YEAR 11 SCIENCE: CHEMISTRY

Half Term 2

MAGHULL HIGH SCHOOL – CURRICULUM MAP

Unit: **Chemical Analysis** **LESSONS**	1. Pure substances and formulations 2. Chromatography (including required practical)	3. Testing for gases 4. **Chemical tests (required practical)** 5. **Flame tests** 6. **Metal hydroxides**	7. **Carbonates, Halides and Sulphates** 8. **Instrumental methods** 9. **Flame emission spectroscopy**
Knowledge & Skills Development	• Understanding of the difference between pure substances and formulations and how boiling and melting points can be used to distinguish pure from impure substances • To be able to carry out chromatography and calculate Rf values • Knowledge of the different tests for oxygen and hydrogen • Knowledge of the different tests for carbon dioxide and chlorine gas • Identify specific ions from the results of flame tests • Use sodium hydroxide solution to identify cations	• Write balanced equations for the reactions to produce the insoluble hydroxides • Describe the tests to identify carbonates, halides and sulphates • State advantages of instrumental methods compared with chemical tests • Interpret an instrumental result given appropriate data in chart or tabular form, when accompanied by a reference set in the same form	
Assessment / Feedback Opportunities	**Formative Assessment** Teacher questioning Quizzes Exam style questions	**Summative assessment** End of topic assessment Exam questions in future end of topic assessments to assess recall	
Key Vocabulary	Independent Variable, Dependent Variable, Control Variables, Method, Conclusion, Precaution, Evaluation, Reliable, Precision, Valid, Anomaly, Describe, Explain, Compare, Analyse, Calculate, Suggest Pure, formulation, chromatography, retention, compound, component, separate, interpret, ion, cation, anion, precipitate, dilute, spectroscopy		
Literacy/Reading Opportunities	Subject specific vocabulary introduced before reading of related texts Word etymology from Latin and Greek roots Reading of simple and complex sentences, paragraphs, articles Scientific writing including structuring methods, comparisons and evaluations		
Cross Curricular Themes	Numeracy/Maths – averages (means), reading scales, graph plotting, lines of best fit, using and rearranging equations, using scientific calculators		

Personal Development (Including British Values, RSE, Citizenship)	None
Career Opportunities	Science technical, chemical analyst for industry and the government