




Area	Big Idea	Year 7	Year 8	Year 9	Year 10	Year 11
 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-Voltage	P1 9U-Home electricity 9C-Power 9C-Ohm's law 9C-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

Area	Big Idea	Year 7	Year 8	Year 9	Year 10	Year 11
 <p>Matter</p>	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	

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- 10U-Atmosphere after 10U-Plants

Area	Big Idea	Year 7	Year 8	Year 9	Year 10	Year 11
 Organisms	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	
 Genes	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

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Teaching order

- 8U-Tissues & organs' after 8U- Pure substances
- 8U-Respiration after 8U- Reactions & products

Teaching order

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