

Gatsby Benchmark 4

'Linking curriculum learning to careers'

Specific career content delivery and examples of the promotion of employability skills

Curriculum area:	Science
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Year 7/8		
Autumn term	Spring term	Summer term
<p><u>Introduction to Science and key skills, Basic Chemistry, Cells and organisation, Forces</u></p> <p><u>The pharmaceutical industry uses these techniques</u></p> <p><u>Communication - presenting ideas</u></p> <p><u>Teamwork - carrying out practical work together</u></p> <p><u>Problem solving - answering specific questions</u></p> <p><u>Analysing - collecting data and drawing conclusions</u></p> <p><u>Resilience - changing methodology through practical work</u></p> <p><u>Thinking skills - designing practicals to answer questions</u></p>	<p><u>Mixtures and Separation Techniques, Digestion and nutrition, Light</u></p> <p>Communication - presenting ideas</p> <p>Teamwork - carrying out practical work together</p> <p>Problem solving - answering specific questions</p> <p>Analysing - collecting data and drawing conclusions</p> <p>Resilience - changing methodology through practical work</p> <p>Thinking skills - designing practicals to answer questions</p>	<p><u>The Periodic Table, Human Reproduction, Energy.</u></p> <p>Communication - presenting ideas</p> <p>Teamwork - carrying out practical work together</p> <p>Problem solving - answering specific questions</p> <p>Analysing - collecting data and drawing conclusions</p> <p>Resilience - changing methodology through practical work</p> <p>Thinking skills - designing practicals to answer questions</p> <p>Confidence - Healthy body</p>

Year 9

Autumn term

Spring term

Summer term

Adaptation & Inheritance, Periodic Table, Electricity & Magnetism & The Earth

Communication - presenting ideas
 Teamwork - carrying out practical work together
 Problem solving - answering specific questions
 Analysing - collecting data and drawing conclusions
 Resilience - changing methodology through practical work
 Thinking skills - designing practicals to answer questions

Health & Lifestyle, Separation Techniques & Energy

Communication - presenting ideas
 Teamwork - carrying out practical work together
 Problem solving - answering specific questions
 Analysing - collecting data and drawing conclusions
 Resilience - changing methodology through practical work
 Thinking skills - designing practicals to answer questions

Example activity linking curriculum learning to a career

Separating Mixtures

Using distillation in the drinks industry for the production of alcohol.

Analysing - collecting data and drawing conclusions

Metals and acids, Ecosystem Processes & Motion & pressure

Communication - presenting ideas
 Teamwork - carrying out practical work together
 Problem solving - answering specific questions
 Analysing - collecting data and drawing conclusions
 Resilience - changing methodology through practical work
 Thinking skills - designing practicals to answer questions

Year 10

Autumn term	Spring term	Summer term
<p>Communication - presenting ideas Teamwork - carrying out practical work together Problem solving - answering specific questions Resilience - changing methodology through practical work Thinking skills - designing practicals to answer questions</p> <p><u>Example activity linking curriculum learning to a career</u> <u>Separating Mixtures</u> Using chromatography techniques in the food industry for quality control. Analysing - collecting data and drawing conclusions</p> <p><u>Example activity linking curriculum learning to a career</u> <u>Cell Biology</u> By understanding how cells work in healthy and diseased states, cell biologists will be able to develop new, more effective medicines and plants with improved qualities. Cell biology has assisted the human fertility programme, DNA testing has been used in archaeology, paternity tests and forensic science to help solve murders and assaults.</p>	<p>Communication - presenting ideas Teamwork - carrying out practical work together Problem solving - answering specific questions Analysing - collecting data and drawing conclusions Resilience - changing methodology through practical work Thinking skills - designing practicals to answer questions</p> <p><u>Example activity linking curriculum learning to a career</u> <u>Bioenergetics</u> Applications in farming and the food industry.</p> <p><u>Energy</u> Renewable energy resources have become increasingly important especially for future generations.</p>	<p>Communication - presenting ideas Teamwork - carrying out practical work together Problem solving - answering specific questions Analysing - collecting data and drawing conclusions Resilience - changing methodology through practical work Thinking skills - designing practicals to answer questions.</p> <p><u>Electricity.</u> Electrical engineers and electricians use some of these principles in their work. Automotive engineers also apply these in vehicle engineering.</p>

Example activity linking curriculum learning to a career

Particle Model & Nuclear Physics

Medical imaging techniques are now widely used, such as positron emission tomography (PET) and nuclear magnetic resonance imaging (MRI). Nuclear techniques are used in the detection of explosives and weapons as a barrier to terrorism.

Nuclear physics continues to have a profound impact on the production of energy which fuels wider productivity in the economy.

People who work with environmental issues use Accelerator Mass Spectrometry to take environmental measurements.

Year 11

Autumn term	Spring term	Summer term
<p>Communication - presenting ideas Teamwork - carrying out practical work together Resilience - changing methodology through practical work Thinking skills - designing practicals to answer questions Self-management. - Initiative and enterprise Planning and organising - reviewing and planning for assessments</p> <p><u>Example activity linking curriculum learning to a career Photosynthesis</u> Garden centres use the principles of photosynthesis to optimise the growth of their plants and maximise profit. Problem solving - answering specific questions Analysing - collecting data and drawing conclusions</p>	<p>Communication - presenting ideas conclusions Resilience - changing methodology through practical work Thinking skills - designing practicals to answer questions Initiative and enterprise Planning and organising - reviewing and planning for assessments</p> <p><u>Example activity linking curriculum learning to a career</u> <u>Forces</u> Rollercoaster designers use knowledge of forces to make safe rides. Teamwork - carrying out practical work together Problem solving - answering specific questions Analysing - collecting data and drawing conclusions</p>	<p style="background-color: #cccccc; text-align: center;">Summer term</p>