Chromatography Atmosphere past and present Pollution from human activity Greenhouse effect	Finite and renewable resources Life cycle assessments Potable water Sewage treatment	Fossils and extinctions Theories of evolution Classification	
	Assessment	DIRT assessment	Mock Exams	DIRT assessment	DIRT assessment	GCSE Exams	
	Title	Organic Chemistry	Ecology Part 1	Waves	Magnets and electromagnets		
	Curriculum Content	Crude oil and fractional distillation Hydrocarbons Cracking and alkenes Polymers	Feeding relationships Adaptations Competition for resources Ecosystems	Transverse and longitudinal waves The wave equation The electromagnetic spectrum Uses and hazards of different ranges of the electromagnetic spectrum.	Magnetic materials Simple magnet theory and fields Electromagnets Motor effect		
	Assessment		Mock Exams				
	Title	Inheritance and Evolution Part 1			Ecology Part 2		
	Curriculum Content	Sexual and asexual reproduction Mitosis and meiosis DNA and chromosomes Genetic crosses and pedigree diagrams			Sampling habitats Human impact on ecosystems		
Assessment				PC3 Exam			