

Heredity

BIO12-12

5 inquiry questions • 12 dot points

1

How does reproduction ensure the continuity of a species?

- explain the mechanisms of reproduction that ensure the continuity of a species, by analysing sexual and asexual methods of reproduction in a variety of organisms, including but not limited to:...
- analyse the features of fertilisation, implantation and hormonal control of pregnancy and birth in mammals
- evaluate the impact of scientific knowledge on the manipulation of plant and animal reproduction in agriculture

2

How important is it for genetic material to be replicated exactly?

- model the processes involved in cell replication, including but not limited to:...
- assess the effect of the cell replication processes on the continuity of species

3

Why is polypeptide synthesis important?

- construct appropriate representations to model and compare the forms in which DNA exists in eukaryotes and prokaryotes
- model the process of polypeptide synthesis, including:...
- investigate the structure and function of proteins in living things

4

How can the genetic similarities and differences within and between species be compared?

- conduct practical investigations to predict variations in the genotype of offspring by modelling meiosis, including the crossing over of homologous chromosomes, fertilisation and mutations
- model the formation of new combinations of genotypes produced during meiosis, including but not limited to:...

5

Can population genetic patterns be predicted with any accuracy?

- investigate the use of technologies to determine inheritance patterns in a population using, for example:...
- investigate the use of data analysis from a large-scale collaborative project to identify trends, patterns and relationships, for example:...