

Heredity and Variation

Chapter 16: Heredity and Variation · Topic 1

Key Concept

Genes, located on chromosomes, carry hereditary information passed from parents to offspring, determining various inherited traits.

Mendel's laws of inheritance explain how traits are passed down, including dominant and recessive alleles determining observable characteristics.

Variation occurs due to genetic differences (mutations, genetic recombination) and environmental influences on individuals within a species.

Heredity and variation together drive evolution, as advantageous variations can be naturally selected and passed to future generations.

Quick Revision Notes

- Genes on chromosomes carry hereditary info.
- Passed from parents to offspring.
- Mendel's laws: dominant, recessive alleles.
- These determine observable characteristics.
- Variation: genetic differences, mutations.
- Also environmental influences matter.
- Heredity, variation drive evolution.
- Advantageous variations naturally selected.

Practice Questions

- 1 Discuss how traits pass from parents to offspring.
- 2 Research Mendel's experiments with pea plants.
- 3 Discuss an example of variation among people.
- 4 Discuss how mutations can cause variation.
- 5 Discuss the connection between variation and evolution.
- 6 Explain heredity in your own words.