

Chapelton Academy Curriculum Intent Plan 2023-2024

Chemistry - 2 Teacher Plan

Procedural Knowledge (Exam technique, skills etc)

a: modelling	b: calculations and using equations	c: Drawing line graphs from data	d: interpreting data from graphs and tables	e: decoding exam vocabulary	f: revision techniques	g: Managing time limited tasks	h: drawing apparatus		j: setting up apparatus	k: task collaboration	l: exam error/problem solving	m: drawing structures	n: extended response
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3.1.1 - Atomic Structure
3.1.2 - Amount of Substance
3.1.3 - Bonding
3.1.4 - Energetics
3.1.5 - Kinetics
3.1.6 - Equilibria
3.1.7 - REDOX
3.1.8 - Thermodynamics (Y13)
3.1.9 - Rate Equations (Y13)

3.1.10 - Equilibrium Constant, Kp (Y13)
3.1.11 - Electrode potentials (Y13)
3.1.12 - Acids & Bases (Y13)
3.2.1 - Periodicity
3.2.2 - Group 2 Metals
3.2.3 - Group 7
3.2.4 - Period 3 elements & oxides (Y13)
3.2.5 - Transition Metals (Y13)
3.2.6 - Reaction of ions in aqueous solution (Y13)

3.3.1 - Intro to Organic
3.3.2 - Alkanes
3.3.3 - Halogenoalkanes
3.3.4 - Alkenes
3.3.5 - Alcohols
3.3.6 - Organic Analysis
3.3.7 - Optical Isomerism (Y13)
3.3.8 - Aldehydes & Ketones (Y13)
3.3.9 - Carboxylic Acids & Derivatives (Y13)

3.3.10 - Aromatic Chemistry (Y13)
3.3.11 - Amines (Y13)
3.3.12 - Polymers (Y13)
3.3.13 - Amino Acids & DNA (Y13)
3.3.14 - Organic Synthesis (Y13)
3.3.15 - Nuclear Magnetic Resonance (Y13)
3.3.16 - Chromatography (Y13)

Both Teachers		Teacher 1					Teacher 2					Both Teachers			
Week	Date	# lessons	Disciplinary Knowledge sequence	Activities	DK this interweaves with	Procedural Knowledge progression	#lessons	Disciplinary Knowledge sequence	Activities	DK this interweaves with	Procedural Knowledge progression	RS Revision	HW Focus	Assessment	DATA/ Other
1	04/09/2023	#	Y12 Organic Recap				#	Y12 Organic Recap							
2	11/09/2023	3	Y12 Organic Recap	Chemsheets Exampro Revision/Recall Pyramids	All Organic chemistry moving forwards	a,d,f,g,k,l,m,n	2	Y12 Organic Recap	Chemsheets Exampro Revision/Recall Pyramids	All Organic chemistry moving forwards	a,d,f,g,k,l,m,n	Y12 Organic Pyramids Recap Activities			
3	18/09/2023	3	3.3.10 - Aromatic 1- Structure of benzene & evidence 2- Reactions of benzene	Exampro PMT qs' PPQ's	All organic 3.1.3 3.1.2	a,d,f,g,k,l,m,n	2	3.3.7 - Optical Isomerism 1. Definitions 2. Production of racemates from aldehydes	Chemsheets PPQ's	3.3.1 3.3.6 3.3.8 3.3.14	a,d,f,g,k,l,m,n				
4	25/09/2023	3	3.3.8 - Aldehydes & Ketones 1. Production of from oxidation of alcohols & reduction back & oxidation to acids 2. Nucleophilic addition reactions 3. Chemical tests	Chemsheets PPQ's PMT flash cards	3.3.5 3.3.1 3.3.9 3.3.7 3.3.6 3.1.3 3.1.7	a,d,f,g,k,l,m,n	2	3.3.7 - Optical Isomerism 1. Definitions 2. Production of racemates from aldehydes	Chemsheets PPQ's	3.3.1 3.3.6 3.3.8 3.3.14	a,d,f,g,k,l,m,n	Y12 Pyramids	Y12 Revision	Y12 Organic Paper	
5	02/10/2023	3					2	3.3.11 - Amines 1. Prep (R-X + NH3) & Aromatic	Chemsheets Exampro	3.3.1 3.3.3 3.3.10	a,d,f,g,k,l,m,n	3.3.10 Pyramid 3.3.7 Pyramid	Y13 Organic q's Carousel quiz		
6	09/10/2023	3	3.3.9 - Carboxylic Acids & Derivatives 1. Structures of acids & esters 2. Hydrolysis (acid & base) 3. Biodiesel				2	3.3.11 - Amines 2. Base properties & strength 3. Nucleophilic properties	Chemsheets Exampro	3.3.1 3.3.3 3.3.10	a,d,f,g,k,l,m,n	3.3.8 Pyramid 3.3.11 Pyramid	Y13 Organic q's Carousel quiz		DATA ENTRY 6/10
7	16/10/2023	3	3.3.9 - Carboxylic acids & derivatives 4. Acylation 5. Structures of anhydrides, acyl chlorides, amides 6. Ethanoic anhydride v ethanoyl chloride in aspirin ** Practical to be carried out @SheffieldUni * Awaiting confirmation**	Chemsheets PPQ's PMT Carousel	3.3.1 3.3.5 3.3.11 3.3.10 3.3.6 3.1.3 3.1.12	a,d,f,g,h,j,k,l,m,n	2	3.3.12 - Polymers 1. Condensation Polymers of diacids & diols, diacids & diamines & amino acids 2. Polyesters & polyamides (Terylene & nylon 6,6/Kevlar) & uses of	Chemsheets PMT Carousel	3.3.1 3.3.4 3.3.5 3.3.9 3.3.11 3.3.6	a,d,f,g,k,l,m,n	3.3.11 Pyramid	Research - biodegradability & disposal of polyesters & polyamides and problems associated with it Y13 Organic q's Carousel quiz		
8	23/10/2023	OCTOBER HALF TERM HOLIDAY													

9	30/10/2023	3	3.14 - Organic Synthesis 1. Summary of routes 2. Green synthesis 3. High atom economy & devise synthetic steps	Chemsheets Summary sheets Carousel	all organic chemistry topics	a,d,f,g,k,l,m,n	2	3.3.13 - Amino Acids, proteins & DNA 1. AA's - Acid/Base properties - zwitterion structure 2. Proteins - peptide bonds, s-s bridges, Primary/Secondary/Tertiary structures		3.1.3 3.3.1 3.3.9 3.3.11 Biology knowledge	a,d,f,g,k,l,m,n	3.3.12 3.3.9 Pyramids	Y13 q's Carousel Quiz		
10	06/11/2023	3	3.1.15 - NMR 1. Solvents, reagents and chemical shift 2. Proton NMR	Chemsheets PMT PPQ's Carousel	all organic chemistry topics	a,d,f,g,k,l,m,n	2	3.1.13 - 3. Chromatography of amino acids 4. Enzymes - stereospecificity/active site		3.1.3 3.3.16 3.3.11 3.3.9 Biology knowledge	a,d,f,g,k,l,m,n	3.3.14 pyramid 3.3.15 pyramid	Y13 q's Carousel Quiz		
11	13/11/2023	3	3.1.15 - NMR 3. C13 NMR	Chemsheets PMT PPQ's Carousel	all organic chemistry topics	a,d,f,g,k,l,m,n	2	5. DNA - structure of 3 parts & H-bonds 6. Action of anti cancer drugs					Y13 q's Carousel Quiz		
12	20/11/2023	3	3.3.16 - Chromatography 1. TLC, Column & GC methods 2. Calculating Rf values & ID of compounds	Chemsheets PPQs Carousel	all organic chemistry topics	a,d,f,g,k,l,m,n	2	Contingency/revision				3.3.13 pyramid	Y13 q's Carousel Quiz		
13	27/11/2023	3	Contingency week/revision				2	Contingency/revision							
14	04/12/2023	3					2								A Level Paper 2 - 2023
15	11/12/2023	3					2								
16	18/12/2023	3					2								
17	25/12/2023	CHRISTMAS HOLIDAY													
18	01/01/2024	CHRISTMAS HOLIDAY													
19	08/01/2024	3					2								
20	15/01/2024	3					2								
21	22/01/2024	3					2								
22	29/01/2024	3					2								
23	05/02/2024	3					2								
24	12/02/2024	FEBRUARY HALF TERM													
25	19/02/2024	3					2								
26	26/02/2024	3					2								
27	04/03/2024						2								
28	11/03/2024														
29	18/03/2024	3													
30	25/03/2024	3													DATA - 28/3 29/3 Holiday
31	01/04/2024	EASTER HOLIDAY													
32	08/04/2024	EASTER HOLIDAY													
33	15/04/2024	3													
34	22/04/2024	3													
35	29/04/2024	3													
36	06/05/2024	3													Holiday 6/5
37	13/05/2024	3													
38	20/05/2024	3													
39	27/05/2024	SPRING BANK HOLIDAY													
40	03/06/2024	3	Revision/Retrieval quizzes/catch up practical/					Revision/Retrieval quizzes/catch up practical/							
41	10/06/2024	3	Revision/Retrieval quizzes/catch up practical/					Revision/Retrieval quizzes/catch up practical/							
42	17/06/2024	Y12 STUDY LEAVE STARTS													
43	24/06/2024	25th June - 2nd July - Y12 Mocks													
44	01/07/2024	3rd - 5th July - Post - 18 days													
45	08/07/2024														
46	15/07/2024	WORK EXPERIENCE WEEK													
47	22/07/2024														
48	29/07/2024														