









Curriculum Overview for Science Year 9

<p>Half Term 1: Future Olympian</p> <p>Substantive Knowledge:</p> <ul style="list-style-type: none"> • Identification of main food group • How to control body temperature • The effects of energy drinks • Explain heart rate • Describe how heart rate is affected by exercise • Describe exothermic and endothermic reactions. • Explain breathing rate and how it changes during exercise • Compare anaerobic and aerobic respiration • How respiration is affected by altitude • The effects of performance enhancing drugs in sport • How athletes alter their body to gain an advantage • Describe what makes the perfect athlete • Describe the 3 types of neurone • How drugs affect the nervous system • Explain reaction time • How MND and MS affect normal life • How we respond to sound and light • How to calculate speed • How to interpret distance-time graphs <p>How to interpret velocity-time graphs</p> <p>Disciplinary Knowledge:</p> <ul style="list-style-type: none"> • Graph analysis of heart rate/distance-time graphs • Using calculations to analyse exercise • Use a variety of resources to summarise notes • Ask questions and develop a line of enquiry based on observations of the real world. • Make and record observations 		<p>Skim reading Decoding – modelled Etymology of key terms Syllabification</p>
		<p>Healthy, Balanced, composite, ceramics, Ratios, Energy, Diet, Temperature, Homeostasis, Vasodilation, Vasoconstriction, Electrolytes, Endothermic, Exothermic Adrenaline, Caffeine, Glucose, Lungs, Reactants, Products, Respiration, Haemoglobin, Saturation, Drug testing, Athletes, Performance enhancement, Steroids, Marginal gains, synapse, Neurone, Stimulant, Reaction time, Acceleration, Deceleration, Velocity, Antidoping</p>
		<p>Recall Written assessment</p>
		<p>Article comprehension task Preparation of revision cards Memorising of revision cards for recall quiz – one for each unit</p>
<p>Half Term 2: Future olympian</p> <p>ubstantive Knowledge:</p> <ul style="list-style-type: none"> • Identification of main food group • How to control body temperature • The effects of energy drinks • Explain heart rate • Describe how heart rate is affected by exercise • Describe exothermic and endothermic reactions. • Explain breathing rate and how it changes during exercise • Compare anaerobic and aerobic respiration • How respiration is affected by altitude • The effects of performance enhancing drugs in sport • How athletes alter their body to gain an advantage 		<p>Skim reading Decoding – modelled Etymology of key terms Syllabification</p>
		<p>Healthy, Balanced, Ratios, Energy, Diet, Temperature, Homeostasis, Vasodilation, Vasoconstriction, Electrolytes, Endothermic, Exothermic Adrenaline, Caffeine, Glucose, Lungs, Reactants, Products, Respiration, Haemoglobin, Saturation, Drug testing, Athletes, Performance enhancement, Steroids, Marginal gains, synapse, Neurone, Stimulant,</p>



<ul style="list-style-type: none"> • Describe what makes the perfect athlete • Describe the 3 types of neurone • How drugs affect the nervous system • Explain reaction time • How MND and MS affect normal life • How we respond to sound and light • How to calculate speed • How to interpret distance-time graphs 		<p>Reaction time, Acceleration, Deceleration, Velocity, Antidoping</p>
<p>How to interpret velocity-time graphs</p> <p>Disciplinary Knowledge:</p> <ul style="list-style-type: none"> • Graph analysis of heart rate/distance-time graphs • Using calculations to analyse exercise • Use a variety of resources to summarise notes • Ask questions and develop a line of enquiry based on observations of the real world. • Make and record observations 		<p>Written assessment</p>
		<p>Article comprehension task Preparation of revision cards Memorising of revision cards for recall quiz – one for each unit</p>