Year 9 Biology

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| TOPIC: Genetics and Evolution |

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| Theme: Identify and explain genetics and evolution | Level: Year 9 |
| Objectives: To develop an understanding of genetics and evolution | |

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| Focussing Statements | Key Words Practical | |
| **9Aa: Monsters and myths**   * Identify and give examples of environmental variation. * Explain how environmental variation is caused. * Tell the difference between continuous and discontinuous variation. * Explain why environmental variation can make classification and identification difficult.   **9Ab: Inherited variation**   * Identify and give examples of inherited variation. * Explain how inherited variation is caused. * Describe where genetic information is stored and what it does. * Identify normal distribution.   **9Ac: DNA**   * State what chromosomes are made of. * State the number of pairs of chromosomes in most human cells. * Describe where genes are found and what they do. * Describe the roles played by Watson, Crick, Franklin and Wilkins in the discovery of the structure of DNA. * Use a model to illustrate the relationship between cells, cell nuclei, DNA, chromosomes, genetic information and genes.   **9Ad: Genes and extinction**   * Explain how changes in an ecosystem can cause endangerment and extinction. * Suggest methods of conservation.   **9Ae: Natural selection**   * Explain how natural selection determines the survival of certain variations of adaptations within a population.   **9ba Reactions in plants**   * Model aerobic respiration using a word equation.   **9b Plant growth**   * Describe how gas exchange (including water) occurs in plants. | genus  journal  scientific paper  species  variation  characteristic  classification  continuous  continuous variation  discontinuous  discontinuous variation  environment  environmental factor  environmental variation  physical environmental factor  resource  adapted  biodiversity  competition  ecosystem  endangered  extinct  food web  gene bank  native | **Exploring science 9A and 9B practical works sheets** |