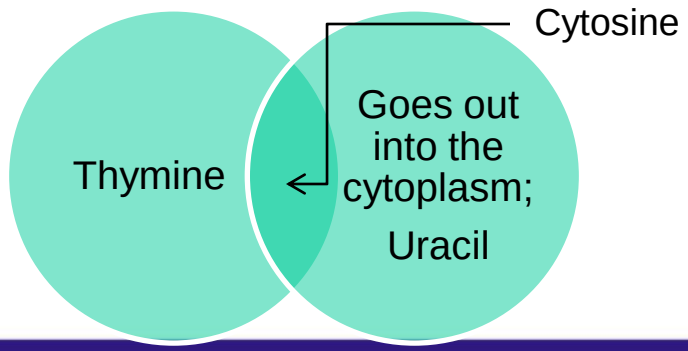
SCIENCE EXPLORER

Section 1-4

1. a, b
2. adenine (A), thymine (T), guanine (G), and cytosine (C)
3. The genetic code is the order of nitrogen bases along a gene that specifies what type of protein will be produced.
4. amino acid
5. amino acids
6. During protein synthesis, the cell uses information from a gene on a chromosome to produce a specific protein.
7. ribosomes
8. 

Section 1-4 continued

9. a. Messenger RNA copies the coded message from the DNA in the nucleus.
   b. Transfer RNA carries amino acids and adds them to the growing protein.
10. d
11. b
12. A mutation is any change in a gene or chromosome.
13. Mutations can cause a cell to produce an incorrect protein during protein synthesis.
14. b, c
15. variety
16. false
17. helpful
18. environment

Section 1-4

The DNA Connection

Answer to Discover p 39:

---/-·/-·-·/····/·-·/---/--/---/···/---/--/·/···/

Section 1-4

The DNA Connection

Protein Synthesis

SCIENCE EXPLORER

Solve this word puzzle and find out the name of the "factory" that produces proteins:

ERMIOBSO

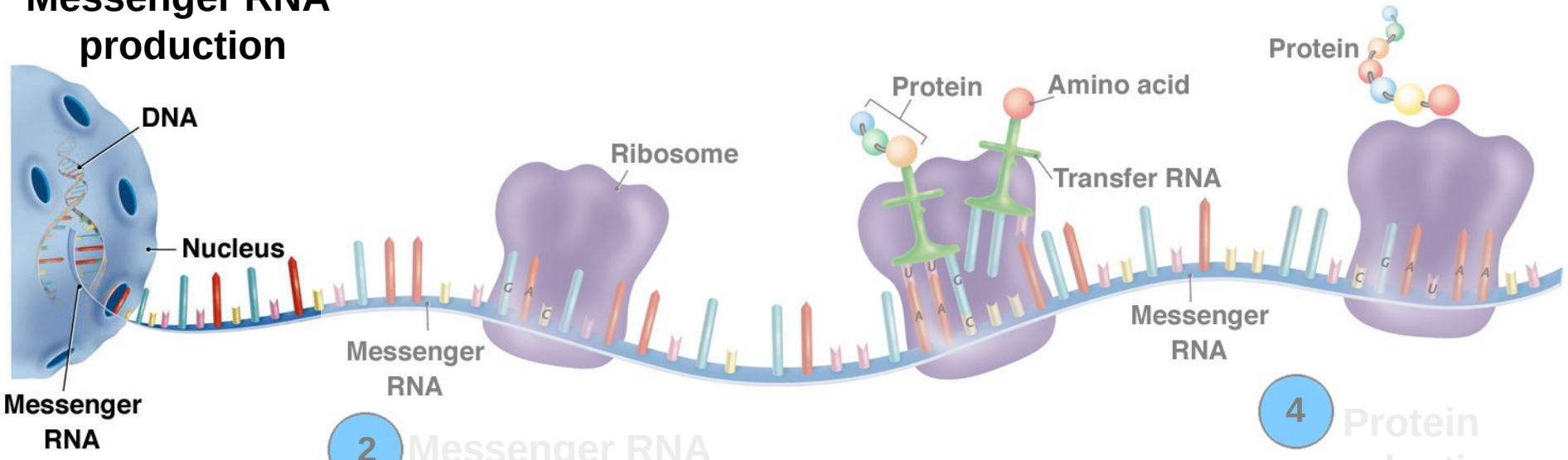
Ribosome

Protein Synthesis

SCIENCE EXPLORER

1

Messenger RNA production



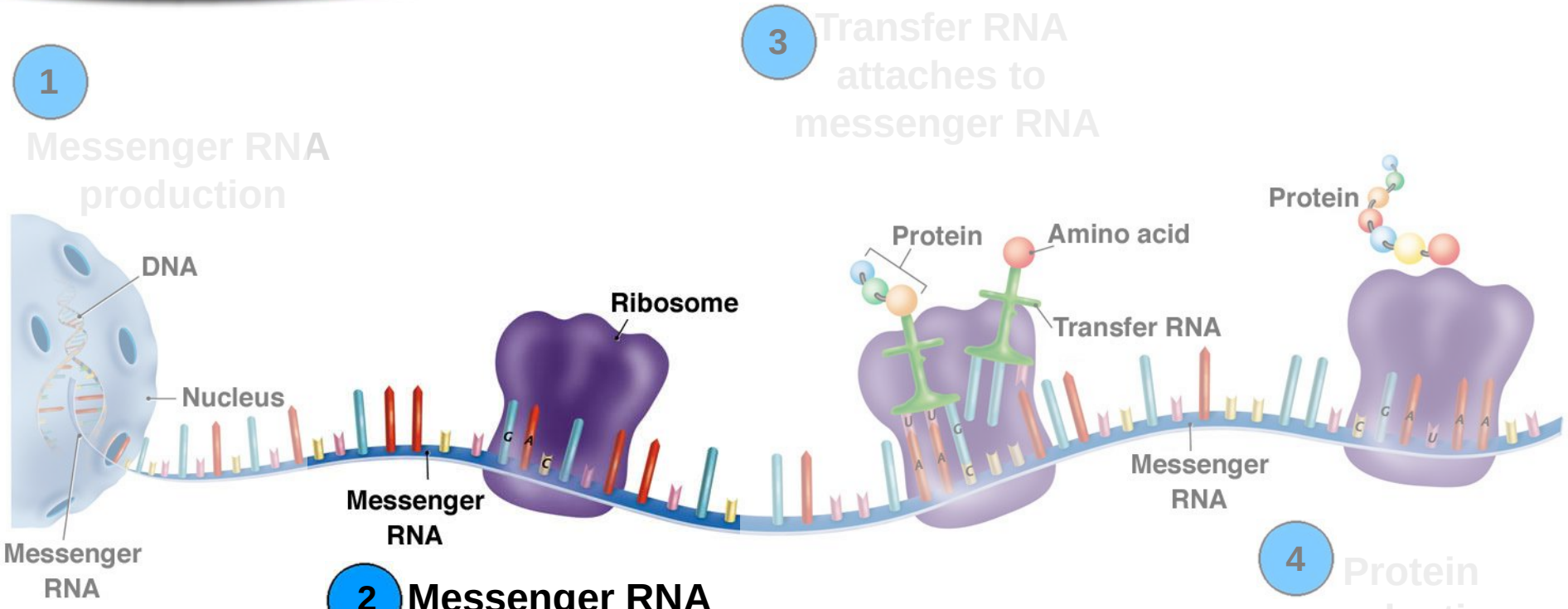
2 Messenger RNA attaches to a ribosome

3 Transfer RNA attaches to messenger RNA

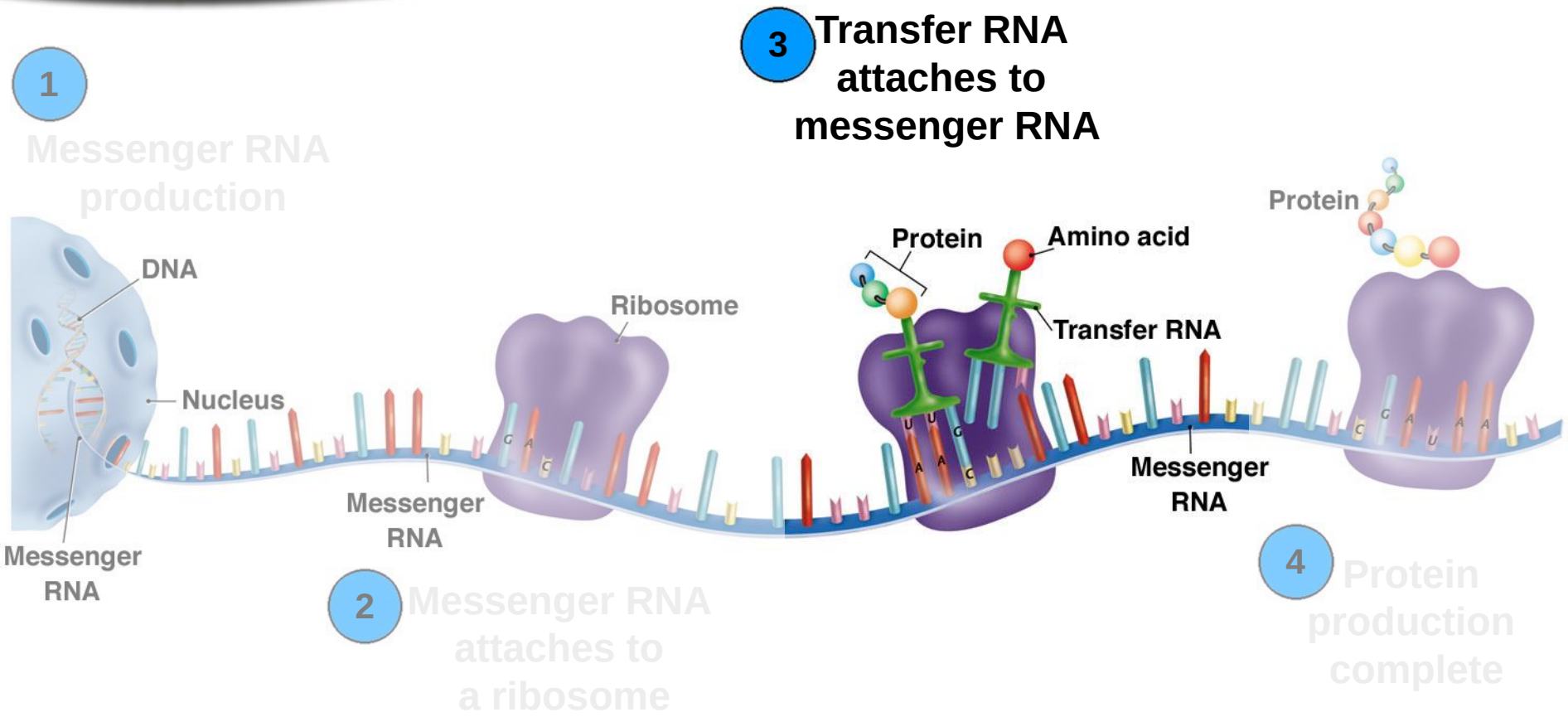
4 Protein production complete

Protein Synthesis

SCIENCE EXPLORER



Protein Synthesis

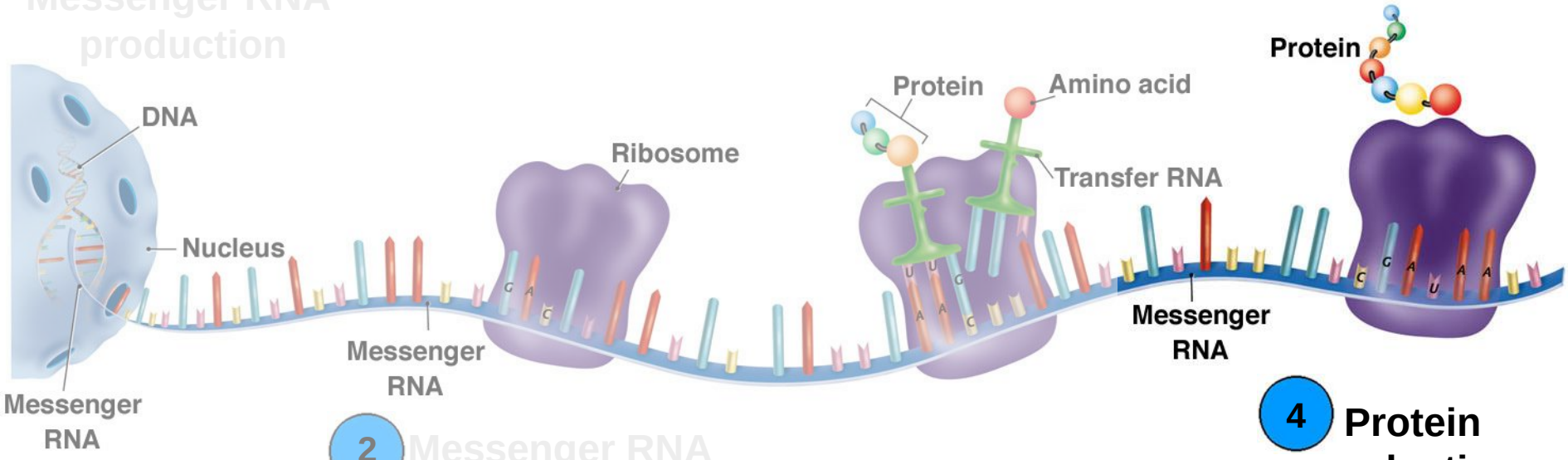


Protein Synthesis

1 Messenger RNA production

2 Messenger RNA attaches to a ribosome

3 Transfer RNA attaches to messenger RNA



4 Protein production complete

Protein Synthesis