

<p align="center"><b>Y11 Home Study</b> GCSE to A-Level Applied Science: Bridging Work</p>   <p><b>Contact: Miss Tytherleigh</b> <b>a.tytherleigh@ralphallenschool.com</b></p>	 <p><b>Complete</b> an information sheet outlining information about the skills and qualifications required to be a <b>biomedical scientist</b> who might work for the NHS. You should include:</p> <ul style="list-style-type: none"> <li>- Entry requirements</li> <li>- Skills required</li> <li>- Common tasks</li> <li>- Other relevant information</li> </ul> <p><a href="https://nationalcareers.service.gov.uk/job-profiles/biomedical-scientist">https://nationalcareers.service.gov.uk/job-profiles/biomedical-scientist</a></p> <p><b>Time: 1 hour</b></p>	 <p><b>Read</b> the information from GCSE bitesize about energy transfers and answer the following questions:</p> <ol style="list-style-type: none"> <li>1. What are the different types of energy?</li> <li>2. What is a Sankey diagram used to show?</li> <li>3. Sketch a Sankey diagram to show the energy transfers in a battery operated radio.</li> <li>4. What is the equation used to calculate efficiency?</li> </ol> <p><a href="https://www.bbc.co.uk/bitesize/guides/zgvc6fr/revision/1">https://www.bbc.co.uk/bitesize/guides/zgvc6fr/revision/1</a></p> <p><b>Time: 30 mins</b></p>	 <p><b>Listen</b> to the podcast "The frozen zoo", from the National Geographic. Create a table with two columns, one titled advantages and one titled disadvantages. List some advantages and disadvantages of the frozen zoo and its role in conservation in your table. Aim for at least 5 in each column.</p> <p><a href="https://www.nationalgeographic.com/podcasts/overheard/season-2/episode-8-frozen-zoo/">https://www.nationalgeographic.com/podcasts/overheard/season-2/episode-8-frozen-zoo/</a></p> <p><b>Time: 30 minutes</b></p>
 <p><b>Complete</b> an information sheet outlining information about the skills and qualifications required to be a <b>forensic scientist</b> who might work within a criminal investigative setting. You should include:</p> <ul style="list-style-type: none"> <li>- Entry requirements</li> <li>- Skills required</li> <li>- Common tasks</li> <li>- Other relevant information</li> </ul> <p><a href="https://nationalcareers.service.gov.uk/job-profiles/forensic-scientist">https://nationalcareers.service.gov.uk/job-profiles/forensic-scientist</a></p> <p><b>Time: 1 hour</b></p>	 <p><b>Read</b> the article about curing HIV. Think about how this discovery could impact the treatment of a disease which was previously thought to be incurable.</p> <p>Write a list of either scientific key words or words that you do not understand in the article. Research their meaning and create a key word glossary of these terms. You should aim to include a minimum of 10 words in your glossary.</p> <p><a href="http://www.sci-news.com/medicine/london-patient-hiv-08213.html">http://www.sci-news.com/medicine/london-patient-hiv-08213.html</a></p> <p><b>Time: 30 minutes</b></p>	 <p><b>Watch</b> the Science 'lesson' on YouTube at the link below about Titrations. Write a step by step guide aimed at a Y11 student about how to carry out a titration. Include a labelled diagram in your guide.</p> <p><a href="https://www.youtube.com/watch?v=saRBT5oZfh8">https://www.youtube.com/watch?v=saRBT5oZfh8</a></p> <p><b>Time: 1 hour</b></p>	 <p><b>Complete</b> an information sheet outlining information about the skills and qualifications required to be a <b>pharmacologist</b> who might work for a drug development company. You should include:</p> <ul style="list-style-type: none"> <li>- Entry requirements</li> <li>- Skills required</li> <li>- Common tasks</li> <li>- Other relevant information</li> </ul> <p><a href="https://nationalcareers.service.gov.uk/job-profiles/biomedical-scientist">https://nationalcareers.service.gov.uk/job-profiles/biomedical-scientist</a></p> <p><b>Time: 1 hour</b></p>
 <p><b>Watch</b> the video about hazards and risks in the science laboratory and complete the following:</p> <ol style="list-style-type: none"> <li>1. What is the difference between a hazard and a risk?</li> <li>2. Draw the common hazard warning symbols and state what they mean.</li> </ol> <p><a href="https://www.youtube.com/watch?v=fn8BoY4ZewY">https://www.youtube.com/watch?v=fn8BoY4ZewY</a></p> <p><b>Time: 1 hour</b></p>	 <p><b>Read</b> the following internet links and explain in a 600 word essay the Haber process, the conditions of the Haber process and why the specific conditions are so important.</p> <p><a href="https://www.thechemicalengineer.com/features/cewctw-fritz-haber-and-carl-bosch-feed-the-world/">https://www.thechemicalengineer.com/features/cewctw-fritz-haber-and-carl-bosch-feed-the-world/</a></p> <p><a href="https://www.chemguide.co.uk/physical/equilibria/haber.html">https://www.chemguide.co.uk/physical/equilibria/haber.html</a></p> <p><b>Time: 1 hour</b></p>	 <p><b>Watch</b> the video about renewable energy resources.</p> <p>List the different methods of renewable energy resources in the video and describe how each one works.</p> <p><a href="https://www.youtube.com/watch?v=K75mJ1opM_Q">https://www.youtube.com/watch?v=K75mJ1opM_Q</a></p> <p><b>Time: 30 minutes</b></p>	 <p><b>SUBMITTED TASK</b></p> <p>Answer the following questions that cover content learned at GCSE and during completion of this home learning menu.</p> <ol style="list-style-type: none"> <li>1. What are the common skills and tasks that scientists in different work places are required to perform? (6 marks)</li> <li>2. Write a risk assessment for carrying out a titration in a school laboratory (6 marks)</li> <li>3. What are the advantages and disadvantages of renewable energy resources? (6 marks)</li> </ol> <p>Submit your answers by email to Miss A. Tytherleigh: <a href="mailto:a.tytherleigh@ralphallenschool.com">a.tytherleigh@ralphallenschool.com</a></p>