

**Key Stage 4**

**AQA Science Double Award with GCSE extension**

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|  | **Autumn term** |  |  | **Spring term** |  |  | **Summer term** |
| **Year 11** | **Component 2: Environment, evolution & inheritance.**  **Key elements of the module:**   * Understanding the processes involved in photosynthesis * Exploring interaction between organisms * Considering how natural selection has led to the variety of life on Earth   **Suggested ELC TDA**: Investigating the conditions in which bread goes mouldy |  | **Yaar 11** | **Component 4: Chemistry in our world**  **Key elements of the module:**   * Understanding the reactions of acids * Investigating energy transfers in chemical reactions and rated of reactions * Exploring the structure of the Earth’s atmosphere   **Suggested ELC TDA:** Investigating variables that affect the rate of reaction. |  | **Year 11** | **Component 6: Electricity, magnetism & waves**  **Key elements of the module:**   * Understanding electric current as a flow of electric charge * Investigating magnets and electromagnets * Exploring transverse and longitudinal waves including electromagnetic waves   **Suggested ELC TDA:** Investigating the range over which a Bluetooth device is effective. |

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|  | **Autumn term** |  |  | **Spring term** |  |  | **Summer term** |
| **Year 10** | **Component 1: the Human Body**  **Key knowledge:**   * Understanding how the body is organised * Exploring how the body’s processes are co-ordinated * Looking at how health and disease can impact our body   **Suggested ELC TDA:** Investigating which food (biscuits or crisps) contain the most energy.  *Where practicable some elements of this topic will be taught at the end of KS3 at the point that all KS3 knowledge is secure* |  | **Year 10** | **Component 3: Elements, mixtures & compounds**  **Key elements of the module:**   * Understanding that everything in the Universe is made of atoms. * Know that mixtures contain two or more elements and that these can be separated. * Understand that compounds are formed when two or more elements are joined by chemical bonds.   **Suggested ELC TDA**: Investigating the different colours in food colouring using paper chromatography |  | **Year 10** | **Component 5: Energy, forces & the structure of matter.**  **Key elements of the module:**   * Understanding the principles behind energy stores and transfers * Exploring how forces impact our everyday lives and the principle of work * Looking at how nuclear radiation is produced   **Suggested ELC TDA:** Investigating which material keeps my cup of tea the hottest the longest. |