BIOLOGY YEAR 12 - MODULE 5 - LESSON 11

Translation - From mRNA to Polypeptide

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

Once the genetic message has been copied into mRNA, the cell must interpret that message and assemble amino acids in the correct order. Translation turns the mRNA code into a growing polypeptide.

- The ribosome reads mRNA during translation.
- How peptide bonds form during polypeptide elongation.

2. Success Criteria

By the end, you should be able to:

- The ribosome reads mRNA during translation.
- tRNA carries amino acids and pairs by anticodon-codon matching.
- How peptide bonds form during polypeptide elongation.

3. Key Terms

Translation
The process of using the mRNA code to assemble a polypeptide.

Ribosome
The site where mRNA is read and amino acids are joined during translation.

tRNA
Transfer RNA, which carries a specific amino acid and has an anticodon.

Anticodon
A three-base sequence on tRNA that pairs with a complementary codon on mRNA.

Peptide bond
The bond that links adjacent amino acids in a polypeptide.

Polypeptide
A chain of amino acids joined in a sequence determined by the genetic code.

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: "The ribosome reads mRNA during translation.". Use one specific example from the lesson.

BAND 3 2 MARKS

2. Apply this idea to a new example: "tRNA carries amino acids and pairs by anticodon-codon matching.". Show your reasoning clearly.

BAND 4 3 MARKS

3. Analyse why this idea matters for understanding Translation - From mRNA to Polypeptide: "How peptide bonds form during polypeptide elongation.".

BAND 5 4 MARKS

6. Extend: Apply the Idea

BAND 5/6 5 MARKS

A student gives a memorised answer about Translation - From mRNA to Polypeptide 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 Translation - From mRNA to Polypeptide?

☐ 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 Translation - From mRNA to Polypeptide?

☐ 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: The ribosome reads mRNA during translation.

BAND 3 2 MARKS

SUCCESS CRITERION 2

Prove that you can: tRNA carries amino acids and pairs by anticodon-codon matching.

BAND 4 3 MARKS

SUCCESS CRITERION 3

Prove that you can: How peptide bonds form during polypeptide elongation.

BAND 5 4 MARKS

One thing I still need help with: