


YEAR 11 Separate Sciences CHEMISTRY REVISION PLAN 2020

| PART | PERCENTAGE | WHAT IS IT? | DATE |
|--|------------|--|---------------------------------|
| Paper 1 8. Atomic theory and the periodic table 9. Chemical bonding 10. Quantitative chemistry 11. Chemical changes 12. Energy changes | 50% | EXAM /100 1 hr 45 mins Multiple choice, structured, closed short answer and open response. | 14 th May AM |
| Paper 2 13. Rate and extent of chemical change 14. Organic chemistry 15. Chemical analysis 16. Chemistry of the atmosphere 17. Using resources | 50% | EXAM /100 1 hr 45 mins Multiple choice, structured, closed short answer and open response. | 10 th June PM |

WAYS TO REVISE:

- Question and answer cards
- Knowledge organisers
- Practical lab book
- Revision guides- reading and then testing yourself.
- Assessment questions and specification- <http://www.aqa.org.uk/subjects/science/gcse/chemistry-8462>
- GCSE Bitesize (AQA Separate sciences Chemistry)
- Your own notes, reading them, testing yourself.
- Afterschool revision
- Use the timetable for topics to revise.
- Use your mock to analyse what you need to revise.
- Seek help from science staff if you are struggling with a particular topic.
- Dedicate a specific time to revise science.
- Identify your areas of weakness and focus on them.
- Dedicate each week to specific topics.
- Get a lined paper notepad to make notes in for each topic.



| Week beginning  | <u>Mon</u> | <u>Tue</u> | <u>Wed</u> | <u>Thurs</u> | <u>Fri</u> | <u>Sat</u> | <u>Sun</u> |
|---|-----------------------------|----------------|--------------------------------------|---------------|-----------------------|-----------------------------|-----------------------------|
| 20/01/20 | Topic 8 1 | Topic 8 2 | Topic 8 3 | Topic 8 4 | Topic 9 1 | Topic 9 2 | Topic 9 3 |
| 27/01/20 | Topic 14 1 | Topic 14 2 | Topic 14 3 | Topic 9 4 | Topic 9 8 | Topic 9 9 | Topic 13 1 |
| 03/02/20 | Topic 13 2 | Topic 13 3 | Topic 13 4 | Topic 15 1 | Topic 15 2 | Topic 15 3 | Topic 15 4 |
| 10/02/20 | Topic 11 1 | Topic 11 2 | Topic 11 3 | Topic 11 4 | Topic 16 1 | Topic 16 2 | Topic 16 3 |
| 17/02/20 <u>HALF TERM</u> | Topic 10 1 | Topic 10 2 | Topic 10 3 | Topic 10 4 | Topic 14 5 | Topic 14 6 | Topic 14 7 |
| 24/02/20 | Topic 15 5 | Topic 15 6 | Topic 15 7 | Topic 15 8 | Topic 16 4 | Topic 16 5 | Topic 16 6 |
| 02/03/20 | Topic 8 5 | Topic 8 6 | Topic 8 7 | Topic 8 8 | Topic 11 5 | Topic 11 6 | Topic 11 7 |
| 9/03/20 | Topic 14 8 | Topic 14 10 | Topic 14 10 | Topic 14 9 | Topic 14 9 | Topic 10 5 | Topic 10 6 |
| 16/03/20 | Topic 10 7 | Topic 10 8 | Topic 10 9 | Topic 8 9 | Topic 8 9 | Topic 8 10 | Topic 9 5 |
| 23/03/20 | Topic 9 4 | Topic 9 9 | Topic 9 10 | Topic 9 12 | Topic 9 13 | Topic 15 6 | Topic 15 7 |
| 30/03/19 | Topic 15 8 | Topic 17 1 | Topic 17 2 | Topic 17 3 | Topic 17 4 | Topic 17 5 | Topic 12 1 |
| 06/04/20 <u>EASTER</u> | Topic 8 test & Review | | | | Topic 9 test & Review | | |
| 13/04/20 <u>EASTER</u> | Topic 10 10 | Topic 10 10 | Topic 11 11-14 | | | Topic 11 test and review | Topic 10 test and review |
| 20/04/20 | Topic 12 2 | Topic 12 3 | Topic 12 4 | Topic 12 5 | Topic 11 8 | Topic 11 9 | Topic 11 10 |
| 27/04/20 | Topic 12 Test and review | | Complete specimen paper 1 and review | | | | Topic 10 11 |

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|-----------------------|-------------------|-----------------|-----------------|--|
| 04/05/20 | Topic 8 11 | Topic 8 12 | Topic 10 6-8 | Topic 8 13 |
| 11/05/20 | Topic 12 4-5 | Topic 11 | PAPER 1 EXAM | Topic 13 1-3 Topic 13 4-5 |
| 18/05/20 | Topic 13 7 | Topic 13 8-9 | Topic 14 3-4 | Topic 14 9 Topic 14 10-12 Topic 17 7 Topic 17 8 |
| 25/05/20 HALF TERM | Topic 17 9 | Topic 13 6 | Topic 13 7 | Complete specimen paper 2 and review Topic 13 7-9 |
| 01/06/20 | Topic 16 ALL | Topic 15 ALL | Topic 17 ALL | Topic 14 7-9 |
| 08/06/20 | Topic 14 10-11 | Topic 14 12 | PAPER 2 EXAM | CELEBRATE! 😊 |

Required practical

| Topic 8 Atomic theory and the periodic table | ✓ | Topic 9 Bonding | ✓ | Topic 10 Quantitative chemistry | ✓ |
|---|----|------------------------------------|----|--|----|
| Atoms, elements and compounds | 1 | Chemical bonds | 1 | Conservation of mass and balancing equations | 1 |
| Mixtures | 2 | Ionic bonding | 2 | Relative formula mass | 2 |
| Developing model of the atom | 3 | Ionic compounds | 3 | Mass changes when a product is a gas | 3 |
| Relative electrical charges of subatomic particles | 4 | Covalent bonding | 4 | Chemical measurements | 4 |
| Size and mass of atoms | 5 | Metallic bonding | 5 | Moles | 5 |
| Relative atomic mass | 6 | States of matter and state symbols | 6 | Amount of substance in equations | 6 |
| Electronic structure | 7 | Properties of ionic compounds | 7 | Using moles to balance equations | 7 |
| The periodic table | 8 | Properties of small molecules | 8 | Limiting reactants | 8 |
| Development of the periodic table | 9 | Polymers | 9 | Concentration of solutions | 9 |
| Metals and non-metals | 10 | Giant covalent structures | 10 | Percentage yield | 10 |
| Group 0 | 11 | Metals and alloys | 11 | Atom economy | 11 |
| Group 1 | 12 | Structure and bonding in carbon | 12 | Molar volumes of gases | 12 |
| Group 7 | 13 | Graphene and fullerenes | 13 | | |

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|---|----|--|----|--|---|
| Transition metals | 14 | Nanoparticles | 14 | | |
| Topic 11 Chemical changes | ✓ | Topic 12 Energy changes | ✓ | Topic 13 Rate and extent of change | ✓ |
| Metal oxides | 1 | Exothermic and endothermic reactions | 1 | Calculating rates of reaction | 1 |
| The reactivity series | 2 | Reaction profiles | 2 | Factors which affect rate of reaction | 2 |
| Extraction of metals and reduction | 3 | The energy change of reactions – bond energies | 3 | Collision theory and rates of reaction – activation energy | 3 |
| Oxidation and reduction in terms of electrons | 4 | Cells and batteries | 4 | Catalysts | 4 |
| Reactions of metals with acids | 5 | Fuel cells | 5 | Reversible reactions | 5 |
| Neutralisation of acids and salt production | 6 | | | Energy changes and reversible reactions | 6 |
| Soluble salts | 7 | | | Equilibrium | 7 |
| pH scale and neutralisation | 8 | | | Le Chatellier's principle – concentration | 8 |
| Titrations | 9 | | | Le Chatellier's principle – temperature and pressure | 9 |
| Strong and weak acids | 10 | | | | |
| The process of electrolysis | 11 | | | | |
| Using electrolysis to extract metals | 12 | | | | |
| Electrolysis of solutions | 13 | | | | |
| Reactions as half equations | 14 | | | | |
| Topic 14 Organic chemistry | ✓ | Topic 15 Chemical analysis | ✓ | Topic 16 Chemistry of the atmosphere | ✓ |
| Crude oil and hydrocarbons | 1 | Pure substances | 1 | Gases in the atmosphere | 1 |
| Fractional distillation and petrochemicals | 2 | Formulations | 2 | The Earth's early atmosphere | 2 |
| Properties of hydrocarbons | 3 | Chromatography | 3 | How CO ₂ and O ₂ changed in the atmosphere | 3 |
| Cracking and alkenes | 4 | Testing for gases | 4 | Greenhouse gases and human activity | 4 |
| Structure and formulae of alkenes | 5 | Flame testing | 5 | Global climate change and carbon footprint | 5 |
| Reactions of alkenes | 6 | Testing for cations | 6 | Atmospheric pollution | 6 |
| Alcohols | 7 | Testing for anions | 7 | | |

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|---|----|---|---|--|--|
| Carboxylic acids | 8 | Instrumental analysis and emission spectroscopy | 8 | | |
| Addition polymers | 9 | | | | |
| Condensation polymers | 10 | | | | |
| Amino acids | 11 | | | | |
| DNA and other naturally occurring polymers | 12 | | | | |
| Topic 17 | ✓ | | | | |
| Using resources | | | | | |
| Using resources and sustainable development | 1 | | | | |
| Potable water | 2 | | | | |
| Waste water treatment | 3 | | | | |
| Alternate methods of extracting metals | 4 | | | | |
| Life cycle assessment and recycling | 5 | | | | |
| Corrosion and its prevention | 6 | | | | |
| Alloys as useful materials | 7 | | | | |
| Ceramics, polymers and composites | 8 | | | | |
| The Haber process | 9 | | | | |
| Production of fertilisers | 10 | | | | |