**Curriculum Overview for Science**

**Year 9**

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| **Half Term 1: Future Olympian****Substantive Knowledge:*** 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

How to interpret velocity-time graphs**Disciplinary Knowledge:*** 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
 | Books | Skim readingDecoding – modelledEtymology of key termsSyllabification |
| Speech | 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 |
| Checklist RTL | Recall Article comprehension task |
| Home | Preparation of revision cards for every lessonMemorising of revision cards for recall quiz – one for each science |
| **Half Term 2: Future olympian****ubstantive Knowledge:*** 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
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* How MND and MS affect normal life
* How we respond to sound and light
* How to calculate speed
* How to interpret distance-time graphs

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| Checklist RTL | Review sheet – one for each scienceEnd of unit assessment – one for each science |
| Home | Preparation of revision cards for every lessonReview sheet – for each scienceRevision for end of unit assessment – for each science |