

Year 7 – **Biology topics**, **Chemistry topics**, **Physics topics**.

Term 1	Term 2	Term 3
<p>Matter</p> <p>Lab safety Lab equipment Using a Bunsen burner Particle model of solids, liquids and gases Changing state Solutions Diffusion Density Gas pressure Filtration Distillation and evaporation Chromatography Formative assessment: planning an investigation Purifying rock salt Periodic table Group 1 elements Group 7 elements Group 0 elements Project: summarising and applying knowledge.</p>	<p>Building blocks of life (continued)</p> <p>Pregnancy and the foetus Maternal lifestyle DNA structure Discovery of DNA Extracting DNA from plants Genetic crosses Natural selection Project: summarising and applying knowledge.</p>	<p>Forces continued.</p> <p>Friction Distance – time graphs Speed – time graphs Magnetism Project: summarising and applying knowledge.</p>
<p>Building blocks of life</p> <p>Cell structure Specialised cells Microscopes Cells, tissues, organs and organ systems The reproductive system Puberty Menstrual cycle Fertilisation IVF Formative assessment: IVF</p>	<p>Forces</p> <p>Introduction to forces Density Floating and sinking Formative assessment: writing a conclusion Resultant forces Pressure Pressure in liquids How to draw a line graph The extension of a spring: Hooke's law</p>	<p>Living processes</p> <p>Breathing and the structure of the lungs Gas exchange Diseases of the lungs Balanced diet Enzymes Digestive system Formative assessment: planning an investigation Energy in food practical The skeletal system Antagonistic pairs Tendons and ligaments Aerobic respiration Anaerobic respiration in humans Fermentation: anaerobic respiration in yeast. Project: summarising and applying knowledge.</p>
<p><u>Assessment</u></p> <p>Assessment will take the form of 5-a-day activities at the start of lessons to recall previous work. Formative assessments at set parts of the topics. Summative assessments during assessment periods during the year.</p>		

Year 8 **Biology topics**, **Chemistry topics**, **Physics topics**.

Term 1	Term 2	Term 3
<p>Earth and it's resources</p> <p>Igneous rocks Erosion and weathering Sedimentary rocks Fossils and fossil formation Metamorphic rocks Rock cycle Formative assessment: rock cycle Earth structure Carbon cycle and carbon emissions Global warming and climate change Recycling Day and night Solar system Exploring space Project: summarising and applying knowledge.</p>	<p>Living together continued</p> <p>Structure of a flower Seed dispersal Ecosystem structure Competition Interdependence Food chains and webs Pyramids of number Bioaccumulation Mutualistic relationships Parasitic relationships Animal adaptations Plant adaptations Natural cycling Drowning in plastic Human impact on ecosystems Project: summarising and applying knowledge.</p>	<p>Energy continued</p> <p>Renewable and non-renewable Energy in fuels Power Work Deformation Machines and levers Conduction Convection Radiation Project: summarising and applying knowledge.</p>
<p>Living together</p> <p>Leaf adaptations Stomata prints Plant transport systems Chemistry of photosynthesis Testing a leaf for starch Limiting factors affecting photosynthesis Investigation of the rate of photosynthesis</p>	<p>Energy</p> <p>Energy stores Energy transfer and dissipation Gravitational potential energy Sankey diagrams Energy efficiency Graph skills Formative assessment: graph skills</p>	<p>Wonderous variety</p> <p>Sexual and asexual reproduction DNA structure revisited Genetic variation Variation Inherited and environmental variation Continuous and discontinuous variation Selective breeding Genetic engineering Cloning Fossils Extinction Classification Conservation Project: summarising and applying knowledge.</p>
<p>Assessment</p> <p>Assessment will take the form of 5-a-day activities at the start of lessons to recall previous work. Formative assessments at set parts of the topics. Summative assessments during assessment periods during the year.</p>		

Year 9 **Biology topics**, **Chemistry topics**, **Physics topics**.

Term 1	Term 2	Term 3
<p>Energy in reactions</p> <p>Periodic table Combustion Exothermic reactions Endothermic reactions Fuel Metals and non-metals Metals and acid Formative assessment: analysing data Reactivity series Metals and oxygen Chemical reactions v's physical change Non-metal reactions Conservation of mass Thermal decomposition Catalysts Project: summarising and applying knowledge.</p>	<p>Waves continued</p> <p>The eye Correcting vision What is colour? Cameras Making and transmitting sound Frequency and amplitude Formative assessment How light and sound are similar How we hear Project: summarising and applying knowledge.</p>	<p>Identified KS3 gaps and therapy</p> <p>The first half of term three will be specifically devoted to ensuring the students have developed the maths and analytical skills that are essential for progressing into the GCSE course. Key areas will be identified using the assessment which will take place at the end of February. A final round of assessment will take place around the middle of May.</p>
<p>Waves</p> <p>An introduction to light Shadows Reflection from plain mirrors Reflection: virtual images Reflection off curved mirrors Refraction</p>	<p>Identified KS3 gaps and therapy</p> <p>During the second half of term two the science department will be working on aspects of the course that the students need some therapy on. Key areas will be identified using the assessment which will take place at the end of February. This will include practical skills and planning investigations so that the students have had access to the complete KS3 curriculum despite gaps in knowledge and any disruption caused by lockdown.</p>	<p>Identified KS3 gaps and therapy</p> <p>The department will use the final half term of the year to ensure that any areas that identified from the final round of assessment in May are thoroughly covered so the students are ready to progress into the GCSE course in September.</p>
<p>Assessment</p> <p>Assessment will take the form of 5-a-day activities at the start of lessons to recall previous work. Formative assessments at set parts of the topics. Summative assessments during assessment periods during the year.</p>		