



	Lessons Sequence					
TOPIC (S) BIOENERGETICS	1. Photosynthesis reaction 2. Rate of photosynthesis (req prac)		3. Uses of glucose from photosynthesis 4. Aerobic & anaerobic respiration		5. Body response to exercise 6. Metabolism	
Knowledge & Skills development	<ul style="list-style-type: none"> Recall the photosynthesis equation & classification as exothermic and endothermic reaction. Explain the factors that can alter the rate of reaction of photosynthesis. Practical skills development: measuring volume, calculating averages, variables. 			<ul style="list-style-type: none"> Detail how a plant uses the glucose made during photosynthesis Outline the equations for aerobic and anaerobic respiration, classifying as exothermic or endothermic. Describe and explain the responses of the body to exercise. Link respiration to metabolism. 		
Assessment / Feedback Opportunities	Targeted questioning throughout topic	Teacher assessment of practical skills during investigation - verbal	Knowledge recall quick quizzes	Deep marking of written task in students books	Topic Test	Targeted exam questions – teacher or self-assessed
Cultural Capital	<ul style="list-style-type: none"> Growing seeds 					
SMSC / Promoting British Values (Democracy, Liberty, Rule of Law, Tolerance & Respect)	<ul style="list-style-type: none"> Performance Enhancing Drugs Working in groups during practicals or research tasks 					
Recommended Reading	<ul style="list-style-type: none"> Following a practical method. Recommended Read: Photosynthesis (Torrey Maloof) Recommended Read: My Body Systems My respiratory System (Martha Rustad) 					
Key Vocabulary	Independent Variable, Dependent Variable, Control Variables, Method, Conclusion, Precaution, Evaluation, Reliable, Precision, Valid, Anomaly, Describe, Explain, Compare, Analyse, Calculate, Suggest Light intensity, Chlorophyll, Glucose, Starch, Carbon dioxide, Water, Temperature, Aerobic respiration, Exothermic, Anaerobic respiration, Fermentation, Lactic acid, Oxygen debt, Metabolism					
Digital Literacy	SharePoint resources including topic quizzes Possible use of excel to plot graphs and analyse data, powerpoint, word, etc to present information, internet for research					
Cross-Curricular Links	PE – Respiration, Numeracy/Maths – averages (means), reading scales, graph plotting, lines of best fit, using and rearranging equations, using scientific calculators					
Careers	Horticulturist, florist, physiotherapist, coaching					