

Explain the role of meiosis and mitosis and the function...

explain the role of meiosis and mitosis and the function of chromosomes, DNA and genes in heredity and predict patterns of Mendelian inheritance

Learning intention

- explain the role of meiosis and mitosis and the function of chromosomes, DNA and genes in heredity and predict patterns of Mendelian inheritance

Teach and model

- using models and diagrams to represent the relationship between genes, chromosomes, and DNA of an organism's genome
- explaining how genetic information passed on to offspring from both parents by meiosis and fertilisation increases the variation of a species
- using Mendelian inheritance to predict the ratio of offspring genotypes and phenotypes in monohybrid crosses involving dominant and recessive alleles or in genes that are...

Check understanding

- Explain the main idea in explain the role of meiosis and mitosis and the function... using an example.
- Show the idea in a second way: with words, a model, a diagram or symbols.
- Apply the idea to a short unfamiliar situation and justify the result.

Teaching cautions

- Ask the student to explain their choice, not only state an answer.
- Check that key vocabulary is understood in a new example.
- Mix representations so the skill is transferred rather than copied.

Quick lesson sequence

- Connect to prior knowledge and introduce the key vocabulary.
- Model one clear example, then solve a second example together.
- Finish with an independent check and a short student explanation.