Stanchester Academy

Curriculum Sequencing Overview – Year 10 Combined Science

Week	1	2	3	4	5	6	7	8
Unit Theme and Assessed Knowledge/ Skills	Biology Unit 4 Bioenergetics & Biology 2 Plant Biology						Chem 3 Quantitative Chemistry	
Lesson Topics Sequence & Content	B4.1 Photosynthesis B4.2 Light intensity RP B4.3 Light intensity RP part 2	B4.4 Increasing Food production (HT) B2.18 Leaf Structure B2.19 Stomata B2.20 Transpiration	B2.21 Factors affecting transpiration B2.22 Translocation B4.5 Uses of Glucose **B4 Plant Biol** review **& assess**	B4.6 Aerobic Respiration B4.7 Anaerobic Respiration in humans B4.8 Response to exercise B4.9 Anaerobic respiration in plants & yeast	Biol 3 Types of Disease & revisited Biol 3 immunity & vaccination revisited Biol 3 Drug development revisited Biol 2 Heart disease risk factors & treatments revisited	Seneca Training (can slot in earlier if available) **Biol Paper 1 Mock exam** Chem 3.1 Equations & Balancing C3.2 Ar & Mr	Biol Paper 1 Mock Review Biol Paper 1 Class intervention C3.3 % by mass C3.4 Measurement & Uncertainty	C3.5 Masses & gases C3.6 (HT) Moles C3.7 (HT) Reacting masses C3.8 (HT) Using Moles
Key Assessments			**B4 Plant Biol**			**Biol Paper 1 Mock exam**		

Week	9	10	11	12	13	14	15	16
Unit Theme and Assessed Knowledge/ Skills		Chem 4 Chemical Changes				Chem 5 Energy Changes	Phys 3 Particle Model	
Lesson Topics Sequence & Content	C3.9 (HT) Limiting Reactants C3.10 Concentration **C3 Quantitative Assess**	Chem 4.1 Metal Oxides C4.2 Reactivity Series C4.3 Extraction of metals C4.4 Displacement Reactions	C4.5 Metals & Acids C4.6 Neutralisation C4.7 Making soluble salts C4.8 Making salts pt 2	C4.9 pH & neutralisation **C4 Metal reactions** review & assess C4.11 (HT) Strong & Weak acids C4.12 Electrolysis	C4.13 Electrolysis of molten C4.14 Electrolysis & Metal extraction (aluminium) C4.15 Electrolysis of solutions C4.16 RP electrolysis of solutions	C5.1 Endo/Exo reactions C5.2 RP Temp changes (FT should take 2 lessons) C5.3 Reaction Profiles	C5.4 Calculating Energy Changes (HT) **C5 Assess** P3.1 Density P3.2 RP Density	P3.3 Change of State P3.4 Internal Energy P3.5 SHC P3.6 Latent Heat
Key Assessments	**C3 Quantitative**			**C4 Metal Reactions**			**C5 Energy Changes**	

Week	17	18	19	20	21	22	23	24
Unit Theme and Assessed Knowledge/ Skills	Phys 4 Atomic Structure & Radioactivity					Biol 5 Homeostasis & Response		
Lesson Topics Sequence & Content	P3.7 Particle motion in gases **P3 Particle model Review & Assess** P4.1 Atomic Structure P4.2 Model of the atom	<u>Chem 1 isotopes & abundance</u> – *not covered in Yr9* P4.3 Radioactivity P4.4 Nuclear equations P4.5 Half Life	P4.6 Irradiation & Contamination **P4 Radioactivity Review & Assess** Phys / Chem paper 1 weak area focus Phys / Chem paper 1 weak area focus	Chem Paper 1 Revision Phys Paper 1 Revision **Chem Paper 1 Mock** **Phys Paper 1 Mock**	Chem Paper 1 Mock review Chem 1 intervention Phys Paper 1 Mock Review Phys 1 intervention	B5.1 Homeostasis B5.2 Nervous System B5.3 Reflex actions B5.5 Ruler drop RP	B5.10 Endocrine system B5.11 Blood Glucose B5.12 Diabetes B5.13 Diabetes recommendations	B5.19 Human Reproduction B5.20 IVF *(HT, but can teach to all for cultural capital)* B5.21 IVF evaluation (HT) B5.23 Contraception
Key Assessments	**P3 Particle Model**		**P4 Radioactivity**	**Chem & Phys Paper 1 Mocks**				

Week	25	26	27	28	29	30	31	32
Unit Theme and Assessed Knowledge/ Skills		B6 Inheritance						Revision
Lesson Topics Sequence & Content	Work Experience	**Biol 5 Review & Assess** B6.1 DNA B6.2 Human Genome project B6.3 Meiosis	B6.4 Sexual & asexual reproduction B6.5 Genetic cross diagrams B6.6 Inherited disorders B6.7 Variation	B6.8 Variation pt2 B6.9 Natural Selection B6.10 Fossils & Fossil Evidence B6.11 Examples of evolution	B6.12 Antimicrobial resistance B6.13 Selective breeding in animals B6.14 Selective breeding in plants B6.15 Genetic modification	B6.16 GMO debate B6.17 Classification B6.18 Evolutionary trees B6.19 Extinction	B6 Review & Asses P2 Current & resistance in circuits P2 Resistance in bulb, lamp & diode RP P2 Resistance in wire	P2 Mains elec P1 & P2 Power & Energy equations recall & handling P1 Energy stores, efficiency & dissipation Paper 1 variables in RPs
Key Assessments		**Biol 5 Homeostasis Assess**					**B6 Inheritance**	

Week	33	34	35	36	37	38
Unit Theme and Assessed Knowledge/ Skills	Biol 7 Ecology					
Lesson Topics Sequence & Content	B7.1 Ecosystems B7.2 Pred-prey B7.3 Sampling pt1 B7.4 Sampling pt2	B7.5 Adaptations in animals B7.6 Adaptations in plants B7.7 Carbon Cycle	B7.8 Water Cycle B7.9 Land use B7.10 Global Warming B7.11 Waste management	B7.12 Maintaining biodiversity **B7 Assess** Biol Paper 2 revision	**Biol Paper 2 mock exam** Chem 8.1 Pure substances C8.2 Formulations	Biol 2 Mock Review Biol 2 intervention C8.3 & 4 Chromatog RP C8.5 Gas tests
Key Assessments				**B7 Ecology**	**Biol Paper 2 Mock**	