



MAGHULL HIGH SCHOOL – CURRICULUM MAP

Unit: Respiration and Photosynthesis	1. Careers 2. Measuring Lung Volume 3. The Lungs 4. Breathing in and Out 5. Lung Disease (Reading) 6. Asthma	7. Smoking 8. Aerobic Respiration 9. Anaerobic Respiration 10. Exercise 11. Photosynthesis	12. Adaptations of a Leaf 13. Stomata 14. Testing a Leaf for Starch 15. Plants (Reading) 16. Minerals and Fertiliser
LESSON TOPIC QUESTION(S)			
Knowledge & Skills Development	<ul style="list-style-type: none"> Equation for aerobic respiration. When do we aerobically respire. Equation for anaerobic respiration including fermentation and the uses. Structure of lungs Difference between breathing and respiration Mechanics of breathing Effect of exercise on the circulatory and respiratory system. Photosynthesis equation. Practical skills; measuring volume, timing, safety precautions. Label the structure of a leaf. 	<ul style="list-style-type: none"> Ways a leaf is adapted for photosynthesis. Describe and explain what stomata are. Practical skills; measuring volume and mass, safely using a Bunsen burner. Practical skills; using a microscope, preparing a microscope slide. Maths skills; calculating averages and calculating number of stomata per square mm. Causes, symptoms and treatment of asthma. Impact of smoking short term and long term on health. Identify what minerals plants need to grow and why a fertiliser may be used. 	
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 Respiration, Aerobic, Anaerobic, Carbon Dioxide, Glucose, Alveoli, Bronchus, Bronchioles, Asthma, Nutrients, Minerals, Fertiliser, Inhale, Exhale, Stomata, Palisade		
Literacy/Reading Opportunities	Two dedicated reading lessons 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 PE – Aerobic Respiration and Anaerobic Respiration		

Personal Development (Including British Values, RSE, Citizenship)	Health and Wellbeing – Fitness and Exercise, Smoking, Asthma
Career Opportunities	Dedicated careers lesson at start of topic Nursing, Doctor, Midwifery, Medicine, Nutritionist, Support Worker