

## Switching to OCR A from Pearson (Edexcel)

### Introduction

We are really excited about our GCE Chemistry A qualification. Whether taking on the AS Level or the full A Level, this fantastic course is a great qualification for those with an interest in the subject. Why choose Chemistry A?

- Building on our existing popular course, the specification was updated in consultation with teachers, higher education, learned societies and industry.
- The 'Big Ideas' of chemistry are arranged in topics that underpin the knowledge and understanding needed for the next generation of chemists.
- Chemistry A is enjoyable to teach and learn, giving learners the essentials for chemistry-related higher education courses as well as many transferable, marketable skills.
- The chemical topics are presented in a clear and logical linear order, with maths and How Science Work opportunities clearly highlighted, allowing you flexibility in how to approach the teaching.
- There are many highlighted opportunities for hands-on practical work, linking to our flexible practical assessment model.

### Our offer

- Our A Level Chemistry team, Danièle Gibney and David Paterson, are passionate about chemistry and education. With chemical research, teaching, publishing and school science management experience, they are fully committed to supporting centres' delivery of Chemistry A – contact Danièle and David by email at [ScienceGCE@ocr.org.uk](mailto:ScienceGCE@ocr.org.uk) or by phone on 01223 553998.
- We have produced a wide range of [support materials](#), from our handbooks (covering practical work and maths) to delivery guides, lesson elements, practical activities, candidate exemplars and more.
- Join our conversation on the [OCR Community](#) and on Twitter [@ocr\\_science](#) to ask questions, talk about and share good practice and ideas.

[#PositiveAboutPractical](#)



## Key differences

OCR Chemistry A (H032/H432)	Pearson (Edexcel) Chemistry (8CH0/9CH0)
<b>Practical skills take centre stage</b> , detailed in full at the start of the specification in a separate module for <b>clarity</b> and <b>prominence</b> .	Core practical activities listed in the specification appendix.
<b>Flexible practical</b> assessment that allows you to use your own practical activities or select from our range of suggested activities.	A core set of 16 defined practicals activities.
Extensive <b>additional guidance</b> throughout the specification, linking opportunities for <b>practical, mathematical</b> and <b>how science works</b> skills to learning outcomes.	Appendices in the specification listing the skills.
<b>Clear division of chemistry</b> in the AS and A Level specification making co-teaching easy.	Differences in the division of topics between papers at AS Level compared with the A Level.
<b>Fewer marks in the AS and A Level assessments</b> , giving learners more time to develop their answers. (AS 140 marks in 180 minutes; A Level 270 marks in 360 minutes) The all-modules A Level paper contributes 26% to the final mark.	20 more marks in AS Level and 30 more marks in A Level.  A high weighting of 40% for the all-topics A Level paper.



## Content

The content within the [OCR Chemistry A specification](#) covers the key concepts of chemistry and will be very familiar. We've laid it out in a logical progression to support co-teaching the AS Level and teaching the A Level in a linear way.

OCR Chemistry A (H032/H432)	Pearson (Edexcel) (8CH0/9CH0) <i>(* – topic is split)</i>
<p><b>Module 1: Development of practical skills in chemistry</b></p> <p>Practical skills assessed in a written examination and Practical skills assessed in the practical endorsement</p>	<p>The same practical skills, as mandated by the DfE, are listed in Appendix 5 of the Edexcel specification</p>
<p><b>Module 2 – Foundations in chemistry</b></p> <p>Atoms, compounds, molecules and equations Amount of substance Acid–base and redox reactions Electrons, bonding and structure</p>	<p>Topic 1: Atomic Structure &amp; Periodic Table* Topic 2A: Bonding Topic 2B: Structure* Topic 3: Redox I Topic 5: Formulae, Equations and Amounts of Substance Topic 12: Acid-Base Equilibria*</p>
<p><b>Module 3 – Periodic table and energy</b></p> <p>The periodic table and periodicity Group 2 and the halogens Qualitative analysis Enthalpy changes Reaction rates and equilibrium (qualitative)</p>	<p>Topic 1: Atomic Structure &amp; Periodic Table* Topic 2B: Structure* Topic 4A: The elements of Groups 1 &amp; 2 Topic 4B: The elements of Group 7 Topic 4C: Analysis of inorganic compounds Topic 8: Energetics I Topic 9: Kinetics I Topic 10: Equilibrium I</p>



OCR Chemistry A (H032/H432)	Pearson (Edexcel) (8CH0/9CH0) <i>(* – topic is split)</i>
<p><b>Module 4 – Core organic chemistry</b></p> <p>Basic concepts Hydrocarbons Alcohols and haloalkanes Organic synthesis Analytical techniques (IR and MS)</p>	<p>Topic 6A: Introduction to organic chemistry Topic 6B: Alkanes Topic 6C: Alkenes Topic 6E: Alcohols Topic 6D: Halogenoalkanes Topic 7A: Mass spectrometry Topic 7B: Infrared (IR) spectroscopy Topic 18C: Organic Synthesis*</p>
<p><b>Module 5 – Physical chemistry and transition elements</b></p> <p>Reaction rates and equilibrium (quantitative) pH and buffers Enthalpy, entropy and free energy Redox and electrode potential Transition elements</p>	<p>Topic 16: Kinetics II Topic 11: Equilibrium II Topic 12: Acid-Base Equilibria* Topic 13A: Lattice energy Topic 13B: Entropy Topic 14: Redox II Topic 15A: Principles of transition metal chemistry Topic 15B: Reactions of transition metal elements</p>
<p><b>Module 6: Organic chemistry and analysis</b></p> <p>Aromatic compounds Carbonyl compounds Carboxylic acids and esters Nitrogen compounds Polymers Organic synthesis Chromatography and spectroscopy (NMR)</p>	<p>Topic 17A: Chirality Topic 17B: Carbonyl compounds Topic 17C: Carboxylic acids Topic 18A: Arenes - benzene Topic 18B: Amines, amides, amino acids and proteins Topic 18C: Organic Synthesis* Topic 19B: Nuclear magnetic resonance Topic 19C: Chromatography</p>



OCR Chemistry A (H032/H432)	Pearson (Edexcel) (8CH0/9CH0) <i>(* – topic is split)</i>
<b>Appendix 5e: Mathematical requirements</b> Arithmetic and numerical computation Handling data Algebra Graphs Geometry and trigonometry	<b>Appendix 6: Mathematical skills and exemplifications</b> Arithmetic and numerical computation Handling data Algebra Graphs Geometry and trigonometry

*Note: one Edexcel specification topic (19A Mass Spectrometry) does not appear in the OCR A specification.*



## Assessment – AS Level

OCR Chemistry A (H032)	Pearson (Edexcel) (8CH0)
<p><b>AS Paper 1: Breadth in chemistry Modules 1–4</b> 70 marks, 50% of AS Level Written paper – 1 hour 30 minutes</p> <p>Section A multiple choice questions, 20 marks. Section B short answer question styles (structured questions, problem solving, calculations, practical) and extended response questions, 50 marks.</p>	<p><b>AS Paper 1: Core Inorganic and Physical Chemistry, Topics 1–5 &amp; practical skills</b> 80 marks, 50% of AS Level Written paper – 1 hour 30 minutes</p> <p>The paper may include multiple-choice, short open, open-response, calculations and extended writing questions.</p>
<p><b>AS Paper 2: Depth in chemistry Modules 1–4</b> 70 marks, 50% of AS Level Written paper – 1 hour 30 minutes</p> <p>Question styles include short answer (structured questions, problem solving, calculations, practical) and extended response questions, including those marked using Level of Response mark schemes.</p>	<p><b>AS Paper 2: Core Organic and Physical Chemistry: Topics 2, 5–10 &amp; practical skills</b> 80 marks, 50% of AS Level Written paper – 1 hour 30 minutes</p> <p>The paper may include multiple-choice, short open, open-response, calculations and extended writing questions.</p>



## Assessment – A Level

OCR Chemistry A (H432)	Pearson (Edexcel) (9CH0)
<p><b>A Level Paper 1: Periodic table, elements and physical chemistry</b> <b>Modules 1, 2, 3 &amp; 5</b> 100 marks, 37% of A Level Written paper – 2 hours 15 minutes</p> <p>Section A multiple choice questions, 15 marks. Section B short answer question styles (structured questions, problem solving, calculations, practical) and extended response questions, 85 marks.</p>	<p><b>A Level Paper 1: Advanced Inorganic and Physical Chemistry: Topics 1–5, 8, 10–15</b> 90 marks, 30% of A Level Written paper – 1 hour 45 minutes</p> <p>The paper may include multiple-choice, short open, open-response, calculations and extended writing questions.</p>
<p><b>A Level Paper 2: Synthesis and analytical techniques, Modules 1, 2, 4 &amp; 6</b> 100 marks, 37% of A Level Written paper – 2 hours 15 minutes</p> <p>Section A multiple choice questions, 15 marks. Section B includes short answer question styles (structured questions, problem solving, calculations, practical) and extended response questions, 85 marks.</p>	<p><b>A Level Paper 2: Advanced Organic and Physical Chemistry, Topics 2, 3, 5–7, 9, 16–19</b> 90 marks, 30% of A Level Written paper – 1 hour 45 minutes</p> <p>The paper may include multiple-choice, short open, open-response, calculations and extended writing questions.</p>
<p><b>A Level Paper 3: Unified chemistry</b> <b>Modules 1–6</b> 70 marks, 26% of A Level Written paper – 1 hour 30 minutes</p> <p>Question styles include short answer (structured questions, problem solving, calculations, practical) and extended response questions.</p>	<p><b>A Level Paper 3: General and Practical Principles in Chemistry: All topics &amp; practical skills</b> 120 marks, 40% of A Level Written paper – 2 hours 30 minutes</p> <p>The paper may include short open, open-response, calculations and extended writing questions.</p>



OCR Chemistry A (H432)	Pearson (Edexcel) (9CH0)
<p><b>Practical Endorsement in chemistry</b> Separately reported non-exam assessment, with candidates demonstrating competence in a range of skills and techniques, in a minimum of 12 assessed practical activities. Teacher assessment against the Common Practical Assessment Criteria.</p>	<p><b>Practical Endorsement in chemistry</b> Separately reported non-exam assessment, with candidates demonstrating competence in a range of skills and techniques, in a minimum of 12 assessed practical activities. Teacher assessment against the Common Practical Assessment Criteria.</p>





## Want to switch to OCR?

If you're an OCR-approved centre, all you need to do is download the specification and start teaching.

Your exams officer can complete an [intention to teach form](#) which enables us to provide appropriate support to them. When you're ready to enter your students, you just need to speak to your exams officer to:

1. Make estimated entries by 10 October so we can send you any early release materials, prepare the question papers and ensure we've got enough examiners.
2. Make final entries by 21 February

If you are not already an OCR-approved centre please refer your exams officer to the [centre approval section](#) of our admin guide.

## Practical Endorsement Administration (A Level only)

The requirements for the Practical Endorsement have been set by the Department for Education and Ofqual working with all awarding bodies to ensure a common approach. Just as when following the Edexcel A Level Chemistry qualification, your A Level learners studying OCR Chemistry A will need to demonstrate to you, their teacher(s), that they are competent in each of the skills and techniques defined for A Level chemists, and are consistently and routinely demonstrating competence against the Common Practical Assessment Criteria (CPAC).

You will need to:

- Keep records of carrying out practical activities as well as your assessment of competence of each of your learners in each of these skills and techniques. This can be done using our popular [OCR PAG tracker spreadsheet](#). Centres have found the tracker helpful and easy to use, and updated improved versions are available from September 2016.
- Register the name of a 'lead teacher' with JCQ. The lead teacher will then act as the contact person for arranging the monitoring visit. You will need to indicate that you are teaching the OCR Chemistry A qualification. Your exams officer will have received an [email with details](#) of how to do this. If and when a monitoring visit takes



place it will be done by an OCR-appointed monitor applying the criteria agreed across all awarding organisations.

Learners need to keep records of their practical work, which can be done in whatever format best suits you and your learners, be it a lab book, a loose leaf folder or an electronic record. Help, guidance and training are available from our [Positive about practical page](#).

## Next steps

1. Familiarise yourself with the specification, sample assessment materials and teaching resources on the [OCR Chemistry A](#) qualification page (Assessment Preparation) of the OCR website.
2. Browse the [online delivery guides](#) for teaching ideas and use the [Scheme of work builder](#) to create your personal scheme of work. We also have a [lesson planning support document](#) that links the sections of the specification to our delivery guides and further guidance, and includes suggested teaching hours.
3. [Get a login](#) for our secure extranet, [Interchange](#) – allows you to access the latest past/practice papers and use our results analysis service, [Active Results](#).
4. Sign up to receive [subject updates](#) by email.
5. Sign up to attend a [training event](#) or take part in webinars on specific topics running throughout the year or our Q&A webinar sessions every half term.
6. Attend one of our free [teacher network events](#) that are run in each English region every term. These are hosted at the end of the school day in a school or college, with teachers sharing good practice and Subject Specialists on hand to lead discussion and answer questions.
7. Follow us on Twitter [@ocr\\_science](#) and join our [free online community](#) where you can have discussions with other teachers and OCR Subject Specialists, and where new resources are developed and posted first.

