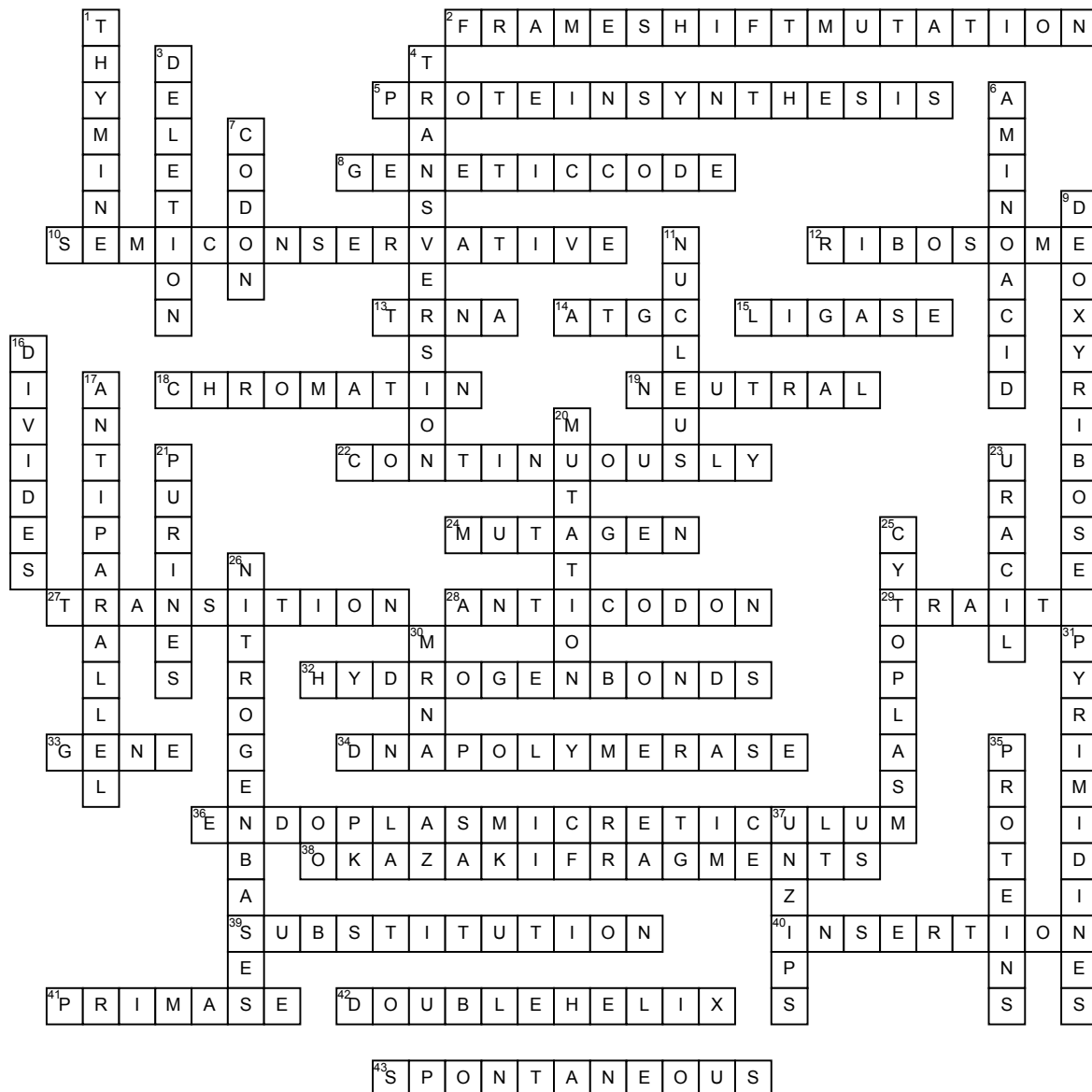


# Replication, Transcription, Translation, and Mutations



## Across

2. Type of mutation that changes the entire sequence of DNA following the mistake (2 words)
5. tRNA and mRNA are involved in (2 words)
8. A mutation can change the \_\_\_\_\_ and be replicated when forming new cells (2 words)
10. DNA replication is \_\_\_\_\_
12. After transcription, mRNA leaves the nucleus and attaches itself to a \_\_\_\_\_
13. \_\_\_\_\_ carries amino acids to the site of protein synthesis
14. The bases are often abbreviated to \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_
15. \_\_\_\_\_ joins the Okazaki fragments
18. Unwound DNA
19. A mutation can be \_\_\_\_\_, beneficial, or harmful
22. DNA polymerase replicates one strand \_\_\_\_\_ and one not
24. A mutagen is a(n) \_\_\_\_\_, such as radiation, chemicals, high temperatures, or UV light
27. A purine → purine or pyrimidine → pyrimidine mutation
28. A(n) \_\_\_\_\_ is a sequence of three bases in a tRNA molecule
29. Passed on from parents to offspring
32. \_\_\_\_\_ connect the bases (2 words)
33. Part of a chromosome, passed on from parents to offspring

34. \_\_\_\_\_ adds nucleotides and checks to make sure the new copy is correct (2 words)
36. Ribosomes are located on the \_\_\_\_\_ (2 words)
38. Because it only makes 5'-3', DNA polymerase makes little sections for the other side called \_\_\_\_\_ (2 words)
39. One base is placed incorrectly
40. One base is added
41. \_\_\_\_\_ creates a primer on the DNA strand by adding RNA nucleotides
42. DNA is shaped like a twisted ladder, or \_\_\_\_\_ (2 words)
43. Mutations can be \_\_\_\_\_
- Down**
1. In DNA, adenine pairs with \_\_\_\_\_
3. One base is deleted
4. A purine → pyrimidine or pyrimidine → purine mutation
6. The message from the mRNA will be translated into an \_\_\_\_\_ sequence (2 words)
7. A(n) \_\_\_\_\_ is a sequence of three bases that codes for an amino acid
9. The sides of DNA are made of \_\_\_\_\_ and phosphate.
11. Transcription happens in the \_\_\_\_\_
16. DNA replication does not happen when the cell \_\_\_\_\_
17. DNA is \_\_\_\_\_
20. A change that takes place in DNA
21. A and G are both \_\_\_\_\_

23. RNA has \_\_\_\_\_ instead of thymine
25. Translation occurs in the \_\_\_\_\_, specifically on the ribosomes
26. \_\_\_\_\_ contain nitrogen (2 words)
30. Transcription is the process of making \_\_\_\_\_
31. T and C are \_\_\_\_\_
35. \_\_\_\_\_ are made in the ribosomes
37. Helicase \_\_\_\_\_ DNA