

Science Long Term Plan Year 7 2019-20

Temperance Term

W/C	2nd September	9th September	16th September	23rd September	30th September	7th October	14th October	21st October	
Topic	First Aid			Particles		Cells			
	Introduction to science: Understand Health and Safety and risk assessment, including First Aid. Apparatus and How to use a Bunsen Burner. Certificate from St John's Ambulance upon successful completion of First Aid course.			Use particle model to explain properties of substances and the three states of matter. Use particle model to explain change of state, melting and freezing, boiling and melting points, diffusion and pressure.		Link structure and function of specialist cells. Calculate magnification and use a microscope. Describe unicellular organisms.			
Challenge	Teach and assist other students how to perform First Aid.			Explain why heat may not cause a temperature change		Explain and describe the similarities and differences of plant and animal cells.			
Assessment	End of unit assessment			End of unit assessment		End of unit assessment			
W/C	4th November		11th November	18th November	25th November	2nd December	9th December		
Topic	Forces				Elements, Atoms and Compounds				CHRISTMAS
	Describe pairs of forces acting on an object. Explain how the effect of gravity changes moving away from Earth and why the speed or direction of motion of objects can change using force arrows.				Use properties to determine use, explain the difference between elements/compound. Use particles diagrams to explain why compounds have different properties than original elements. Calculate mass				
Challenge	Apply Hooke's Law to make quantitative predictions with unfamiliar materials.				Compare properties of compounds to their structure.				
Assessment	End of unit assessment				End of unit assessment				

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Justice Term

W/C	6 th January	13 th January	20 st January	27 th January	3 rd February	10 th February	HALF TERM
Topic	Structure and Function of Body			Sound			
	Explain in detail the hierarchy of organisation in a multicellular organism, describe and explain inhaling/exhaling, measure lung volume and interpret data.			compare the properties of waves and their features, describe sound as the transfer of energy through vibrations and explain why sound cannot travel through a vacuum. explain how parts of the ear transfer vibrations,			
Challenge	Analyse the usefulness of the structure and function of skeleton tissue and joints against their function.			Compare and contrast waves of different frequency using a diagram			
Assessment	End of unit assessment			End of unit assessment			
W/C	24 th February	2 nd March	9 th March	16 th March	23 rd March	30 th March	EASTER
Topic	Chemical Reactions			Reproduction			
	State the difference between chemical and physical changes and give examples			Explain fertilisation and the role of pollination in plants. Describe the role of individual organs within the reproductive system.			
Challenge	Compare and contrast the differences between physical and chemical changes, with examples as evidence			Explain the function of male and female reproductive organs within the reproductive system as a functioning system.			
Assessment	End of unit assessment			End of unit assessment			

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Courage Term

W/C	20 th April	27 th April	4 th May	11 th May	18 th May	HALF TERM
Topic	Light			Revision		
	Compare a simple camera with the eye. Predict how coloured objects will appear given different coloured lights and filters. Predict the path of light using a model of light refraction. apply the concept of specular reflection and diffuse scattering to models and other examples.					
Challenge	Explain why humans can see different coloured light through lenses and filters					
Assessment	End of unit assessment					
W/C	1 st June	8 th June	15 th June	22 nd June	29 th June	6 th July
Topic	KS3 Internal Exams		Space			
			Use the speed of light to describe distances between astronomical objects. Describe the structure of the Universe in detail, in order of size and of distance away from the Earth. Explain how the properties and features of planets are linked to their place in the Solar System. Predict the effect of the Earth's tilt on temperature and day-length			
Challenge			Explain why it is possible to see an eclipse on some of the planets in the Solar System but not others.			
Assessment			End of unit assessment			