St Mary Redcliffe and Temple School

Chemistry

Exam Board: OCR A (new for 2023)

Specification no: H432

Specification Link (scan the QR code)

This is a two-year linear A level course

Course delivery:

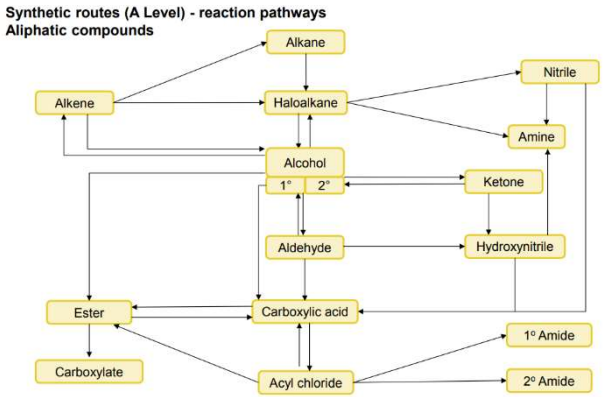
Two teachers delivering an evidenced based teaching approach with

- Well-crafted explanations with new information presented in small bitesize chunks building upon prior learning.
- Checking to make sure you understand the chemistry as we go through a lesson with regular use of mini whiteboards.
- Homework and practical activities to support the learning.
- Plenty of revision materials supplied via our Virtual Learning Environment.
- 9 contact hours with teachers each fortnight in Year 12 and 10 contact hours with teachers each fortnight in Year 13.
- One twilight session available for each fortnight for extra support.

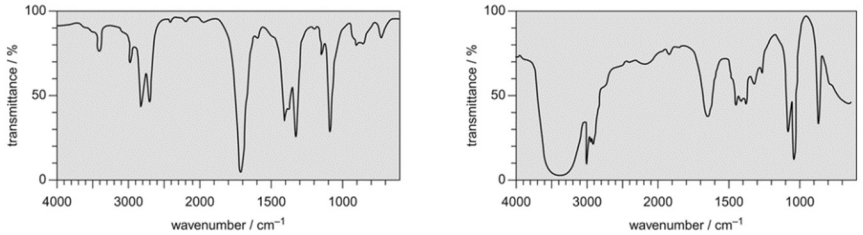
Course Content

Year	Theoretical work	Practical work
1	Foundations of Chemistry Periodic Table and Energy Core Organic chemistry	Moles determination Acid-base titration Enthalpy determination Qualitative analysis of ions Synthesis of an organic liquid Rates of reaction – Continuous monitoring method
2	Physical Chemistry and transition elements Organic Chemistry and Analysis	Synthesis of an organic solid Qualitative analysis of organic functional groups Electrochemical Cells Rates of reaction – Initial rates pH Measurement

You'll learn about these organic molecules and learn about the chemistry involved in coverting an alkane into an acyl chloride – important for designing drugs of the future.



And learn how to analyse spectra, like the images below, to see if reactions have been successful.



Entry Requirements:
A grade 65 in combined science or grade 6 in separate Chemistry with a grade 6 in Maths

Skills and personal qualities required developed by the course:

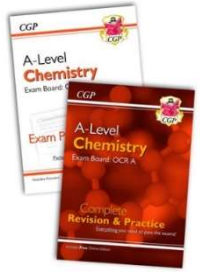
- Enquiring mind and an enthusiasm for science and learning
- Resilience as Chemistry is a challenging subject
- Comfortable with basic mathematics (if not we recommend the following resource and students opt for the Level 3 Maths Studies course

Skills and personal qualities required developed by the course:

- Practical skills and the ability to link abstract ideas to visible observations.
- Develop independent learning which will prepare them for further study.
- Communication skills through discussion and presentations.

Resources:

- Online access to Kerboodle which provides a digital version of the textbook
- Well-resourced Virtual Learning Environment
- We will offer you the chance to buy the following revision guide and workbook at a reduced cost of £15 in September.



Reading around the subject

1. Periodic Tales: The Curious Lives of the Elements by Hugh Aldersley-Williams (ISBN-10: 0141041455)
2. The Disappearing Spoon by Sam Kean (ISBN-10: 0316388270)
3. A Short History of Nearly Everything by Bill Bryson (ISBN-10: 9781784161859)
4. The Periodic Table by Primo Levi (ISBN-10: 0141185147)
5. Bad Science

Videos/TV Programs

1. The Modern Alchemist – A Royal Institution Christmas Lecture - https://www.rigb.org/christmaslectures/watch/2012/the-modern-alchemist
3. Subscribe to 'Machemguy' on YouTube who has 100s of videos for A-Level Chemistry

For further information:
Contact: Mr S Alexander, Head of Chemistry