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| Year 9 | **Topic: B7 – Inheritance, evolution and variation**  **C7 – Energetics and Rate**  **Period:** Autumn 1 |
| **Overview of topic:**  B7 – Natural selection will be the first lesson in this topic, this will then be built on as students learn about evolution and the evidence of evolution. Students will then move into learning about DNA which will further build as they learn about the impact Franklin, Wilkins, Watson and Crick. They will also cover the topic of inheritance.  C7 - Students will gain an understanding of rates of reaction, including the graph profiles associated with this. They will then move onto learning about catalysts. Further learning will cover exothermic and endothermic reactions which will include a practical investigation, complete and incomplete combustion then thermal decomposition. | |
| **Key** **knowledge:**  B7 – Understanding how DNA is the basis of human life and the evidence of evolution.  C7 – Understanding of exothermic and endothermic reactions, how they absorb and release energy.  **Key vocabulary:**   |  |  | | --- | --- | | **Tier 2** | **Tier 3** | | **Probability** | **Species**  **Fossil**  **Chromosome**  **Genome** | | **Rate**  **Temperature**  **Fuel**  **Measure** | **Enthalpy**  **Catalyst**  **Combust**  **Decompose** | | **Key skills:**  ***Know how to…***  ***B7 – Use of punnet squares and probability to predict inheritance.***  ***C7 – Identify the improvements within a practical. Use equipment to measure temperature change. Collect and evaluate data.*** |
| **Co-curricular opportunities: *Understanding how cold packs and hand-warmers can be used.*** | **Key reading skills taught and key texts:**  **B7 - the history of the discovery of DNA**  **C7 - Questioning combustion reading**  **Wider Reading Opportunities/Links:**  B7 -<https://profiles.nlm.nih.gov/spotlight/kr/feature/biographical-overview>  C7 - <https://www.thoughtco.com/endothermic-and-exothermic-reactions-602105> |
| **How can I use this information at home?**   * Conversation starters with your children to discuss their learning * Support your child in carrying out independent research around the topic * Visit your local library (or BorrowBox), museums, or other locations to explore the topic * Promote books/other texts that explore this topic (see reading section) * Help your child to learn the key vocabulary | |