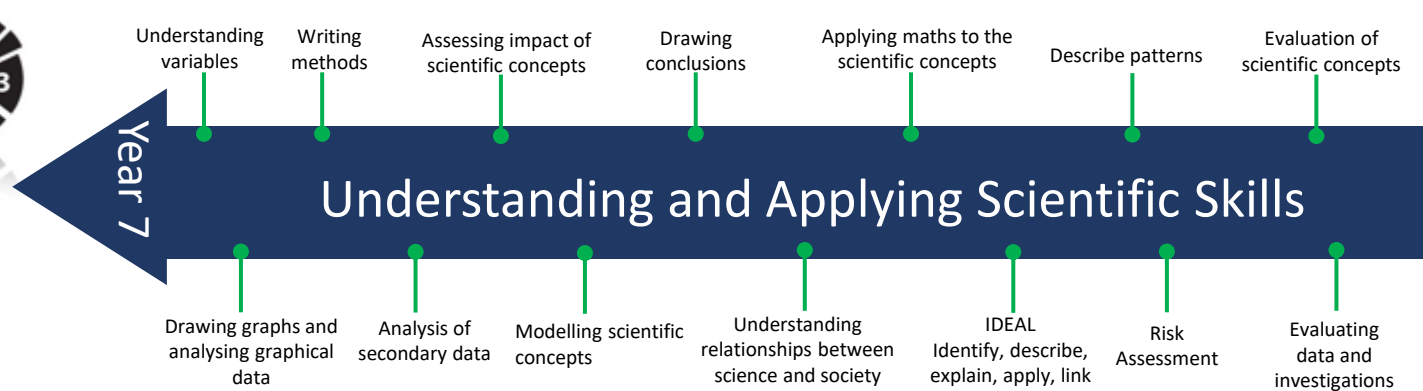




**End of
YEAR
13**

Further synthesis & Analysis

Chromatography
¹³C NMR Spectroscopy
Organic Synthesis
Gas Chromatography
¹H NMR Spectroscopy
NMR Spectroscopy

Amino acids, Proteins and DNA

Enzymes
Proteins
Amino acids
Cisplatin
DNA

Polymers

Disposing of Polymers
Condensation polymerization
Monomers & repeating units

Aromatic Compounds & Amines

Reaction of Amines

Period 3 Elements & Transition metals

Calculating the pH of a buffer
Buffer action
Period 3 elements
Transition Metals
Isomerism in Complex ions
Ligand Substitution reactions
Transition Metal Titrations
Metal-Aqua ions
Period 3 oxides
Complex ions
Formation of Colored Ions
Variable Oxidation States
Transition Metal Catalysts

Isomerism and Carbonyl Compounds

Optical Isomerism
Hydroxynitrates
Reactions & uses of Esters
Aldehydes & Ketones
Carboxylic acids & Esters
Acyl Chlorides

Reactions of aromatics

Acids, Bases & pH

Titration calculations
pH Curves
Titrations
The acid dissociation Constant
pH Calculations
Acids, bases and K_w

Electrode Potentials & Cells

Electrochemical cells
Standard Electrode Potentials
Changing Gas Equilibria
Gas Equilibria
The Rate determining step
Clock Reaction
Rate equations
Monitoring reactions

Rate equations and K_p

The Arrhenius Equation
Rate-Concentration reactions
The Initial Rates Method
Reaction rates and graphs
Enthalpies of solution
Enthalpy changes

Homologous series

Electrochemical series
Electrode Potentials
Alkenes
Addition polymers
Ethanol production
Alkanes as Fuels
Halogenoalkanes
Elimination reactions
Reactions of Alkenes
Alcohols
Oxidizing alcohols

Organic analysis

Tests for functional groups
Infrared spectroscopy
Mass Spectrometry
Born-Haber Cycles
Entropy

Thermodynamics

Introduction to organic chemistry

Isomers
Mechanisms
Nomenclature
Functional groups
Formulas
Ion tests

Inorganic chemistry

Group 7 Halogens
Group 2 compounds
Periodicity
Factors affecting equilibrium
The equilibrium constant
Industrial processes
Reversible reactions

Equilibria

Hess's Law
Measuring reaction rates
Catalysts
Reaction rates
Measuring enthalpy change
Bond enthalpies
Enthalpy

Energetics & Kinetics

Measuring enthalpy change
Bond enthalpies
Enthalpy

**YEAR
12**

Atomic Structure

Mass Spectroscopy
Electronic configuration
Successive ionization energy
Fundamental particles
Orbitals & subshells
Ionization energy

Amount of substance

The Mole
Chemical Equations
Titrations
Chemical Yield
Redox reactions
Gases and the mole
Equations and calculations
Formulas
Atom Economy
Redox equations

Bonding

Ionic bonding
Charge clouds
Polarization
Properties of metals
Covalent bonding
Shapes of Molecules
Intermolecular forces
Metallic bonding

