



MAGHULL HIGH SCHOOL – CURRICULUM MAP

Unit: Organic	1. Identification of functional groups	2. Mass spectrometry	3. Infra-red spectroscopy
LESSONS			
Knowledge & Skills Development	- Know the reactions of functional groups: alcohol, aldehyde, alkene and carboxylic acid Required practical 6 Tests for alcohol, aldehyde, alkene and carboxylic acid. - Know mass spectrometry can be used to determine the molecular formula of a compound. - Use precise atomic masses and the precise molecular mass to determine the molecular formula of a compound. - Know bonds in a molecule absorb infrared radiation at characteristic wavenumbers.	- Know 'Fingerprinting' allows identification of a molecule by comparison of spectra. - Use infrared spectra and the Chemistry Data Sheet or Booklet to identify particular bonds, and therefore functional groups, and also to identify impurities. - Know the link between absorption of infrared radiation by bonds in CO₂, methane and water vapour and global warming. - Use data in the Chemistry Data Sheet or Booklet to suggest possible structures for molecules.	
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	Aldehyde, carboxylic acid, alcohol, functional group, mass spectrometry, fingerprinting, spectra, infrared radiation, wavenumbers, Independent Variable, Dependent Variable, Control Variables, Method, Conclusion, Precaution, Evaluation, Reliable, Precision, Valid, Anomaly, Describe, Explain, Compare, Analyse, Calculate, Suggest, Absolute, Uncertainty, Error		
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, significant figures		

Personal Development (Including British Values, RSE, Citizenship)	None
Career Opportunities	Organic mass spectrometry, materials tester, forensic scientist, analytic chemist