

## AUTUMN 1

### Quantitative Chemistry

Masses in reactions, conservation of mass, empirical formulae, moles in solids, solutions and gases

Prior Learning  
Conservation of mass (Y8), mass numbers on periodic table (Y9), chemical formulae (Y8&9).

## AUTUMN 2

### Quantitative Chemistry

Atom economy and percentage yield

### Using Resources

Treating potable and waste water, phytomining, bioleaching, life cycle assessment, corrosion, alloys, Haber Process

Prior Learning  
Metal extraction (Y8&9), recycling metals (Y8&9), separating techniques (Y8).

## SPRING 1

Revision – Paper 1 (topics 1-5) AO1 – core content and fundamentals. Past paper practice

Prior Learning  
Pupils will have been exposed to content in year 9, 10 and year 11.

## SPRING 2

Revision – Paper 2 (topics 6-10) AO1 – core content and fundamentals. Past paper practice

Prior Learning  
Pupils will have been exposed to content in year 9, 10 and year 11.

## SUMMER 1

Revision – Paper 1&2 AO2 – required practical's recap and past paper practice

Prior Learning  
Pupils will have been exposed to content in year 9, 10 and year 11.

### CAREERS LINKS

Pharmacology, chemical manufacturing, environmental chemist, medicine, veterinary science, materials science, forensic science, biomedical science, waste disposal, surface treatment development, drug design, vaccine development, specialised research, and development chemist.

### CHARACTER LINKS

Motivation, resilience, and teamwork (performance virtues). Confidence and determination  
Listening, critical thinking and problem solving (intellectual virtues).  
Evaluation of ideas and process and seeking improvement through better knowledge and techniques (intellectual virtues).  
Consideration and construction of moral and ethical arguments in Science (moral virtues).

### KEY ASSESSMENT DATES

End of topic tests are completed in addition to exam assessments in Oct, Dec and April according to the KS4 assessment calendar.