

Reproductive Technologies - Artificial Insemination and Artificial Pollination

Use this worksheet after reading the lesson to practise the key ideas and prove you can meet the success criteria.

Name _____

Date _____

Class _____

1. Key Ideas

These technologies manipulate reproduction without usually changing DNA sequence directly. The syllabus focus is comparing their processes and outcomes, then linking them to productivity and control of inherited traits.

- Artificial insemination and artificial pollination are reproductive technologies.
- The animal system and plant system differ in reproductive structures and procedure.

2. Success Criteria

By the end, you should be able to:

- Artificial insemination and artificial pollination are reproductive technologies.
- They mainly control which gametes combine rather than directly altering DNA sequence.
- Each has specific process steps and intended outcomes.

3. Key Terms

Artificial insemination

Deliberate introduction of semen into the female reproductive tract without natural mating.

Artificial pollination

Deliberate transfer of selected pollen to a stigma to control plant fertilisation.

Controlled breeding

Managing which parents contribute gametes to offspring.

Trait control

Increasing the likelihood that selected inherited characteristics appear in offspring.

Fertilisation outcome

The genetic combination produced after selected gametes combine.

Productivity

Efficiency or output gain, often important in agricultural contexts.

4. Activity: Build the Lesson Map

Use the lesson to complete the table. Keep answers brief but specific.

Prompt	Your answer
Main concept	
Important example	
Common mistake to avoid	
How this links to the next lesson	

5. Short Answer Questions

1. Explain this lesson goal in your own words: "Artificial insemination and artificial pollination are reproductive technologies.". Use one specific example from the lesson.

BAND 3 **2 MARKS**

2. Apply this idea to a new example: "They mainly control which gametes combine rather than directly altering DNA sequence.". Show your reasoning clearly.

BAND 4 **3 MARKS**

3. Analyse why this idea matters for understanding Reproductive Technologies - Artificial Insemination and Artificial Pollination: "Each has specific process steps and intended outcomes.".

BAND 5 **4 MARKS**

6. Extend: Apply the Idea

BAND 5/6

5 MARKS

A student gives a memorised answer about Reproductive Technologies - Artificial Insemination and Artificial Pollination but does not use evidence or reasoning.

Improve the answer by writing a stronger response that uses accurate terminology, a relevant example and a clear explanation.

7. Multiple Choice

1. What is the best first step when answering a question about Reproductive Technologies - Artificial Insemination and Artificial Pollination?

- A. Identify the key concept being tested
- B. Write every fact from memory
- C. Ignore the command word
- D. Skip examples and evidence

2. Which answer would show stronger understanding of Reproductive Technologies - Artificial Insemination and Artificial Pollination?

- A. An answer with accurate terms and reasoning
- B. A copied definition only
- C. A single-word response
- D. An answer with no example

3. What should you do if a question asks you to explain?

- A. Link the idea to a reason or cause
- B. List unrelated facts
- C. Only draw a diagram
- D. Write the shortest possible answer

8. Success Criteria Proof

Finish with evidence that you can do each success criterion.

SUCCESS CRITERION 1

Prove that you can: Artificial insemination and artificial pollination are reproductive technologies.

BAND 3 **2 MARKS**

SUCCESS CRITERION 2

Prove that you can: They mainly control which gametes combine rather than directly altering DNA sequence.

BAND 4 **3 MARKS**

SUCCESS CRITERION 3

Prove that you can: Each has specific process steps and intended outcomes.

BAND 5 **4 MARKS**

One thing I still need help with:
