

8.5 Translation

Key Concept: Translation converts an mRNA message into a polypeptide, or protein

Directions: Answer the following questions using complete sentences in your science notebook.

1. What is translation?
2. How can four nucleotides code for 20 amino acids?
3. What is a codon?
4. What amino acid is CCA a code for?
5. What is a stop codon?
6. What is a start codon?
7. What happens if the reading frame is changed?
8. Why is the genetic code called universal?
9. Suppose an mRNA molecule in the cytoplasm had 300 nucleotides. How many amino acids would be in the resulting protein?
10. What two tools are used in reading the mRNA?
11. What does the tRNA do?
12. What is an anticodon?
13. Where does translation happen (in both eukaryotic and prokaryotic cells)?
14. Explain the three steps of translation:
 - Step 1:
 - Step 2:
 - Step 3:
15. Explain the connection between a codon and an anticodon.