Curriculum Overview: Triple Chemistry
Year group 11

- **What we are learning**: The topic or focus for the half term.
- **Key knowledge & skills**: What students should understand and be able to do.
- **How we assess learning**: knowledge checks, practical tasks, written responses and formal assessments.
- **Key words to know**: Vocabulary students will learn and use.

What your child will learn each half term
This overview shows the key topics, skills, and knowledge your child will be learning in Triple Chemistry in Y11. It helps families understand what's being taught, how it builds on previous learning, and how you can support your child at home.

- **How science works skills**
- Use and rearrange equations confidently in Chemistry and Physics topics.
- Link graphs and data to scientific models, drawing conclusions from evidence.
- Develop skills in planning, carrying out, and analysing required practicals.
- Apply practical skills: selecting equipment, measuring accurately, and identifying variables to control in an investigation.
- Communicate scientific ideas clearly in extended written answers, using correct terminology.

Half term	What we are learning	Key knowledge and skills	How we will assess learning in this unit	Homework	Key vocabulary for this unit
HT 1 and 2	Crude oil & fuels (C7a) Organic reactions (C7b) Polymers (C7c) C8 Chemical analysis	Crude oil & fuels (C7a): fractional distillation of crude oil, properties and uses of hydrocarbons, complete and incomplete combustion, environmental impacts (pollutants, greenhouse gases). Organic reactions (C7b): reactions of alkanes, alkenes, alcohols, and carboxylic acids; addition and combustion reactions; testing for alkenes. Polymers (C7c): addition and condensation polymerisation, examples of natural and synthetic polymers, linking properties to structure. C8 Chemical Analysis: Purity, formulation, identification of ions and gases, separation techniques (filtration, chromatography, distillation). Perform simple tests, interpret chromatograms, identify substances, evaluate purity.	Continuous formative assessment in lessons. End of topic tests. Question level analysis and feedback. Required practical assessment booklets.	Homework is set on a Monday and is due the following Monday. Homework will be set online using a website 'Educake' which pupils will receive their login details for.	**Crude oil, hydrocarbon, alkane, alkene, homologous series, combustion, fractional distillation, pollutant, greenhouse gas, addition reaction, alcohol, carboxylic acid, polymer, monomer, addition polymerisation, condensation polymerisation, biodegradable, synthetic, natural polymer. Purity, Formulation, Filtration, Chromatography, Distillation, Ion test,**

					Identification, Gas test, Separation.
HT 3 and 4	C9 Our Atmosphere C10a The Earths resources C10b Using our resources	• C9 Our Atmosphere: Composition of the atmosphere, greenhouse gases, climate change, carbon cycle, human impact. Explain atmospheric processes, analyse data, evaluate environmental effects. • C10a The Earth's Resources: Renewable and non-renewable resources, water treatment, life-cycle assessment, sustainable use. Evaluate resource management, interpret data, explain sustainability. • C10b Using Our Resources: Methods of extracting and processing resources, environmental impacts, alloys, ceramics, polymers, composites, potable water production. Explain production processes, evaluate environmental and practical considerations, compare materials.			Atmosphere, Greenhouse gas, Carbon cycle, Climate change, Human impact, Renewable, Non-renewable, Life-cycle assessment, Sustainability, Water treatment, Extraction, Processing, Alloy, Ceramic, Polymer, Composite, Potable water, Environmental impact.