# CHEMISTRY A LEVEL SUPER-CURRICULAR: AIMING FOR THE TOP AND ASPIRING HIGH

#### **Reading Tasks**

## The Science of Everyday Life by Marty Jopson

Have you ever wondered why ice floats and water is such a freaky liquid? Or why chillies and mustard are both hot but in different ways? This fascinating scientific tour of household objects has the answer to all of these, and many more, baffling questions about the chemistry and physics of the everyday stuff we use every day.

#### The Disappearing Spoon by Sam Kean

The fascinating tales in this book follow carbon, neon, silicon, gold and every single element on the periodic table as they play out their parts in human history, finance, mythology, conflict, the arts, medicine and the lives of the (frequently) mad scientists who discovered them.

#### Phosphate rocks by Fiona Erskine

This book offers the reader two quite different books for the price of one, being a pacy murder mystery which also offers a fascinating insight into the workings of an industrial plant and the chemistry behind the processes involved.

#### Principles of American Nuclear chemistry by Thomas McMahon

What was life like for the scientists working at Los Alamos? This novel imagines this life through the wide eyes of the thirteen-year-old son of an MIT physicist who worked on the project. Filled with the sensuous excitement of scientific discovery and the outrageous behaviour of people pushed beyond their limits, this book is a coming-of-age story that explores the mysterious connections between love and work, inspiration and history.

#### Lessons in chemistry by Bonnie Garmus

Smart, funny, joyous and powerful, this book featuring an unconventional female scientist with a quiet game-plan to change the world is undoubtedly one of 2022's most gloriously enjoyable debut novels.

# **Writing Tasks**

#### **Oxford Science Writing Competition**

Enter this annual science competition from Oxford University. Click <a href="here-formation">here-for more information</a>.

#### **Article**

Write an <u>article</u> on the subject of your choice, suitable for publication in a review journal (e.g. Chemistry Review).

# **Listening Tasks**

### **Imaginary World**

Imaginary worlds podcast

Imaginary Worlds sounds like what would happen if NPR went to ComicCon and decided that's all they ever wanted to cover. Host Eric Molinsky uses his skills to create thoughtful, sound-rich episodes about science fiction, fantasy, and other genres of speculative fiction.

#### **Point of Discovery**

Point of discovery podcast

Behind every scientific discovery is a scientist (or 12) and a story. "Point of Discovery" takes you on a journey beyond WHAT we know to HOW we know it. Along the way, listeners will meet the sometimes quirky, always passionate people.

#### **Periodic Table**

Listen to a podcasts from different elements in the periodic table

### **Watching Tasks**

#### **Fantastic Fungi**

Fantastic Fungi - available via Netflix

Delve into the magical world of fungi, from mushrooms that clear oil spills to underground fungal networks that help trees communicate.

# My Octopus Teacher

My octopus teacher available via Netflix.

An incredible true story about a man and his quest to befriend and octopus. A filmmaker forges an unusual friendship with an octopus living in a South African kelp forest, learning as the animal shares the mysteries of her world.

#### **Dark Waters**

Dark waters -

A film about a corporate defence attorney takes on an environmental lawsuit against a chemical company that exposes a lengthy history of pollution.

# **Dopesick**

<u>Dopesick</u> - TV series on how one company triggered the worst drug epidemic in American history.

#### **Erin Brockovich**

Erin Brockovich film, available via Netflix.

A true story, Erin was never trained, or indeed meant to work in a lawyers office. she discovers some legal files that don't add up... On investigation she discovers an injustice, and decides, against the odds, to take on the bad guys on behalf of a poor and very ill community in a small town.

# Research Tasks Summer School

Imperial college summer schools and work experience opportunities - keep a lookout on their website.

# **Trips & Visits**

# Sign Up

Sign up for the Royal Institution Christmas lectures in London

# **Creative Tasks**

Silver Egg Make a 'silver' egg

# **Student Led Tasks**

#### Join

Love chemistry? Become a student member of the Royal society for Chemistry.

# Join

Interested in becoming a medic? take a look at this website for info on volunteering and exams.