

Genetic Change

BIO12-13

3 inquiry questions • 13 dot points

1 How does mutation introduce new alleles into a population?

- explain how a range of mutagens operate, including but not limited to:...
- compare the causes, processes and effects of different types of mutation, including but not limited to:...
- assess the significance of 'coding' and 'non-coding' DNA segments in the process of mutation
- investigate the causes of genetic variation relating to the processes of fertilisation, meiosis and mutation
- evaluate the effect of mutation, gene flow and genetic drift on the gene pool of populations

2 How do genetic techniques affect Earth's biodiversity?

- investigate the uses and applications of biotechnology (past, present and future), including:...

3 Does artificial manipulation of DNA have the potential to change populations forever?

- investigate the uses and advantages of current genetic technologies that induce genetic change
- compare the processes and outcomes of reproductive technologies, including but not limited to:...
- investigate and assess the effectiveness of cloning, including but not limited to:...
- describe techniques and applications used in recombinant DNA technology, for example:...
- evaluate the benefits of using genetic technologies in agricultural, medical and industrial applications
- evaluate the effect on biodiversity of using biotechnology in agriculture
- interpret a range of secondary sources to assess the influence of social, economic and cultural contexts on a range of biotechnologies