



Key Stage 3 Framework for Learning Year 7 2018-2019: Future Foundations



Curriculum Area: **Science**

Year 7	First 2 Weeks	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge	<p>Cosmic</p> <p>Command words Repeats, means, anomalies, accuracy, errors. Variables and methods. Graphs Sample size (range, intervals and scale) Control groups.</p>	<p>Cosmic</p> <p>Command words Repeats, means, anomalies, accuracy, errors. Variables and methods. Graphs Sample size (range, intervals and scale) Control groups.</p>	<p>Cells and reproduction</p> <p>Menstrual cycle Cells Reproductive system Fertilisation</p>	<p>Atoms and Elements</p> <p>Elements Periodic table Periodic table quiz</p> <p>Chemical reactions Compounds Bonding</p> <p>Reactivity Reactivity Investigation Reactivity Inv. write up</p> <p>The atom Energy in reactions Conservation of mass</p>	<p>Electricity & Magnetism</p> <p>Circuits Conductors and insulators Measuring current Voltage</p> <p>Magnetism Electromagnetism</p> <p>Generating electricity Power stations National Grid</p>	<p>Matter and Space</p> <p>States of matter Conservation of matter Stearic acid</p> <p>Conduction Convection Radiation</p> <p>Gravity and air resistance A trip to Mars Design, build and test landers</p>	<p>Plants</p> <p>Photosynthesis Testing leaves for starch Food chains Food webs Insect pollination Bee aware Bee movie Observing plant growth Leaf structure Seed dispersal Seed dispersal write up Stomata Observing plant growth</p>
Syllabus	<p>The year 7 and 8 curriculum has been developed from the KS3 national framework. All aspects that are not included in year 8, have been integrated into the KS4 curriculum taught during year 9. This can be found using the link below:</p> <p>https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/335174/SECONDARY_national_curriculum_-_Science_220714.pdf</p>						



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Skills	<p>Command words How Science Works (HSW) key terms Repeats Means Anomalies Errors Accuracy Resolution Range Interval Scale Variables Graphs plotting Graphs analysis</p>	General skills	<p>Command words How Science Works (HSW) key terms Repeats Means Anomalies Errors Accuracy Resolution Range Interval Scale Variables Graphs plotting Graphs analysis</p>	Command words	<p>Students will learn the command words explicitly and then be given opportunity to identify which command words should be used and answer questions which use the specific command words. Describe Explain Compare Contrast Evaluate</p>	Writing a Scientific report	<p>Students will learn how to write a scientific report that should include Equipment. Method. Variables (IV, DV, CV). Diagrams. Results. Graphs. Conclusions.</p>	Assessments		<p>Marking Point 1 Graph skills Marking Point 2 Methods and variables Marking Point 3 Multiple Choice Test (MCT)</p>	<p>Marking Point 1 Apollo 13 cultural capital video homework Marking Point 2 Journey of a sperm Marking Point 3 Progress test</p>	<p>Marking Point 1 Reactivity Inv. write up Marking Point 2 Conservation of mass letter Marking Point 3 MCT</p>	<p>Marking Point 1 Voltage and current assessment Marking Point 2 Electromagnets 'write up' Marking Point 3 Progress test</p>	<p>Marking Point 1 Gravity and air resistance write up Marking Point 2 Explaining evaporation and condensation Marking Point 3 MCT</p>	<p>Marking Point 1 Marking Point 2 BEE movie cultural capital Marking Point 3 Progress test</p>
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<p>Cultural Enrichment</p>	<p>Apollo 13</p> <p>Task</p> <p>Write an extended piece of writing (with 5 paragraphs) about the film. This will need to be between one and two pages.</p> <p>Main objective is to identify the times at which the astronauts use / show / need the CHS qualities of Success</p> <p>Students should keep themselves up to date with scientific issues raised and present in the media. They should watch documentaries of a scientific nature.</p>	<p>Apollo 13</p> <p>Task</p> <p>Write an extended piece of writing (with 5 paragraphs) about the film. This will need to be between one and two pages.</p> <p>Main objective is to identify the times at which the astronauts use / show / need the CHS qualities of Success</p> <p>Students should keep themselves up to date with scientific issues raised and present in the media. They should watch documentaries of a scientific nature.</p>	<p>Essay Homework BBC – The Human Body.</p> <p>Video homework on birth / fertilisation</p> <p>Students should write about the complications that surround fertilisation and birth and how modern medicine has overcome these issues.</p> <p>Students should keep themselves up to date with scientific issues raised and present in the media. They should watch documentaries of a scientific nature.</p>	<p>Famous Scientists</p> <p>Students will watch the theory of everything.</p> <p>They will write about the qualities of success shown by Stephen and his family. They will also link this to the qualities they have shown in life. Students should keep themselves up to date with scientific issues raised and present in the media. They should watch documentaries of a scientific nature.</p>	<p>Famous Scientists</p> <p>Students will watch the theory of everything.</p> <p>They will write about the qualities of success shown by Stephen and his family. They will also link this to the qualities they have shown in life. Students should keep themselves up to date with scientific issues raised and present in the media. They should watch documentaries of a scientific nature.</p>	<p>Interstellar</p> <p>Students should write about trying to find a new habitable planet. They will include all the features necessary to sustain life</p>	<p>Essay homework - Bee movie.</p> <p>Students should research the positive effects bees have on the reproduction of plants. Students should also include research / statistics about the effects of decreasing Bee populations. Students will also have the opportunity to design and carry out their own ecology project to support/implement "Save the Bees" initiatives.</p>
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<p>Character</p>		 <p>QofS – Optimism</p> <p>The cosmic topic will introduce students to Science at CHS and allow them to hone their fundamental Science skills from KS2 and build on these. Students will develop optimism when planning their flight path and reflecting on their KS2 outcome and their new target grade. Additionally when discussing topics such as space travel for the future students will develop their optimism for the future society.</p>	 <p>QofS – Empathy</p> <p>Students will be taught in form groups which will create a team ethos. Their learning of IVF and fertility treatment, puberty, and multiple births will enable students to develop their empathy particularly during group tasks and discussions around these topics. Following feedback from their "Progress test" students will gain experience of empathising with their peers.</p>	  <p>QofS – Creativity & Curiosity</p> <p>Students will experiment with a variety of experiments during the Atoms and Elements topic and be encouraged to make predictions and show curiosity about their results. Whilst learning how to write a scientific report and during their homework task students will have an opportunity to think creatively.</p>	  <p>QofS – Responsibility & Reflection</p> <p>Whilst contributing to group practicals students will be expected to show high levels of responsibility and independence. They will reflect on the work that they do in the topic and look to improve on this. Students will also reflect on societies use of fossil fuels and carbon dioxide emissions.</p>	  <p>QofS – Practice & Resiliency</p> <p>Students will practise their understanding of key scientific skills and apply this to exam style questions. This will be a key focus this half term as students are introduced to analysing tabulated data. Three assessment points through the term will enable students to be resilient when acting on their feedback by practicing their skills as they prepare for their final "Progress test"</p>	 <p>QofS – Motivation</p> <p>Students will need to be motivated to revise for their "Progress Test". Students will be given advice on how to revise and be encouraged to use Personal Learning Checklists to support their revision. For their home learning this half term students will be encouraged to be motivated to design and carry out a "Save the Bees" project.</p>
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