

	Autumn 1st		Autumn 2nd	
Yr 7	Working in the lab	Forces	Matter	Particle Model
Yr 8	Reactions	Earth	Organisms Breathing	EarthsResources
Yr 9	Cells		Atomic Structure	Periodic table
Yr 10	Periodic Table (Unit 5)		Atomic Structure (Unit 1)	
Yr 11	Waves (Unit 1) Acids and Alkalis (Unit 7)		The Rate and extent of chemical change (Unit 1)	

	Spring 1st		Spring 2nd	
Yr 7	Mixtures & separation	Cells	Electricity	Human Reproduction
Yr 8	Forces 2 (speed)	Light	Respiration	Electrical Energy
Yr 9	Periodic Table	Growth and Differentiation	Heating and Cooling	Solar System
Yr 10	Structure and Bonding (Unit 1)	Health & Disease	Electricity	Particle Model
Yr 11	Rates of reaction	Forces & Waves	Carbon Chemistry (Unit 8)	Prevent, treat and cure disease (Unit 3)

	Summer 1st		Summer 2nd	
Yr 7	Plant Reproduction	Interdependence	Gravity and Weight	Plant Reproduction
Yr 8	Speed	Reactant and Products	Evolution	Pupil academic development
Yr 9	Acceleration	Genetics	Resources	Maths in Science, Preparation for GCSE
Yr 10	States of matter (Unit 1) Chemical Quantities (Unit 5)		Carbon Chemistry (Unit 8)	
Yr 11	Revision for Exams			

# 5-year curriculum map: Physics

Area	Big Idea	Year 7	Year 8	Year 9	Year 10	Ks4
 Forces	BI-Forces predict motion	7U-Contact forces 7KC-Balanced & unbalanced 7KC-Friction 7KC-Density	8U-Movement 8KC-Speed 8KC-Motion graphs	9U-Force & direction 9KC-Force vectors 9KC-Equilibrium & interactions	10U-Newton's laws 10KC-Acceleration 10KC-Newton's 2nd law 10KC-Momentum	
	BI-Fields produce forces		8U-Gravity 8KC-Weight 8KC-Gravitational force 8KC-Solar system		10U-Magnetism 10KC-Magnetic field 10KC-Motor effect	
 Energy	BI-Energy is conserved	7U-Energy transfers 7KC-Heat & temperature 7KC-Energy 7KC-Wasted energy			10U-Heating 10KC-Thermal transfer 10KC-Specific & latent 10KC-Pressure	11U-Energy conservation 11KC-Kinetic & potential 11KC-Work
	BI-Electricity transfers energy	7U-Electric circuits 7KC-Electric current 7KC-Resistance	8U-Electrical energy 8KC-Electric charge 8KC-Potential difference	P1 10U-Home electricity 10KC-Power 10KC-Ohm's law 10KC-Energy resources		
	BI-Radiation transfers energy		8U-Light 8KC-Reflection 8KC-Refraction	9U-Sound & waves 9KC-Wave model 9KC-Longitudinal & transverse	10U-E.m. radiation 10K-Electromagnetic spectrum 10K-Wave behaviour	11U-Radioactivity 11K-Radioactive decay 11K-Half life

U = unit    KC = Key Concept    ↓ Within each unit, KC are in recommended teaching order

Year 7-11 progression:

- Later KC rely on understanding earlier KC
- Later KC Integrate earlier KC
- Later KC are more theoretical /quantitative
- Order is based on research

Teaching order

- 8U-Electrical energy after 8U-Pure substances

# 5-year curriculum map: Chemistry

Area	Big Idea	Year 7	Year 8	Year 9	KS4	
 Matter	BI-Structure determines properties	7U-Substances & particles 7KC-Particle model 7KC-Mixtures 7KC-Solutions	8U-Pure substances 8KC-Elements & compounds 8KC-Simple & giant	9U-Periodic table 9KC-Subatomic particles 9KC-Periodic patterns	10U-Structure & bonding 10KC-Ionic, covalent, metallic 10KC-Electrolysis	11U-Carbon chemistry 11KC-Hydrocarbons 11KC-Refining
	BI-Reactions rearrange matter	7U-Changing substances 7KC-Chemical & physical 7KC-pH scale 7KC-Neutralisation	8U-Reactants & products 8KC-Acid reactions 8KC-Oxidation & reduction	9U-Matter & energy 9KC-Atom conservation 9KC-Reaction energy	10U-Making substances 10KC-Making salts 10KC-Amount of substance	11U-Controlling reactions 11KC-Reaction rate 11KC-Equilibrium
	BI-Earth systems interact		8U-Earth systems 8KC-Earth processes 8KC-Potable water	9U-Using resources 9KC-Metal reactivity 9KC-Product lifecycle	10U-Atmosphere 10KC-Earth's atmosphere 10KC-Global warming	

U = unit KC = Key Concept

↓ Within each unit, KC are in recommended teaching order

Year 7-11 progression:

- Later KC rely on understanding earlier KC
- Later KC Integrate earlier KC
- Later KC are more theoretical /quantitative
- Order is based on research

Teaching order

- 10U-Atmosphere after 10U-Plants

# 5-year curriculum map: Biology

Area	Big Idea	Year 7	Year 8	Year 9	Ks4	
 <b>Organisms</b>	BI-Cells are alive	7U-Cells 7KC-Cell structure 7KC-Specialised cells	8U-Respiration 8KC-Cellular energy 8KC-Aerobic & Anaerobic	9U-Growth & differentiation 9KC-Cell transport 9KC-Cell division	10U-Plants 10KC-Photosynthesis 10KC-Plant transport	
	BI-Bodies are systems		8U-Tissues & organs 8KC-Cell organisation 8KC-Digestive system 8KC-Gas exchange	9U-Organ systems 9KC-Circulatory system 9KC-System damage 9KC-Immune system	10U-Feedback & control 10KC-Nervous system 10KC-Endocrine system 10KC-Enzymes	
	BI-Organisms are interdependent	7U-Interdependence 7KC-Feeding relationships 7KC-Competition 7KC-Abiotic & biotic			10U-Human interaction 10KC-Biodiversity 10KC-Communicable disease	
 <b>Genes</b>	BI-Characteristics are Inherited	7U-Reproduction 7KC-Sexual & asexual 7KC-Menstrual cycle 7KC-Embryo development		9U-Genetics 9KC-Genes 9KC-Monohybrid inheritance		11U-Controlling reproduction 11KC-Reproductive hormones 11KC-Genetic engineering
	BI-Species show variation		8U-Life diversity 8KC-Variation 8KC-Selective breeding 8KC-Natural selection			11U-Evolution 11KC-Evolutionary theory 11KC-Classification

U = unit    KC = Key Concept    ↓ Within each unit, KC are in recommended teaching order

Year 7-11 progression:

- Later KC rely on understanding earlier KC
- Later KC Integrate earlier KC
- Later KC are more theoretical /quantitative
- Order is based on research

Teaching order

- 8U-Tissues & organs' after 8U- Pure substances

Teaching order

- 10U-Plants after 10U-Feedback & control
- 10U-Human interaction after 10U- Atmosphere