









Curriculum Overview for Biology Year 10

<p><u>Half Term 5: Bioenergetics</u></p> <p>Disciplinary</p> <ul style="list-style-type: none"> • Describing chemical reactions • Writing word and symbol equations • Balancing symbol equations • Graph analysis • Calculating rates of reaction • Higher tier: calculating rates using a tangent on a graph <p>Substantive</p> <ul style="list-style-type: none"> • Photosynthesis reaction • Rates of reaction for photosynthesis • Limiting factors of photosynthesis • Investigating rates of photosynthesis • How plants use glucose • Aerobic and anaerobic respiration • Impact of exercise on respiration • Metabolism <p>Starting Unit 5 – outlined in half term 6.</p>		<p>Skim and Scan of source information Decoding terms Etymology of key terms</p>
		<p>Photosynthesis Chlorophyll Oxygen Carbon dioxide Reaction Rate Limiting factor Variable Accurate Trend Insoluble Glucose Respiration Aerobic Anaerobic Lactic acid Muscle Fatigue Oxygen debt Metabolism Enzyme Energy</p>
		<p>Recall tasks to start every lesson Recall test Review sheet End of unit assessment</p>
		<p>Revision Card preparation for every lesson Recall test Review sheet Repetition of use of revision cards for end of unit assessment</p>
<p><u>Half Term 6: Homeostasis and response</u></p> <p>Substantive Knowledge:</p> <ul style="list-style-type: none"> • Homeostasis system components • The Nervous System <ul style="list-style-type: none"> • Central Nervous system • Triple: The brain • Triple: The Eye and defects of the eye • Reflex arcs 		<p>Skim and Scan of source information Decoding terms Etymology of key terms</p>



<ul style="list-style-type: none"> • Body temperature control <ul style="list-style-type: none"> • The Endocrine System <ul style="list-style-type: none"> • Parts of the Endocrine system • Hormones • Blood glucose control • Triple: Water control and ADH • Reproductive hormones • Menstrual cycle • Use of reproductive hormones • Triple: Plant hormones and their uses <p>Disciplinary Knowledge:</p> <ul style="list-style-type: none"> • Reaction times investigation: variables, methods, collecting data, risk, evaluation • Triple: Plant hormone investigation: variables, methods, collecting data, risk, evaluation • Measuring time (scales) • Ethics in science (controlling fertility, organ transplants) 		<p>Photosynthesis Chlorophyll Oxygen Carbon dioxide Reaction Rate Limiting factor Variable Accurate Trend Insoluble Glucose Respiration Aerobic Anaerobic Lactic acid Muscle Fatigue Oxygen debt Metabolism Enzyme Energy Homeostasis Negative feedback Central nervous system Peripheral nervous system Neurone Stimulus Synapse Reflex Involuntary Reaction time Repeatable Valid Endocrine System Hormone Insulin Glucose Glycogen Glucagon Menstrual Cycle FSH LH Oestrogen Contraception Inhibit Fertility treatment In vitro Fertility Triple only: Cerebral cortex Cerebellum Medulla Structure Function Accommodation Myopia Hyperopia</p>
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		<p>Recall tasks to start every lesson Recall test Review sheet End of unit assessment</p>
		<p>Revision Card preparation for every lesson Recall test Review sheet Repetition of use of revision cards for end of unit assessment</p>