CHEMISTRY

YEAR 13

AUTUMN 1

Module 6.3 Analysis and chromatography. NMR, Gas and TLC Chromatography, organic functional group analysis.	**Module 6.2** Nitrogen compounds, polymers and synthesis, amines, amino acids, amides and polyamides/polyesters.	Prior Learning Electronic configuration; moles calculations; atomic structure.

AUTUMN 2

Module 5.2 Redox and electrode potentials. Redox reactions, feasibility of reactions.	**Modules 5.1.1 & 5.1.2** Rates and lattice enthalpy. Orders of reactions; Arrhenius, rate calculations.	**Module 5.3** Transition metal chemistry. Titration calculations, ligands, complex ions.	Prior Learning Electronic configuration, atomic structure, ionic and covalent bonding; physical properties of metallic, ionic and covalent structures.

SPRING 1

Module 5.1.3 Acids, bases and buffers. Bronsted Lowry Acid/Bases; pH, buffer solutions.	Prior Learning Rates of reaction, equilibrium, bond energies; Organic nomenclature, organic structures; reactions of organic molecules.

SPRING 2

Revision of all the topics covered over the last two years	Prior Learning Organic nomenclature, organic structures; reactions of organic molecules; anion and cation analytical tests.

SUMMER 1

Revision of all the topics covered over the last two years	Prior Learning Reactions of organic molecules; anion and cation analytical tests.

CAREERS LINKS

Pharmaceutical chemist, analytical chemist, chemical engineer, forensic scientist. Teacher, research scientist, manufacturing. Biotechnologist, medicine, biochemistry.

CHARACTER LINKS

-Resilience, pupils are encouraged to work on their independence and work out problems, learning from mistakes (performance virtues).
-Empathy and compassion- pupils will come across many difficult situations such as ethical issues related to scientific experimentation (moral virtues).

KEY ASSESSMENT DATES

Pupils complete assessments in line with the KS5 assessment calendar. There are also extra end of topic assessments. During year 13 multiple mock assessments in year 13 are sat with the standard year 13 mock fortnight.