



# Super Curriculum – Chemistry

## KS3



### Reading:

- Things we don't know-chemistry- explains the questions that scientists are trying to answer <https://www.thingswedontknow.com/chemistry/>



### Watching:

- Royal Society You Tube Channel – watch engaging videos and clips
- Series of online lectures from Cambridge University department at Wothers.com



### Listening:

- Chemistry World podcasts <https://www.chemistryworld.com/podcasts>
- RSC Periodic Table Podcast
- <https://www.rsc.org/periodic-table/podcast/20/calcium>



### Doing:

- After listening to a video or visiting a website, write a summary about this
- Complete these Chemistry games/ challenges/experiments for young students <https://www.sciencekids.co.nz/chemistry.html>



### Academic Enrichment:

- Year 7 and 8 Chemistry Club – The BGS Discovery Award



# Super Curriculum – Chemistry

## KS4



### Reading:

- The disappearing spoon: and other true tales of madness, love and the history of the world from the periodic table of the elements by Sam Kean
- Organic Chemistry by Jonathan Clayden
- Oxygen, the molecule that made the world by Nick Lane
- Chemistry for Dummies by John T. Moore
- The Royal Society of Chemistry: A future in Education –there is a wealth of information on career routes within the chemical sciences, with videos and case studies of real people who are working in a wide range of roles.



### Watching:

- Royal Society You Tube Channel – watch engaging videos and clips
- BBC Chemistry documentaries <https://www.bbc.co.uk/programmes/b00qbg7f>
- Series of online lectures from Cambridge University department at Wothers.com



### Listening:

- Chemistry World podcasts <https://www.chemistryworld.com/podcasts>
- RSC Periodic Table Podcast: <https://www.rsc.org/periodic-table/podcast/20/calcium>
- Ted Talks – Chemistry <https://www.ted.com/talks?topics%5B%5D=chemist>



### Doing:

- After listening to a podcast or video, write a summary about this.
- After reading the book, write a review using the following prompts: Something I agreed with in this book was...Something I disagreed with in this book was...Something I learnt from this book that I didn't know about this subject before was...



- Free Chemistry MOOCs (online course) <https://www.my-mooc.com/en/categorie/chemistry>. This can be based on medicinal chemistry - the molecular basis of drug chemistry, introduction to physical chemistry, and the principles of biochemistry to name a few. Write a report of what you have learnt on this course.



#### **Academic Enrichment:**

- Year 9 CREST Award – Bronze
- Year 10 and 11 CREST Award – Silver



# Super Curriculum – Chemistry

## KS5



### Reading:

- The disappearing spoon: and other true tales of madness, love and the history of the world from the periodic table of the elements by Sam Kean
- Organic Chemistry by Jonathan Clayden
- Oxygen, the molecule that made the world by Nick Lane
- General Chemistry by Linus Pauling
- Chemistry for Dummies by John T. Moore
- The Elements of Murder: A History of Poison by John Emsley
- Physical Chemistry, P W Atkins, Oxford University Press (8th edn.) 2006, [7th edn. 2001]
- Inorganic Chemistry, Shriver and Atkins, Oxford University Press (4th edn) 2006, (previous edn., 1999]
- Chemistry of the Elements, Greenwood & Earnshaw, Pergamon (2nd edn.), 1997 [1st edn. 1985]
- Foundations of Organic Chemistry, Hornby & Peach, Oxford Chemistry Primer, OUP, 1996
- A Guide to Mechanism in Organic Chemistry, Sykes, Pearson (6th edn.), 1986
- The Royal Society of Chemistry: A future in Education –there is a wealth of information on career routes within the chemical sciences, with videos and case studies of real people who are working in a wide range of roles.



### Watching:

- Royal Society You Tube Channel – watch engaging videos and clips
- Series of online lectures from Cambridge University department at Wothers.com
- BBC Chemistry documentaries <https://www.bbc.co.uk/programmes/b00qbq7f>



### Listening:

- Chemistry World podcasts <https://www.chemistryworld.com/podcasts>
- RSC Periodic Table Podcast <https://www.rsc.org/periodic-table/podcast/20/calcium>
- Ted Talks – Chemistry <https://www.ted.com/talks?topics%5B%5D=chemist>

### Doing:

- After reading the book, write a review using the following prompts: Something I agreed with in this book was...Something I disagreed with in this book was...Something I learnt from this book that I didn't know about this subject before was...
- After listening to a podcast or video, write a summary about this
- Free Chemistry MOOCS (online course) <https://www.my-mooc.com/en/categorie/chemistry>. This can be based on medicinal chemistry - the molecular basis of drug chemistry, introduction to physical chemistry, and the principals of biochemistry to name a few. Write a report of what you have learnt on this course.
- Use the Cambridge University website: <https://www.myheplus.com/post-16/subjects/chemistry> and choose topics to study. There are follow up tasks / questions to answer.



### Academic Enrichment:

- 17th November – virtual seminar – the elements of chemistry (6th form seminar). Students to write a review of the seminar
- 1st December – virtual seminar – Fireworks (6th form seminar) - students to write a review of the seminar: Something I agreed with in this seminar was...Something I disagreed with in this seminar was...Something I learnt from this seminar that I didn't know about this subject before was...
- Year 12 CREST Award – Silver



### Competitions:

- January 2021 – Chemistry Olympiad round 1 Year 13
- March 2021 – Chemistry Olympiad round 2 year 13
- June 2021 - Cambridge Chemistry Challenge – year 12