

Active Revision – Chemistry

Assessment Point – End of Year 10 Assessment

Research shows that students who do frequent chunks of revision across all 3 stages of revision below are more likely to reach their full potential.

- ✓ Upload – consolidate your knowledge
- ✓ Process – active retrieval practice
- ✓ Download – apply your knowledge



upload



process



download

TOPIC: Atomic Structure <https://www.aqa.org.uk/subjects/science/gcse/combined-science-trilogy-8464/specification/subject-content/chemistry>

Includes: Atoms, elements, compounds, mixtures, separation techniques, history of the atom, subatomic particles, electronic structure.

- Create mind maps for each subtopic listed above.
- Make flashcards for key definitions and diagrams (e.g., electron configurations, atomic models through history).
- Use BBC Bitesize or Seneca to fill in knowledge gaps.
- <https://www.youtube.com/watch?v=bgyuXU97jal>

- Draw and label an atom with electron shells from memory.
- Sequence the history of the atom (Dalton → Thomson → Rutherford → Bohr → Chadwick) using paper strips.
- Use the Leitner method to organise your flashcards. Revisit your flashcards daily, every 3 days, or weekly depending on how well you can recall the information.

- Complete past paper questions and mark them using <https://www.physicsandmathstutor.com/chemistry-revision/gcse-aqa/atomic-structure/>
- Atomic Structure Quick-fire Questions https://youtu.be/mjllPJ_c018

<p>TOPIC: Bonding, Structure and the Properties of Matter https://www.aqa.org.uk/subjects/chemistry/gcse/chemistry-8462/specification/subject-content/bonding-structure-and-the-properties-of-matter#Bonding structure and the properties of matter</p> <p>Includes: Ionic, covalent, metallic bonding; properties of materials; states of matter; nanoparticles.</p>		
<ul style="list-style-type: none"> • Make mind maps and labelled diagrams (e.g., dot-and-cross diagrams, metallic lattice). • Flashcards: properties of ionic, simple molecular, giant covalent, and metallic structures. • Print out pictures of the giant covalent structures and annotate them with their key features • https://www.youtube.com/watch?v=YpEQ-NWxKBc 	<ul style="list-style-type: none"> • From memory, draw dot-and-cross diagrams for ionic (e.g., NaCl), covalent (e.g., O₂), and metallic bonding. • Describe properties of different structures using a table, then test yourself from memory. • Create a flow diagram explaining the uses of nanoparticles. 	<ul style="list-style-type: none"> • Complete past paper questions and mark them using https://www.physicsandmathstutor.com/chemistry-revision/gcse-aqa/bonding-structure-properties-of-matter/ • Watch YouTube: Bonding, Structure Quick-fire Questions https://youtu.be/9bbCFUyluWg
<p>TOPIC: Quantitative Chemistry https://www.aqa.org.uk/subjects/chemistry/gcse/chemistry-8462/specification/subject-content/quantitative-chemistry#Quantitative_chemistry</p> <p>Includes: Relative formula mass (Mr), conservation of mass, moles, concentration, gas volumes, yield, atom economy</p>		

<ul style="list-style-type: none"> • Make a mind map for key calculations, drawing out triangles for key equations you will need to learn. Make sure you can rearrange the subject of the equation. • Create worked example flashcards (step-by-step calculations). • https://www.youtube.com/watch?v=eAibVvhmsK0&pp=0gcJcf0Ao7VqN5tD 	<ul style="list-style-type: none"> • Practise calculating Mr and moles with a calculator and periodic table. • Write out and balance equations, then calculate reactants/products masses. • Do timed mole calculations, then self-assess. 	<ul style="list-style-type: none"> • Complete past paper questions and mark them using https://www.physicsandmathstutor.com/chemistry-revision/gcse-aqa/quantitative-chemistry/ • Watch: Quantitative Chemistry Quick-fire Questions https://youtu.be/8uqWdmlKd7c
<p>TOPIC: Chemical Changes https://www.aqa.org.uk/subjects/chemistry/gcse/chemistry-8462/specification/subject-content/chemical-changes#Chemical_changes</p> <p>Includes: Reactivity series, extraction of metals, acids, alkalis, electrolysis.</p>		
<ul style="list-style-type: none"> • Make maps on reactivity series and electrolysis. • Flashcards for definitions (oxidation, reduction, displacement, neutralisation), and equations. • Write out general equations for the acid reactions • https://www.youtube.com/watch?v=KTmXEliU_Go 	<ul style="list-style-type: none"> • Sequence the reactivity series from memory. • Write balanced equations for metal-acid and metal-oxide reactions. • Label an electrolysis setup and describe what happens at each electrode. • Draw out the steps in the required practical Making a Soluble Salt. Annotate each step. 	<ul style="list-style-type: none"> • Complete past paper questions and mark them using https://www.physicsandmathstutor.com/chemistry-revision/gcse-aqa/chemical-changes/ • Watch: Chemical Changes Quick-fire Questions https://youtu.be/7Nrma6v0A8I

<p>TOPIC: Energy Changes https://www.aqa.org.uk/subjects/chemistry/gcse/chemistry-8462/specification/subject-content/energy-changes#Energy_changes</p> <p>Includes: Exothermic and endothermic reactions, energy profile diagrams, bond energies.</p>		
<ul style="list-style-type: none"> • Flashcards for key concepts and diagrams (exothermic vs endothermic). • Mind map on required practical for exo and endothermic reactions – there are 3 different versions of this practical. • Monitoring the temperature of a neutralization, Reacting metals with acids or displacement reactions, and dissolving substances in water. 	<ul style="list-style-type: none"> • Draw energy profiles from memory and annotate. • Calculate energy changes using bond energies. • Practice writing the method for energy changes required practicals, identifying variables and suggesting improvements to the way of working. 	<ul style="list-style-type: none"> • Complete past paper questions and mark them using https://www.physicsandmathstutor.com/chemistry-revision/gcse-aqa/energy-changes/ • Watch: Energy Changes Quick-fire Questions https://youtu.be/PQtjfRoIMAE