

Year 12 – Chemistry– 2020

New Curriculum (ATAR)

Term 1		Term 2		Term 3		Term 4	
W1		W1 Electrolytic cells Ch 8.1 & 8,2	Electrolytic cells	W1 Synthetic Polymers Ch 11.4 p290	IA3 (3)	W1 Revision (Unit 4)	Revision
	Review Last year's concepts		Electrolytic cells		Synthetic polymers		Revision
	Review Last year's concepts		Prac on Electrolytic		IA3 (4)		Revision
W2 Unit 3 Topic 1 Ch 3.3 p81 pH scale ch 3.4 p83 Ch 3.5 p87 Bronsted Lowrey Model	Water as a weak electrolyte and finish catch up	W2	Electrolytic	W2	IA3 (5)	W2 Revision (Unit 3)	Revision
	pH calcs & pOH calcs		IA2 (1) Discuss mods to Prac		IA3 (6)		Revision
	Bronstead-Lowry		IA2 (2) Rationale and mods		IA3 (7)		Revision
W3 Ch 3.7 p92 (Buffers) Dissociation Constant Ch 4.1 p98 Ch 4.2 p103 (calcs)	Buffers, do some review Qn's	W3	IA2 (3) Do the prac	W3 Unit 4 Topic 2 Chemical Synthesis Ch 13.1,13.2 &	IA3 (8) Draft Due!	W3 Revision (Units 3/4)	Revision
	Ka & Kb 4.1 p99		IA2 (4) Analysis		Chemical Synthesis		Revision
	pKa and PKb including calcs		IA2(5) Analysis		Catch up lesson....		Revision
W4 Ch 4.3 p106 (indicators) Titrations Chap 5.1 & 5.2 p114	Indicators includes graphs	W4	IA2 (6) Evaluation	W4 Hydrogen Fuel Cells 13.4 p324 Chem synthesis reaction yield Ch 13.5 p337	Fuels inc bio fuels p328 Hydrogen fuel cells	W4 Revision Block Exams	
	Intro to titrations and how to..		IA2 (7) Evaluation		IA3 (9) Due! Chemical synthesis reaction yield – calcs- p327 MUST do q29 public paper 1		
	Mandatory prac		IA2 (8) Evaluation		Review qns P340		
W5 Chap 5.3 Page126-131 Volumetric analysis Review from last year	Prac cont... and calcs	W5 Unit 4 Starts, Topic 1 Structure of organic compounds Ch 9.1 p220 Functional groups Ch 9.2 p226	IA2 (9) Draft Due	W5 Green Chemsitry Ch 14.1 & 14.2 p344 Atom Economy Ch14.4 p354 Unit 4 Topic 2 Macromolecules: Addition polymers Ch 15.1 p362	Green Chemistry	W5 Revision Block Exams	
	Acid base titrations and curves		Hydrocarbons, naming and drawing		Atom economy		
	Block exam??		Functional groups		Addition polymers		
W6	Revision	W6 Structural formulas Ch 9.3 p232 Isomers Ch 9.4 p234	Functional groups cont...	W6 Condensation polymers Ch15.2 p366 Polymer use Chp 15.3 p369 Amino acids and polypeptides Ch 15.4 373 Macromolecules Monosaccharides etc Ch 15.5 p 376 Submit results for IA2 & IA3 Unit 4 Topic 2	condensation polymers	W6 Revision Block Exams	
	Revision		Structural formulas		Polymer use, amino acids and polypeptides		
	IA1 Data Test		Isomers		Monosaccharides Review Question p381		

W7 Redox Ch 6.1 p138 Ox numbers Ch 6.2 p145	Displacement Electron loss/gain Definitions	W7 Physical properties and trends Ch 9.5 p238	Due date for IA2 Mandatory Prac – 3D models	W7 Unit 4 Topic 2 Molecular Manufacturing Ch 16.1 p384	Molecular Manufacturing- worksheet using QCE Unit 4 (Surfing) p158-159	W7 Revision Block Exams	
	Displacement rn – Mandatory prac single displacement p406		Physical prop and trends- disp and H-bonding		Analytical Techniques		
	Ox state, Ox numbers		Chemical synthesis Contact process and Harber process				
W8 Half equations and overall redox eq Ch 6.3 p150 Submit results for IA1 Galvanic cells Chp 7,1 p162	½ equations and overall	W8 Unit 4 Topic 1 Organic reactions and pathways (7) Addition and elimination rn Ch 10.1 p 252 Oxidation and reduction rn Ch10.2 p 256 Condensation rn Ch 10.3 p 260 Substitution rn Ch10.4 p 263	Addition and elimination reactions	W8 Unit 4 Topic 1 Analytical Techniques (6) Chromatography and electrophoresis Ch 12.1 p300 Data from analytical tech Ch 12.2 p306	Chromatography and Electrophoresis of proteins (prac ??)		
	½ equations cont.....		Oxidation and reduction		Data from analytical techniques		
	Electrochemical Cells: Electrochem series Galvanic cells including structure & equations		Condensation reactions and substitution reactions		SFD!!!		
W9 Galvanic cells Mandatory prac p407	Galvanic cells cont....	W9 Green Chemsitry Ch 14.1 & 14.2 p344 Unit4 topic 1 Organic Materials, Structure and function (5) Carbohydrates Ch 11.1 p276	Hand out IA3 Intro to Green Chemistry, polymers and fuels (Topic for IA3)	W9 Analysing data from spectra Ch 12.3 P312	Data from analytical techniques		
	Mandatory prac- galvanic cell		Choose claim and work on research question (1)		Analyzing data from Spectra		
	Mandatory prac- Hand out IA2		Carbohydrates		Analyzing data from Spectra		
W10 Standard electrode potential Ch 7.2 p174 Applications of spontaneous reactions Ch 7.3 p179 Intro to electrolytic cells Ch 8.1 p190	Standard electrode potential	W10 Unit4 topic 1 Lipids Ch 11.2 p280 Proteins Ch11.3 p283	Decide on research qn prior to holidays (2)	W10 Catch up week	Catch up week		
	Alkaline batteries and fuel cells		Lipids		Catch up week		
	Intro to electrolytic cells Electrolytic cells – # simulation		Proteins		Catch up week		

Simulation for Electrolytic cells: http://media.pearsoncmg.com/bc/bc_0media_chem/chem_sim/html5/Electro/Electro.php