

Chemistry

Subject Leader: Miss J Rigby jrigby@taptonschool.co.uk

Curriculum Intent: To ensure students maintain and develop their curiosity and excitement about the natural world. To develop all to be `scientists` by embedding a culture of confidence and mastery underpinned by scientific enquiry. To develop their ability to see connections between science subject areas and become aware of some of the big ideas for understanding the world. To provide a high challenge, high quality Science education for all our learners.

Core Knowledge	Procedural Knowledge
<p>Topics: Y10 Bonding and Properties of materials. Types of reaction. Energy and Electrolysis. Metal extraction. Predicting and identifying products.</p> <p>Y11 Monitoring and controlling reactions. Equilibria including industrial equilibria. Organic chemistry including oil. Earth systems.</p>	<p>Students will: Use scientific theories and explanations to develop hypotheses. Evaluate methods and suggest possible improvements. Apply a knowledge of sampling techniques to ensure any samples collected are representative. Apply a knowledge of a range of techniques, apparatus, and materials to select those appropriate for both field work and for experiments. Translate data from one form to another. Represent distributions of results and make estimates of uncertainty. Carry out and represent mathematical and statistical analysis. Explain everyday technological applications of science. Use a variety of concepts and models to develop scientific explanations. Appreciate the power of limitations of science and consider ethical issues</p>

Homework:
One homework will be set for every four hours of learning and take approximately 45 minutes to complete. There will be a variety of homework tasks which could include revision for assessments, recap, and review of core learning, Kerboodle quizzes, past paper questions, A4P tasks etc.

Assessment:
In Y10 there will be five End of Unit tests.
There are also two TSAT exams. The October exam will cover Y7, Y8 and Y9 Chemistry and the exam in April will include Y10 Chemistry.
In Y11 there will be five End of Unit tests.
There are also two TSAT exams. The October exam will cover C1, C2 and C3 and the exam in February will include C4, C5 and C6.1.

Links to Personal Development:
Enabling students to recognise risks to their own wellbeing.
Social development: Practise using a range of social skills in different situations.
Confidence, Resilience and Knowledge: Mentally healthy, physically healthy, active lifestyle, healthy relationships.

How is my knowledge developed further at Key Stage Five?
Knowledge and skills gained through the study of GCSE Chemistry or GCSE Combined Science Chemistry are an excellent starting point for further study at KS5. The GCSE Chemistry course builds on the core concepts learnt at KS3, adding the level of detail and complexity needed to access KS5. A Level Chemistry explores the structure of atoms, trends and patterns in reactivity and organic reaction mechanisms. Practical skills introduced at GCSE are further developed at A-Level resulting in high levels of practical competence.