



MAGHULL HIGH SCHOOL – CURRICULUM MAP

Unit: Particles and Solubility	<ol style="list-style-type: none"> 1. Forensic Scientist Career 2. Solids, Liquids and Gases 3. Changes of State 4. Pure Substance and Mixtures 5. Diffusion 	<ol style="list-style-type: none"> 6. Dissolving Substance 7. Different Solvents 8. Temperature and Solubility 9. Filtration 	<ol style="list-style-type: none"> 10. Evaporation and Distillation 11. Separating Rock Salt 12. Ocean Salt (Reading) 13. Chromatography
LESSON TOPIC QUESTION(S)			
Knowledge & Skills Development	<ul style="list-style-type: none"> - Draw the particle diagrams for a solid, liquid and gas - Describe how the particles are arranged in a solid, liquid and gas - Explain the behaviour of particles in a solid, liquid and gas - Evaluate the effectiveness of the particle model - identify the different state changes - investigate the temperature change during a change of state - describe and explain state changes using ideas about the particle model - to define a pure substance and a mixture - to identify a pure substance or mixture from particle diagrams - to describe how to identify pure substances or mixtures from melting and boiling points - to define diffusion - to draw particle models to describe diffusion - to identify examples of diffusion in everyday life - to define the solute, solvent and solution - to draw particle diagrams of the pure solute, solvent and solution 		<ul style="list-style-type: none"> - to describe what solubility is - give examples of some different solvents and where they are used - to investigate how soluble solutes are in different solvents -to investigate how temperature affects solubility -to explain, using particle theory, why temperature affects solubility - to identify the apparatus needed for filtration - to carry out filtration of a mixture - to describe what type of mixture filtration will separate - describe when evaporation and distillation are used to separate mixtures - carry out distillation of a solution - Use 2 methods of separation in order to produce pure crystals of salt from rock salt - Identify what chromatography separates - Carry out chromatography to identify the colours in ink - Describe how chromatography is used in the food or forensics industry
Assessment / Feedback Opportunities	Formative Assessment Teacher questioning Quizzes Mid topic assessment		Summative assessment End of topic assessment
Key Vocabulary	Independent Variable, Dependent Variable, Control Variables, Method, Conclusion, Precaution, Evaluation, Reliable, Precision, Valid, Anomaly Particle, Solid, Liquid, Gas, Evaporation, Condensation, Sublimation, Solidify, Sublimation, Pure, Mixture, Boiling Point, Diffusion, Rate, Dissolve, Solute, Solvent, Solution, Solubility, Soluble, Separate, Filter, Distillation, Chromatography		
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	Dedicated careers lesson at start of topic Materials Scientist, Physical Properties Chemist, Analytical Chemist, Health and Safety Specialist, Chemical Flavourist,, Hospital Pharmacist, Public Pharmacist, Experimental Chemist, Chemical Patent Lawyer, Chemical Engineer, Toxicologist, Distillery Blender