

## Curriculum Map 2021-2022: Year 12 Applied Science

### Year Overview

	Teacher 1: USM (2 lessons per week)	Teacher 2: MBI (4 lessons per week)
<b>Autumn 1</b>	Unit 1 Chemistry	Unit 1 Biology
<b>Autumn 2</b>	Unit 1 Chemistry	Unit 1 Biology Unit 1 Physics
<b>Spring 1</b>	Unit 1 Chemistry Unit 2 Calorimetry	Unit 1 Physics Unit 2 Titration and Colorimetry
<b>Spring 2</b>	Unit 2 Calorimetry Unit 1 revision	Unit 2 Chromatography Unit 2 Personal development
<b>Summer 1</b>	Unit 1 revision	Unit 1 revision
<b>Summer 2</b>	Prep for unit 3 (after unit 1 exams)	Prep for unit 3 and unit 8 (after unit 1 exams)

## Outline of Lessons

Yellow = Self assessed recall tests

Green = Teacher assessed tests

Blue = Feedback of teacher assessed tests

			Teacher 1: USM (X2)	Teacher 2: MBI (X4)	Homework	Assessment and IV
Autumn 1	30/08/2021	Week 1				
	06/09/2021	Week 2	<b>Unit 1 Chemistry:</b> Electronic structure of atoms	<b>Unit 1 Biology:</b> Cells and Microscopes		
	13/09/2021	Week 3	<b>Unit 1 Chemistry:</b> Ionic bonding	<b>Unit 1 Biology:</b> Eukaryotes		
				<b>Unit 1 Biology:</b> Prokaryotes		
	20/09/2021	Week 4	<b>Course assessment (titrations)</b>	<b>Course assessment (titrations)</b>		Course Assessment (titrations) for course decisions
				<b>Course assessment (titrations)</b>		
	27/09/2021	Week 5	<b>Unit 1 Chemistry:</b> Covalent bonding	<b>Unit 1 Biology:</b> Self Assess Recall test on cells	Revise for Biology induction test	Biology Recall test on Cells
<b>Unit 1 Biology:</b> Specialised cells						
04/10/2021	Week 6	<b>Unit 1 Chemistry:</b> Metallic bonding, electronegativity and polarity	<b>Unit 1 Biology:</b> Interpreting micrographs		Biology TA Induction test on Cells and specialised cells	
			<b>Unit 1 Biology Induction test (on cells and specialised cells) Teacher assessed</b>			
11/10/2021	Week 7	<b>Unit 1 Chemistry:</b> Intermolecular forces	<b>Unit 1 Biology:</b> Blood vessels	Revise for Chemistry induction test	Biology Recall test on Epithelial and muscles	
			<b>Unit 1 Biology:</b> Fast and slow twitch muscle			
		<b>Unit 1:</b> Self-assess: Recall test on electronic structure and bonding	<b>Unit 1 Biology:</b> Self Assess: Recall test on Epithelial and muscles		Chemistry Recall test on electronic structure and bonding	
			<b>Unit 1 Biology Induction test feedback and DIRT</b>			

	18/10/2021	Week 8	<b>Unit 1 Chemistry Induction test on bonding and intermolecular forces (teacher assessed)</b>	<b>Unit 1 Biology:</b> Nerve tissue <b>Unit 1 Biology:</b> Nerve impulse		Chemistry TA Induction test on bonding and Intermolecular forces
Autumn 2	01/11/2021	Week 9	<b>Unit 1 Chemistry:</b> Relative masses and moles	<b>Unit 1 Biology:</b> Electroencephalogram (EEG) <b>Unit 1 Biology:</b> Synapses		
	08/11/2021	Week 10	<b>Unit 1 Chemistry Induction test feedback and DIRT</b> Practise: Mole calculations	<b>Unit 1 Biology:</b> Brain chemicals <b>Unit 1 Biology:</b> Self Assess: Recall test on Nervous system <b>Unit 1 Biology End of Topic Test Tissue structure and Function (Teacher assessed)</b> <b>Unit 1 Physics:</b> Interpreting wave graphs	Revise for Biology topic test on Tissue structure and Function	Biology Recall test Nervous system Biology TA EoT Tissue structure and Function
	15/11/2021	Week 11	<b>Unit 1 Chemistry:</b> Calculating reacting masses and gas volumes	<b>Unit 1 Physics:</b> Wave types (longitudinal and Transverse) <b>Unit 1 Physics:</b> Wave speed		
	22/11/2021	Week 12	<b>Unit 1 Chemistry:</b> Calculations in aqueous solutions and percentage yield <b>Unit 1 Chemistry:</b> Self Assess Recall test on quantities used in chemical reactions	<b>Unit 1 Physics:</b> Self Assess Recall test on Basics of waves. <b>Unit 1 Biology End of Topic Test Tissue structure and Function feedback and DIRT</b> <b>Unit 1 Physics:</b> Wave interference	Revise for Chemistry topic test on Structure and Bonding	Physics Recall test on Basics of waves Chemistry Recall test on Calculations in reactions and moles
	29/11/2021	Week 13	<b>Unit 1 Chemistry End of Topic Test: Structure and bonding (Teacher assessed)</b> <b>Unit 1 Chemistry:</b> Layout of Periodic table (period, groups, s/p/d notation) and physical properties of elements (1 <sup>st</sup> ionisation and 1 <sup>st</sup> electron affinity)	<b>Unit 1 Physics:</b> Diffraction gratings <b>Unit 1 Physics:</b> Stationary waves	Revise for Physics topic test on working with waves	Chemistry TA EoT Structure and Bonding
	06/12/2021	Week 14	<b>Unit 1 Chemistry:</b> Physical properties of elements: atomic radius, electronegativity, type of bonding, trends in melting point and boiling point	<b>Unit 1 Physics:</b> Musical Instruments <b>Unit 1 Physics End of Topic test: Working with waves (teacher assessed)</b> <b>Unit 1 Physics:</b> Fibre optics- Laws of refraction		Physics TA EoT Working with waves
	13/12/2021	Week 15	<b>Unit 1 Chemistry End of Topic Test: Structure and Bonding Feedback and DIRT</b> <b>Unit 1 Chemistry:</b> Physical properties of metals	<b>Unit 1 Physics:</b> Fibre optics in medicine (Endoscopy) <b>Unit 1 Physics:</b> Fibre optics in communication (analogue and digital signals)		
	Spring 1	03/01/2022	Week 16	<b>Unit 1 Chemistry:</b> Self Assess: Knowledge Assessment on periodic table and physical properties <b>Unit 1 Chemistry:</b> Chemical properties of elements: Reactions of period 2 and period 3 with oxygen	<b>Unit 1 Physics:</b> Self Assess: Knowledge Assessment on waves in communication <b>Unit 1 Physics End of Topic test: Working with waves feedback and DIRT</b> <b>Unit 1 Physics:</b> Electromagnetic waves	
10/01/2022		Week 17	<b>Unit 1:</b> Chemical of properties of elements: Reactions of metals	<b>Unit 1 Physics:</b> Electromagnetic waves in communications		

			<p><b>Unit 1 Physics: Self Assess: Knowledge Assessment on Electromagnetic waves in communication</b></p> <p><b>Unit 1 Physics End of Topic Test: Waves and Electromagnetic in Communication (teacher assessed)</b></p>		<p>Physics Recall test on Electromagnetic waves in communication</p> <p>Physics TA EoT Waves and electromagnetics in communication</p>
17/01/2022	Week 18	<p><b>Unit 1: Chemical properties of elements: Oxidation and Reduction (Displacement reactions of metals and halogens)</b></p> <p><b>Unit 1 Chemistry: Self Assess: Knowledge Assessment on Chemical properties of elements</b></p>	<p><b>Unit 1 Physics End of Topic Test: Waves and Electromagnetic in Communication feedback and DIRT</b></p> <p>Revision for mock exams</p> <p><b>Unit 1 mock exam Biology</b></p>	<p>Revise for Chemistry topic test on production and uses of substances in relation to properties</p> <p>Revise for Biology and Physics mock exams</p>	<p>Chemistry Recall test on chemical properties of elements</p> <p>Biology mock exam</p>
24/01/2022	Week 19	<p><b>Unit 1 Chemistry End of Topic Test on Production and Uses of Substances in relation to properties (Teacher assessed)</b></p> <p>Revision for mock exams</p>	<p><b>Unit 1 mock exam Physics</b></p> <p><b>Unit 2 A:</b> Practical 1: Calibration of mass balance, pipette and pH meter.</p> <p>Practical 2: Making up solution sodium carbonate</p>		<p>Chemistry TA EoT Production and Uses of Substances in relation to properties</p> <p>Physics mock exam</p>
31/01/2022	Week 20	<p><b>Unit 1 Chemistry End of Topic Test on Production and Uses of Substances in relation to properties: Feedback and DIRT</b></p> <p>Revision for mock exams</p>	<p><b>Unit 2 A:</b> Practical 3: Titration of sodium carbonate solution with hydrochloric acid</p> <p><b>Unit 2 A:</b> Practical 4: Titration of sodium carbonate solution with sulfuric acid using pH meter</p>	<p>Revise for Chemistry mock exam</p>	
07/02/2022	Week 21	<b>Unit 1 mock exam Chemistry</b>	<p><b>Unit 2 A:</b> Practical 5: Making up standard solutions of copper sulfate solutions</p> <p>Practical 6: Colorimetry of copper sulfate solutions</p> <p><b>Unit 2A:</b> Write up report on practicals 1-6 (for assignment A)</p>	<p>Assignment A first submission</p>	<p>Chemistry mock exam</p>
14/02/2022	Week 22	<p><b>Unit 2 B:</b> Practical 7: Calibrating thermometer Practical 8: Cooling curves of stearic acid and paraffin wax</p>	<p><b>Unit 2A:</b> Write up report on practicals 1-6 (for assignment A)</p> <p><b>Assignment A first submission deadline (teacher assessed)</b></p> <p><b>Unit 2 C:</b> Practical 9: Chromatography of plants</p>		
Spring 2 28/02/2022	Week 23	<b>Unit 2 B:</b> Write up report on practicals 7-8 (for assignment B)	<p><b>Unit 2 C:</b> Practical 10: Chromatography of amino acids</p> <p><b>Unit 2 C:</b> Write up report on practicals 9-10 (for assignment C)</p>	<p>Assignment C first submission</p> <p>Assignment B first submission</p>	<p>IV week for Assignment A first submission (USM reviews MBI's Assignment A marking)</p>

	07/03/2022	Week 24	<b>Unit 2 B:</b> Write up report on practicals 7-8 (for assignment B) <b>Assignment B first submission deadline (teacher assessed)</b>	<b>Unit 2 C:</b> Write up report on practicals 9-10 (for assignment C) <b>Assignment C first submission deadline (teacher assessed)</b> <b>Assignment A first submission feedback.</b>	Assignment D first submission	
	14/03/2022	Week 25	Revising unit 1 or Assignment workshop	<b>Unit 2 D:</b> Writing up report on Personal competencies (for Assignment D) <b>Unit 2 D:</b> Writing up report on Personal competencies (for Assignment D) <b>Assignment D first submission deadline (teacher assessed)</b>	Assignment A resub	IV week for Assignment B first submission (MBI reviews USM's Assignment B marking) IV week for Assignment C first submission (USM reviews MBI's Assignment C marking)
	21/03/2022	Week 26	Revising for unit 1 or Assignment workshop <b>Assignment B first submission feedback</b>	Revising for unit 1 or Assignment workshop <b>Assignment A resub deadline (teacher assessed)</b>	Assignment B resub Assignment C resub	IV week for Assignment D (USM reviews MBI's Assignment D marking)
	28/03/2022	Week 27	Revising unit 1 or Assignment workshop	Revising for unit 1 or Assignment workshop Revising for unit 1 or Assignment workshop <b>Assignment D first submission feedback</b>	Assignment B resub Assignment C resub Assignment D resub	IV week for Assignment A resub (USM reviews MBI's Assignment A resub marking)
	04/04/2022	Week 28	Revising for unit 1 or Assignment workshop <b>Assignment B resub deadline (teacher assessed)</b>	Revising unit 1 or Assignment workshop Revising for unit 1 or Assignment workshop <b>Assignment C resub deadline (teacher assessed)</b> <b>Assignment D resub deadline (teacher assessed)</b>		
	Summer 1	25/04/2022	Week 29	Revising for unit 1 (chemistry)	Revising for unit 1 (Biology and Physics) Revising for unit 1 (Biology and Physics)	
02/05/2022		Week 30	Revising for unit 1 (chemistry) <b>Assignment B resub feedback</b>	Revising for unit 1 (Biology and Physics) <b>Assignment C resub and Assignment D resub feedback</b> Revising for unit 1 (Biology and Physics)		
09/05/2022		Week 31	Revising for unit 1 (chemistry)	Revising for unit 1 (Biology and Physics) Revising for unit 1 (Biology and Physics)		
16/05/2022			Revising for unit 1 (chemistry)	Revising for unit 1 (Biology and Physics)		

		Week 32		Revising for unit 1 (Biology and Physics)		
	23/05/2022	Week 33	Revising for unit 1 (chemistry)	Revising for unit 1 (Biology and Physics)		
				Revising for unit 1 (Biology and Physics)		
Summer 2	06/06/2022	Week 34	MOCK EXAM PERIOD			
	13/06/2022	Week 35	MOCK EXAM PERIOD			
	20/06/2022	Week 36	<b>Preparing for unit 3:</b> Energy content of fuels investigations	<b>Preparing for unit 3:</b> Plants and their environment investigations		
				<b>Preparing for unit 3:</b> Plants and their environment investigations		
	27/06/2022	Week 37	<b>Preparing for unit 3:</b> Energy content of fuels investigations	<b>Preparing for unit 3:</b> Enzymes in action investigations		
				<b>Preparing for unit 3:</b> Enzymes in action investigations		
	04/07/2022	Week 38	<b>Preparing for unit 3:</b> Diffusion of molecules investigations	<b>Preparing for unit 3:</b> Osmosis investigations		
				<b>Preparing for unit 3:</b> Osmosis investigations		
11/07/2022	Week 39	<b>Preparing for unit 3:</b> Diffusion of molecules investigations	<b>Preparing for unit 8:</b> Food Tests investigation			
			<b>Preparing for unit 8:</b> Food Tests investigation			
18/07/2022	Week 40					