

Science Long Term Programme of Study Year 7 2021-2022

Temperance Term

W/C	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	HALF TERM
Area of Study	Investigating Science			Cells (B1.1)				
Core Learning	Introduction to lab safety and Science skills Understand Health and Safety and risk assessment. Graph drawing and conclusions			Describe the structure and function of organelles in plant and animal cells. Link structure and function of specialist cells. Calculate magnification and use a microscope. Describe unicellular organisms.				
Opportunities for Challenge	Interpret data and analysing results.			Explain and describe the similarities and differences of plant and animal cells.				
Assessment	End of Topic Test			End of Topic Test				

W/C	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	CHRISTMAS
Area of Study	Particles and Elements (C1.1 and C1.2)						
Core Learning	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. Use properties to determine use, explain the difference between elements/compound. Use particles diagrams to explain why compounds have different properties than original elements.						
Opportunities for Challenge	Explain why heat may not cause a temperature change Compare properties of compounds to their structure.						
Assessment	End of Topic Test						

Science Long Term Programme of Study Year 7 2021-2022

Justice Term

W/C	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	HALF TERM
Area of Study	Forces and Space (P1.1 and P1.4)						
Core Learning	<p>Describe how a range of forces act on given examples. Describe the structure of the universe. 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 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</p>						
Opportunities for Challenge	<p>Apply Hooke's Law to make quantitative predictions with unfamiliar materials. Explain why it is possible to see an eclipse on some of the planets in the Solar System but not others</p>						
Assessment	End of Topic Test						

W/C	Week 20	Week 21	Week 22	Week 23	Week 24	Week 25	EASTER
Area of Study	Body Systems and Reproduction (B1.2 and B1.3)						
Core Learning	<p>Describe and explain the role of human body systems, including the reproductive systems. Explain in detail the hierarchy of organisation in a multicellular organism, describe and explain inhaling/exhaling, measure lung volume and interpret data. Explain fertilisation and the role of pollination in plants. Describe the role of individual organs within the reproductive system.</p>						
Opportunities for Challenge	<p>Analyse the usefulness of the structure and function of skeleton tissue and joints against their function. Explain the function of male and female reproductive organs within the reproductive system as a functioning system</p>						
Assessment	End of Topic Test						

Science Long Term Programme of Study Year 7 2021-2022

Courage Term

W/C	Week 26	Week 27	Week 28	Week 29	Week 30	Week 31	HALF TERM
Area of Study	Chemical Reactions (C1.3 and C1.4)						
Core Learning	<p>Experiment and discover the properties of substances, and identify pH. State the difference between chemical and physical changes and give examples Use the pH scale to measure acidity and alkalinity and describe how indicators are used to identify acidic or alkaline solutions.</p>						
Opportunities for Challenge	<p>Compare and contrast the differences between physical and chemical changes, with examples as evidence. Analyses the difference in accuracy between two techniques used to measure pH.</p>						
Assessment	End of Topic Test						

W/C	Week 32	Week 33	Week 34	Week 35	Week 36	Week 37	SUMMER
Area of Study	KS3 Exams		Light and Sound (P1.3 and P1.2)				
Core Learning			<p>Explain how we see and hear. 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. 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.</p>				
Opportunities for Challenge			<p>Explain why humans can see different coloured light through lenses and filters Compare and contrast waves of different frequency using a diagram</p>				
Assessment			End of Topic Test				