

Science Year 8 long term plan

Week/ Lesson	Term	Topic	Knowledge	Skills	
1 2	Autumn T1	Practical skills	<ul style="list-style-type: none"> • Variables • Dependent and independent • Control variables • Reproducibility • Analysis and evaluation 	Practical skills Graphical skills - how to plot a suitable graph Evaluating practical methods	
3 4 5		Organisms 2	<ul style="list-style-type: none"> • Breathing • Gas exchange • Healthy diets and lifestyles • The digestive system 	Extended writing skills - the consequences of an unhealthy diet	
6		Reteach Week ASSESSMENT	<ul style="list-style-type: none"> • Organisms 2 and practical skills 	Assessment	
7 8		Matter 2	<ul style="list-style-type: none"> • The periodic table • Elements, compounds and mixtures • Polymers and composite materials 	Extended writing skills - the development of the periodic table	
9 10 11		Autumn T2	Forces 2	<ul style="list-style-type: none"> • Balanced forces and equilibrium • Stretch and compression / investigating Hooke's law • Pressure of solids and liquids • Floating and sinking 	Graphical skills- describing and interpreting trends
12			Reteach Week	<ul style="list-style-type: none"> • Organisms 2/Matter 2/Forces 2 	Assessment

		ASSESSMENT		
13		Genes 2	<ul style="list-style-type: none"> ● Natural selection ● Biodiversity ● Genetic material ● Genetic and environmental variation ● Genetic diagrams 	Extended writing skills- The importance in maintaining biodiversity
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16	Spring T1	Reactions 2	<ul style="list-style-type: none"> ● Endothermic and exothermic reactions ● Catalysts ● Combustion and fuels ● Thermal decomposition 	Numeracy skill- subtractions Practical skills- which fuel is the best and analysing data
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19		Reteach Week ASSESSMENT	<ul style="list-style-type: none"> ● Organisms 2/Matter 2/Forces 2/Genes 2/Reactions 2 	Assessment
20	Spring T2	Energy 2	<ul style="list-style-type: none"> ● Work done ● Simple machines ● Energy and temperature ● Heat transfer- conduction/convection and radiation ● Cooling and heating curves 	Numeracy skills- Using work done equation comparing and contrasting the different methods of heat transfer
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23		Ecosystems 2	<ul style="list-style-type: none"> ● Aerobic and anaerobic respiration ● Fermentation ● Photosynthesis – adaptation of leaves and investigating photosynthesis ● Transport of water and minerals 	Practical skills - writing a step by step method
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25		Reteach Week ASSESSMENT	<ul style="list-style-type: none"> ● Organisms 2/Matter 2/Forces 2/Genes 2/Reactions 2/Energy 2/Ecosystems 2 	Assessment
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27	Summer T1	Earth 2	<ul style="list-style-type: none"> ● Fossil fuels and the atmosphere ● The carbon cycle ● Global warming ● Sustainability ● Recycling ● Extraction of metals 	<p>Extended writing skills - climate change</p> <p>Evaluate the advantages of recycling</p>
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29		Waves 2	<ul style="list-style-type: none"> ● Sound ● Light ● Transverse and longitudinal waves ● Reflection and absorption of waves 	
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32		Reteach Week ASSESSMENT	<ul style="list-style-type: none"> ● Organisms 2/Matter 2/Forces 2/Genes 2/Reactions 2/Energy 2/Ecosystems 2/Earth 2/Waves 2 	Assessment
33	Summer T2	Electromagnets	<ul style="list-style-type: none"> ● Magnetic fields ● Investigating electromagnets ● Use of electromagnets ● Investigating the strength of electromagnets 	
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36		Physics investigation	<ul style="list-style-type: none"> ● Investigating the strength of electromagnets ● Report writing ● Analysis and evaluation 	<p>Practical skills - the strength of an electromagnet</p>
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40		Reteach week ASSESSMENT	<ul style="list-style-type: none"> ● Organisms 2/Matter 2/Forces 2/Genes 2/Reactions 2/Energy 2/Ecosystems 2/Earth 2/Waves 2/Electromagnets 2 	Assessment