CHEMISTRY LEARNING JOURNEY: *Develop an understanding of natural phenomena and how the world works through scientific enquiry and analysis.*

YEAR 13

CHROMATOGRAPHY & SPECTROSCOPY
ORGANIC SYNTHESIS
NITROGEN COMPOUNDS
CARBOXYLIC ACIDS & ESTERS
CARBONYL COMPOUNDS
AROMATIC COMPOUNDS
TRANSITION ELEMENTS
REDOX & ELECTRODE POTENTIALS
THERMODYNAMICS
pH AND BUFFERS
REACTION KINETICS

OCR Oxford Cambridge and RSA

ENTHALPY CHANGES, REACTION RATES & EQUILIBRIUM
HYDROCARBONS
ALCOHOLS AND HALOALKANES
ANALYTICAL TECHNIQUES
PERIODICITY, TRENDS & QUALITATIVE ANALYSIS
ELECTRONS, BONDING & STRUCTURE
ACID-BASE & REDOX REACTIONS
AMOUNT OF SUBSTANCE

YEAR 12

USING RESOURCES
CHEMISTRY OF THE ATMOSPHERE
ORGANIC CHEMISTRY
QUANTITATIVE CHEMISTRY

Spring Mock Exams
Autumn Mock Exams

How can chemistry improve sustainability of Earth's precious resources?
How did the atmosphere develop and what impact are human activities having on the atmosphere?
Why are compounds of carbon so diverse and how can we use these compounds to make useful materials?
How do chemists calculate the formulae of compounds and determine the equations for reactions?

YEAR 11

STRUCTURE & BONDING
CHEMICAL CHANGES
CHEMICAL ANALYSIS
ENERGY CHANGES
RATE & EXTENT OF CHEMICAL CHANGE

How do atoms arrange themselves into compounds and how does chemical bonding affect the properties of materials?
How can we predict the products of reactions?
How can chemical reactions be used to extract important resources from the Earth?
What methods do forensic scientists and drug control scientists use to analyse samples?
How does the breaking and making of bonds affect the amount of thermal energy transferred in reactions?
How can the speed of a chemical reaction be manipulated?
How can reversible reactions be optimised to have a maximum yield of desired product?

AQA

YEAR 10

ION IDENTIFICATION
PERIODIC TABLE
ATOMIC STRUCTURE
SEPARATION TECHNIQUES

What qualitative tests do we have for common ions?
How are the elements
What are atoms made from? How do we know?
How can we separate mixtures?

YEAR 9

How do we make things pure?
How can we use it?
What are they like?
Your own scientific research

YEAR 8

SEPARATION TECHNIQUES
PERIODIC TABLE
ACIDS & BASES
SCIENCE FAIR

CHEMICAL REACTIONS of different types
ELEMENTS & COMPOUNDS
PARTICLES - What is everything made of?
Introduction to becoming a good scientist

YEAR 7

SCIENCE TRIP
Fuels Investigation
What are elements, compounds & mixtures?
Changes of state and Diffusion
What do you already know? *Safety. Apparatus.*

WHAT DO WE RETURN TO ON OUR LEARNING JOURNEY?

Concepts/Ideas	Skills
The Scientific Method	Experimental design and use of apparatus & techniques
Atomic structure & Structure and bonding	Presenting observations and data in an appropriate format
Chemical Measurements	Processing, analysing and interpreting experimental results
Chemical changes & Energy changes	Evaluating results and drawing conclusions