



SCIENCE Programme of Study (Year 10 2024-25)

Northumberland's P.R.U.

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15
Autumn 1 – ‘Equality & Diversity’								Autumn 2 – ‘Living in the Wider World’						
Subject Area Topic: Cells & Structures								Subject Area Topic: Evolution, Global Environment Issues & Electricity						
1. Animal cells Plant cells microscopes	2. -Specialised cells -DNA -Chromosomes	3. -Mitosis -Stem cells -Diffusion	4. -Osmosis -States of matter -Atoms	5. -Atomic data Compounds -Atomic mass	6. -Conservation of mass -Balanced chem equations	7. -Atomic structure -electronic structure of atoms -properties of elements, metal, non-metals	8. -Group 1 Metals -group 7 elements -group 0	1. -Plant cell organisation -Transpiration	2. -Variation + evolution	3. -Genetic engineering -Fossils -Classification -Biodiversity + waste management	4. -Global warming -Deforestation -Evolution of atmosphere	5. -Potable water -Desalination -Waste water treatment	6. -Series and parallel circuits -investigating resistance in circuits.	7. -Electricity in the home -Power of electrical items -National grid
Notes/Links/Interleaving			Additional Higher Content -Balanced Symbol equations ext. -Writing chemical formula for common compounds					Notes/Links/Interleaving		Additional Higher Content -Electrical Equations -Resistance graphs for different components -Describing what effects power and equation used				
Spring 1 – ‘The Circle of Life’							Spring 2 – ‘Conflict’							
Subject Area Topic: The Human Body & Genetics							Subject Area Topic: Reactions - Acids, Disease & Medicine							
1. -Reproduction -Meiosis -X Y Chromosomes	2. -Puberty + menstrual cycle -Controlling fertility -Sexually transmitted diseases.	3. -Abiotic and biotic factors -Adaptations -Carbon cycle -Water cycle	4. -Genetic diagrams -Family Tree and genetic screening	5. -Maintaining ecosystems biodiversity	6. -Finite and renewable resources -Recycling -Life cycle assessments.	1. -Acids bases -Reactions of acids -Reactivity series	2. -Reactions of metals -Electrolysis	3. -Enzymes - digestion	4. -Homeostasis	5. -Endocrine system				
Notes/Links/Interleaving			Additional Higher Content -Embryo screening -Classification changes				Notes/Links/Interleaving			Interaction of different diseases Artificial hearts + valves				
Summer 1 – ‘Health & Leisure’							Summer 2 – ‘Crime & Punishment’ (CSI Themed curriculum)							
Subject Area Topic: Digestion, Circulation, Nervous System, Exercise							Subject Area Topic: Physics - Separation, Light, Laws, Forces							

	1. -Communicable diseases -Bacterial diseases -Viral diseases	2. -Fungal and protist diseases -Fighting diseases -Vaccinations	3. -Health and diseases -Cancer -Risks in non-communicable diseases	4. -Antibiotic Resistant bacteria. -Developing drugs	5. -Aerobic and anaerobic respiration	6. - Nervous system	1. -Pure and impure -Formulations -Chromatography -	2. -Tests for gases -Food tests	3. -Refraction and reflection of light Electromagnetic waves.	4. -Stopping and thinking distance -Braking distance -Reaction times	5. -Newtons 1 st law -Newtons 2 nd law	6. -Newtons 3 rd law -Acceleration	7. Elasticity and investigating springs
	Notes/Links/Interleaving		Additional Higher Content -Antibiotic resistant bacteria			Notes/Links/Interleaving			Additional Higher Content Uniform acceleration Reaction time equation calculation				