

Science Long Term Programme of Study Year 7

Temperance Term

W/C	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	HALF TERM
Area of Study	P1.1 Forces and C1.1 Particles and their Behaviour.							
Core Learning	<p>Describe how a range of forces act on given examples. Describe pairs of forces acting on an object. Describe the effects of gravitational forces on Earth and in Space</p> <p>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.</p>							
Opportunities for Challenge	Apply Hooke's Law to make quantitative predictions with unfamiliar materials. Explain why heat may not cause a temperature change							
Assessment	End of Topic Tests							

W/C	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	CHRISTMAS
Area of Study	B1.1 Cells and C1.2 Elements, Atoms and Compounds.						
Core Learning	<p>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.</p> <p>Use properties to determine use and explain the difference between elements and compound. Use particles diagrams to explain why compounds have different properties than original elements.</p>						
Opportunities for Challenge	Explain and describe the similarities and differences of plant and animal cells. Compare properties of compounds to their structure.						
Assessment	End of Topic Tests and Temperance Term Assessment						

Science Long Term Programme of Study Year 7

Justice Term

W/C	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	HALF TERM
Area of Study	P1.2 Sound and B1.2 Structure and Function of Body Systems						
Core Learning	<p>Explain how we hear. 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> <p>Describe and explain the role of human body systems. Explain in detail the hierarchy of organisation in a multicellular organism. Describe and explain inhaling and exhaling, measure lung volume and interpret data.</p>						
Opportunities for Challenge	Compare and contrast waves of different frequency using a diagram Analyse the usefulness of the structure and function of skeleton tissue and joints against their function.						
Assessment	End of Topic Tests						

W/C	Week 20	Week 21	Week 22	Week 23	Week 24	Week 25	EASTER
Area of Study	C1.3 Reactions and B1.3 Reproduction						
Core Learning	<p>Experiment and discover the properties of substances. State the difference between chemical and physical changes and give examples</p> <p>Describe and explain the role of the reproductive systems. Explain fertilisation and the role of pollination in plants. Describe the role of individual organs within the reproductive system.</p>						
Opportunities for 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 Topic Tests and Justice Term Assessment						

Science Long Term Programme of Study Year 7

Courage Term

W/C	Week 26	Week 27	Week 28	Week 29	Week 30	Week 31	HALF TERM
Area of Study	P1.3 Light and Revision					EOY Assessments	
Core Learning	<p>Explain how we see. 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.</p>						
Opportunities for Challenge	Explain why humans can see different coloured light through lenses and filters						
Assessment	End of Topic Tests						

W/C	Week 32	Week 33	Week 34	Week 35	Week 36	Week 37	SUMMER
Area of Study	EOY Assessments	C1.4 Acids and Alkalis and P1.4 Space					
Core Learning		<p>Experiment and identify pH values. Use the pH scale to measure acidity and alkalinity and describe how indicators are used to identify acidic or alkaline solutions.</p> <p>Describe the structure of the universe. 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		Analyses the difference in accuracy between two techniques used to measure pH. Explain why it is possible to see an eclipse on some of the planets in the Solar System but not others					
Assessment		End of Topic Tests					