

MAGHULL HIGH SCHOOL – CURRICULUM MAP

Unit: Energy Transfers LESSONS	1. Photosynthesis 2. Respiration	3. Energy and ecosystems 4. Nutrient Cycles	
Knowledge & Skills Development	<ul style="list-style-type: none"> Recall the light dependent reaction in detail Identify environmental factors that limit the rate of photosynthesis Evaluate data relating to common agricultural practices Recall the stages of glycolysis Recall the equations for aerobic and anaerobic respiration Define gross primary production and net primary production 	<ul style="list-style-type: none"> Calculate the net production of consumers Simplify food webs to reduce energy losses to non-human food chains Describe and explain the role of microorganisms in recycling phosphorus and nitrogen Describe the use of fertilisers and the negative impacts they can have on the environment such as leaching and eutrophication 	
Assessment / Feedback Opportunities	Formative Assessment Teacher questioning Quizzes Exam style questions Essays	Summative assessment 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, Absolute, Uncertainty, Error Photosynthesis, glucose, photolysis, Chloroplast, thylakoid, stroma, chloroplast, anaerobic, aerobic, glycolysis, oxidation, biomass, trophic level, microorganism, decomposers, eutrophication		
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 Synoptic essay writing		
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	Wildlife conservationists, Farmer, botanist, agriculturist, herbalist