Review: reproduction and inheritance

Student activity • observation and reasoning

YEAR 11 / LESSON 94 / BIOLOGY + SCIENCE (DOUBLE AWARD)

The question

Can you connect reproductive processes with inherited variation?

Use the supplied examples, record your reasoning and correct it using evidence.

Equipment

- Student booklet, pencil and ruler
- Earlier reproduction and inheritance work with correction paper

Paper, modelling and written reasoning only. No chemicals or biological samples are handled.

Course coverage: Shared reproduction and inheritance; Biology-only molecular and hormonal extensions marked.

Plan, model or apparatus sketch

Draw and label the apparatus or biological model; identify one limitation.

Method and reasoning

Read the whole sequence before starting

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1. Compare sexual and asexual reproduction using gamete fusion rather than simply counting parents.

2. Trace fertilisation, zygote division and embryo development.

3. Compare mitosis and meiosis, including chromosome-number outcomes.

4. Complete a fictional Aa × aa cross and explain its probabilities.

5. Biology extension: connect DNA sequence, mRNA codons and amino-acid sequence.

6. Correct one misconception about dominance and one about the menstrual-cycle model.

Cleanup

- Return models and keep the corrected work.

Record your evidence

Blank spaces are for your own work

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Reference and task data

Shared monohybrid inheritance includes lesson 92. Detailed RNA/protein synthesis, codominance and FSH/LH interactions are Biology extensions. Use fictional examples and respect privacy.

Example / trial	Observation / evidence	Explanation / limit
Evidence / comparison		
Explanation		
Limit / correction		

Show your calculations, labelled model or correction here.

Explain and evaluate

Use evidence and show calculation steps where relevant

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1. What defines sexual reproduction?

2. Which process halves chromosome number?

3. What is the aa probability from Aa × aa?

4. Does dominant mean beneficial?

5. Biology: where does translation occur?

6. Must every menstrual cycle be 28 days?