



RIVERS TRANSITION CHALLENGE 2024

SUBJECT: Chemistry

Course details: Pearson Edexcel

Qualification: A Level

Minimum entry requirements are:

- Grade 6 in Chemistry or 6/6 in Combined Science
- Grade 4 in English
- Grade 5 in Mathematics

Teachers to contact:

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A-Level chemistry is a demanding course, and it is important to approach it fully prepared. The aim of these tasks is to re-enforce and consolidate the key knowledge and understanding from GCSE's that underpins the A-Levels content, giving a firm base to build from.

Your Tasks

1. Atomic Structure

Read through the summary sheets provided.

Complete worksheets 1 and 2. Use resources such as the summary sheets, GCSE revision guides, and information on www.chemrevise.com and www.chemguide.com to help you.

Stretch and Challenge: Research perfect answers and add to your work in a different colour pen.

Time guide: approx. 1 hour

How this links:

GCSE: Topic 1: Atomic Structure and The Periodic Table

A-Level: Topic 1: Atomic Structure and The Periodic Table

2. Quantitative Chemistry

Read through the summary sheets provided.

Complete worksheets 1, 2 and 3. Use resources such as the summary sheets, GCSE revision guides, and information on www.chemrevise.com and www.chemguide.com to help you.

Stretch and Challenge: Research perfect answers and add to your work in a different colour pen.

Time guide: approx. 1 – 1.5 hours

How this links:

GCSE: Topic 3: Quantitative Chemistry

A-Level: Topic 5: Formulae, Equations and Amounts of Substance

3. Structure and Bonding

Read through the summary sheets provided.

Answer the exam-style questions. Use resources such as the summary sheets, GCSE revision guides, and information on chemrevise.com and chemguide.com to help you.

Stretch and Challenge: Research perfect answers and add to your work in a different colour pen.

Time guide: approx. 1 hour

How this links:

GCSE: Topic 2: Structure and Bonding

A-Level: Topic 2: Bonding and Structure

4. GCSE to A Level Transition Test

Complete the transition test. We will be reviewing this in class when you start in September. It is important we accurately assess your starting point on this course therefore refrain from using resources to help you.

Time guide: 2 hours.





5. Wider Reading

Wider reading, or 'reading around your subject', is important in A-Level study. Wider reading provides you with a broad base of knowledge and enhances your scientific communication skills.

Go to: <https://www.hoddereducationmagazines.com/magazines/chemistry-review/>

Scroll down the free sample articles:

New to the magazine? Explore sample content for free

 <p>Volume 32, 2022/ 2023 Creating flavours in cheese Chemistry Review</p>	 <p>Volume 29, 2019/ 2020 Is vaping really safer than smoking? Chemistry Review</p>	 <p>Volume 28, 2018/ 2019 Organic nitrogen: the secret killer in Chinese megacities Chemistry Review</p>	 <p>Volume 31, 2021/ 2022 Oil on troubled waters Chemistry Review</p>
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Choose one of the articles to read fully, and then write a short summary (approximately 300-400 words) of the science within the article.

Note: The articles may contain lots of unfamiliar chemistry, including chemical names; therefore, focus on identifying and understanding the key points within the article.

Time guide: 1 hour

Key Information

How do I hand in?

Your work for all five tasks must be handed in during our first lesson in September.

How am I graded during Year 12 and Year 13?

You are graded using A to E grades using standard grade boundaries. The tasks may be difficult because there is a big jump from GCSE to Sixth Form study.

We would expect new students to any course to be sitting at the bottom of the grading structure, but there are certain activities that you will be more familiar with and will do better with.

What if I get stuck?

Email us! Our emails are on the front sheet, we know some things are tricky and are here to help!

What if I miss a deadline?

You need to let us know in advance so we can support you. If you miss the deadline, you are risking your course offer.

Wider Reading/Activities to keep you busy during the summer...

Books:

- Edexcel A-Level Chemistry Student Book 1
- The Disappearing Spoon – Sam Kean, 2011
- Periodic Tales: The Curious Lives of Elements – Hugh Aldersley-Williams, 2012
- Why Does Asparagus Make Your Wee Smell? And 57 Other Curious Food and Drink Questions – Andy Brunning, 2016
- Chemistry: A Very Short Introduction – Peter Atkins, 2015

Magazines/Journals:

- New Scientist
- Nature Briefing
- Chemistry World

Websites:

- Periodic Videos by Martyn Poliakoff on YouTube
 - Chemguide.co.uk
 - Chemrevise.org
 - A Future in Chemistry – Royal Society of Chemistry <https://edu.rsc.org/future-in-chemistry>
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