

Now that the revised curriculum has been taught, please consider the Implementation and Impact of the curriculum you taught.
What changes might need to be made to the Curriculum Intent (See Curriculum Map and Overviews) in light of this year's experiences?

Year 10 Overview 2023-24 – Chemistry

Date	Wk	Week	Units Studied & Learning Outcomes	Key Concepts & Assessment
8 weeks (12 Lessons) (38 Days)				
Tues 5-Sep	A	1	<u>Overview of Unit/No. lessons</u> - Structure of the Atom and the Periodic Table (7 lessons) - Bonding (4 lessons) <u>Lesson Sequence of Content:</u> 1, 2 & 3. Size of the atom, isotopes, ions & standard form (3 lessons) 4 – 7. Groups of the periodic table & transition metals (4 lessons) 8, 9 & 10. Ionic bonding & properties (3 lessons) 11. Simple covalent molecules & properties (1 lesson) 12. Polymers and large molecules (1 lesson)	
11-Sep	B	2		
18-Sep*	A	3		
25-Sep	B	4		
2-Oct	A	5		
9-Oct	B	6		
16-Oct	A	7		
23-Oct	B	8		
Prior			Current	Next
Year 8 – Periodic table			Explain trends in the Periodic table	Year 12 – trends in the Periodic table & orbitals
Year 9 – atomic structure			Explain structures and properties of ionic and simple covalent structures	Year 11 – electrolysis (links to ion formation)
GW: recall groups of the Periodic Table & different types of bond BI: describe properties of elements in different groups of the Periodic Table and properties of different types of bond EW: explain trend in groups of the Periodic Table and explain properties of structures in relation to their bonding				
Half-Term				
7 weeks (10-11 lessons) (34 Days)				
6-Nov	A	9	<u>Overview of Unit/No. lessons</u> Bonding & properties of structures (11 lessons) <u>Lesson Sequence of Content:</u> 1 & 2. Giant covalent structures (2 lessons) 3. Graphene & fullerenes (1 lesson) 4 & 5. Metallic bonding & alloys (2 lesson) 6. Nanoparticles (1 lesson) 7, 8 & 9. Revision (3 lessons) 10 & 11. Feedback on the exam (2 lesson)	
13-Nov	B	10		
20-Nov	A	11		
27-Nov	B	12		
4-Dec	A	ST1		
11-Dec	B	ST1		
18-Dec	A	15		
Prior				
Year 9 – atomic structure			Explain structures and properties of giant	Year 12 – rate of reaction

	covalent structures & metallic structures			
	Identify factors that affect the rate of reaction			
• GW: recall different types of bond • BI: describe properties properties of different types of bond • EW: explain properties of structures in relation to their bonding				
Christmas Holiday 6 weeks (9 lessons) (30 Days)				
8-Jan	B	16	<u>Overview of Unit/No. lessons</u> Rate and extent of chemical reactions (9 lessons) <u>Lesson Sequence of Content:</u> 1. Rate of reaction – factors that affect rate (1 lesson) 2 & 3. Rate of reaction – surface area (2 lessons) 4. Rate of reaction - concentration (1 lesson) 5 & 6. Rate of reaction - temperature (2 lessons) 7. Rate of reaction - catalyst (1 lessons) 8, 9 & 10. Required practical – rate of reaction (2 lessons)	
15-Jan	A	17		
22-Jan	B	18		
29-Jan	A	19		
5-Feb	B	20		
12-Feb	A	21		
Prior		Current	Next	
Year 8 – chemical reaction		Explain how factors affect the rate of reaction	Year 12 – rate of reaction	
Year 9 – reactions of metals		Describe ways to measure rate of reaction		
• GW: Identify some factors that affect rate of reaction • BI: Describe how different factors affect the rate of reaction • EW: Explain how the different factors affect the rate of reaction using the collision theory				
Half-Term 5 weeks (7 - 8 lessons) (24 Days)				
26-Feb	B	22	<u>Overview of Unit/No. lessons</u> • Energy changes (4 lessons) • Treatment of water (3 lessons) <u>Lesson Sequence of Content:</u> 1. Energy changes during a reaction – exothermic & endothermic (1 lesson) 2. Reversible reactions (1 lesson) 3 & 4. Equilibrium (2 lessons) 5. Purity & formulations (1 lesson) 6. Potable water (1 lesson) 7. Waste water (1 lesson)	
4-Mar	A	23		
11-Mar	B	24		
18-Mar	A	25		
25-Mar*	B	26		

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Prior	Current		Next	
Year 8 – exothermic & endothermic reactions	Explain how energy is transferred during chemical reactions	Understand how to treat potable & waste water	Year 11 – Haber process Year 12 – Dynamic equilibrium	
GW: State what an exothermic & endothermic reaction are and state the difference between potable and pure water BI: Describe what happens to temperature during an exothermic and endothermic reaction and describe how potable & waste water are treated EW: Explain in terms of energy what an exothermic and endothermic reaction are and explain the stages in treatment of potable and waste water				
Easter Holiday 6 weeks (9 lessons) (29 Days)				
15-Apr	A	27	<u>Overview of Unit/No. lessons</u> - Treatment of water (3 lessons) - Quantitative Chemistry (6 lessons) <u>Lesson Sequence of Content:</u> 1 – 3. Required practical – Water (3 lessons) 4. QC – Relative formula mass (1 lesson) 5. QC – Moles (1 lesson) 6 & 7. QC – Concentration of solutions (2 lessons) 8 & 9. Revision	
22-Apr	B	28		
29-Apr	A	29		
6-May*	B	30		
13-May	A	31		
20-May	B	ST2		
Prior	Current		Next	
Year 7 – Acids & Alkalis	Explain how to determine the mass of solute in water	Understand how to carry out a range of chemical calculations	Year 11 – yield, atom economy, titration calculations Year 12 – moles & quantities	
Year 8 – Chemical reactions				
Year 9 – reactions of metals and balancing equations				
GW: Calculate relative formula mass BI: Rearrange an equation to change the subject of the calculation EW: Complete multi-step calculations				
Half-Term 7 weeks (10-11 lessons) (35 Days)				
3-Jun	A	ST2	<u>Overview of Unit/No. lessons</u> - Quantitative Chemistry (6 - 10 lessons) - Energy changes (2 lessons) <u>Lesson Sequence of Content:</u> 1. Revision (1 lesson) 2. Exam feedback (1 lesson) 3 & 4. QC – Reacting masses (2 lessons)	
10-Jun	B	ST2		
17-Jun	A	35		
24-Jun	B	36		
1-Jul	A	37		
8-Jul	B	38		

15-Jul			5. Quantitative Chemistry - Moles to balance equations & limiting reactants (1 lesson) 6. QC - Yield (1 lesson) 7. QC - Atom economy (1 lesson) 8. QC - Volumes of gases (1 lesson) 9. QC - Titration & titration calculations (2-3 lessons) 10. Reaction profiles (1 lesson) 11 & 12. Bond energies (1 lesson)	
	A	39		
Prior		Current	Next	
Year 7 – Acids & Alkalis		Understand how to carry out a range of chemical calculations	Year 11 – yield, atom economy, titration calculations	
Year 8 – Chemical reactions			Year 12 – moles & quantities	
Year 9 – reactions of metals and balancing equations			Year 12 – enthalpy changes & bond energies	
Year 9 & 10 exothermic & endothermic reactions				
• GW: Calculate relative formula mass & Draw a reaction profile • BI: Rearrange an equation to change the subject of the calculation and draw and label a reaction profile • EW: Complete multi-step calculations and explain a reaction profile in terms of bond making and breaking •				
(Total: 190 Days)				

* Bank Holidays

Prompt Questions

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Please revisit the prompts from last year:

- What are the Key concepts for this unit?
- How will it link to wider disciplinary knowledge/cultural capital: history, culture, authentic artefacts, music, art, literature?
- How does it build on prior knowledge and link to other units, concepts, years, GCSE?
- What is it intended students will have learned?
 - For each Unit? By the end of the Year?
 - GW: ; BI: ; EW
- Is it worth summarising in a knowledge organiser?
- **Assessment: how do you know they have learned the foundational concepts, curriculum and wider disciplinary knowledge? Does assessment look like GCSE light? Should it?**
- Skills used/learned
- Tier 2/3 vocabulary ((Etymology e.g. of Greek/Latin)