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| **What will we be learning?**  **Year 12 Patterns of Inheritance** | **Why this? Why now?**  Previous Learning  Future Learning  Enquiry Processes  Analyse Patterns, Draw conclusions, Present data, Justify opinions, Collect data, Present data, Plan variables | **Key Words:** |
| **What will we learn?**  the contribution of both environmental and genetic factors to phenotypic variation  how sexual reproduction can lead to genetic variation within a species   * How to use genetic diagrams to show patterns of inheritance * How to use phenotypic ratios to identify linkage (autosomal and sex linkage) and Epistasis * The use of the chi-squared (χ2) test to determine the significance of the difference between observed and expected results * The genetic basis of continuous and discontinuous variation * The factors that can affect the evolution of a species * The use of the Hardy–Weinberg principle to calculate allele frequencies in populations * The role of isolating mechanisms in the evolution of new species * The principles of artificial selection and its uses * The ethical considerations surrounding the use of artificial selection   **Misconceptions in this topic** | |
| **What opportunities are there for wider study?**  Careers  Agriculture Audiology Biochemistry Biotechnology Brewing Dentistry Dietetics Ecology Environmental Health Environmental science Fisheries Work Food Science Forensics Horticulture Laboratory Work Marine Biology Medicine Nursing Occupational Therapy Opthalmics and Orthoptics Paramedical Science Pharmacology Physiotherapy Prosthetics and Orthotics Psychiatry Radiography Speech Therapy Sports Science Teaching Veterinary Work Zoology  STE(A)M  https://highcliffe.sharepoint.com/sites/LearnSTEM | |
| **How will I be assessed?**  End of topic assessment | |