5-year curriculum map: Physics

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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-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

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5-year curriculum map: Chemistry

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Area	Big Idea	Year 7	Year 8	Year 9	Year 10	Year 11
 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:
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- Later KC Integrate earlier KC
- Later KC are more theoretical /quantitative
- Order is based on research

Teaching order
- 10U-Atmosphere after 10U-Plants

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5-year curriculum map: Biology

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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

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
- 8U-Respiration after 8U-Reactions & products

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

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