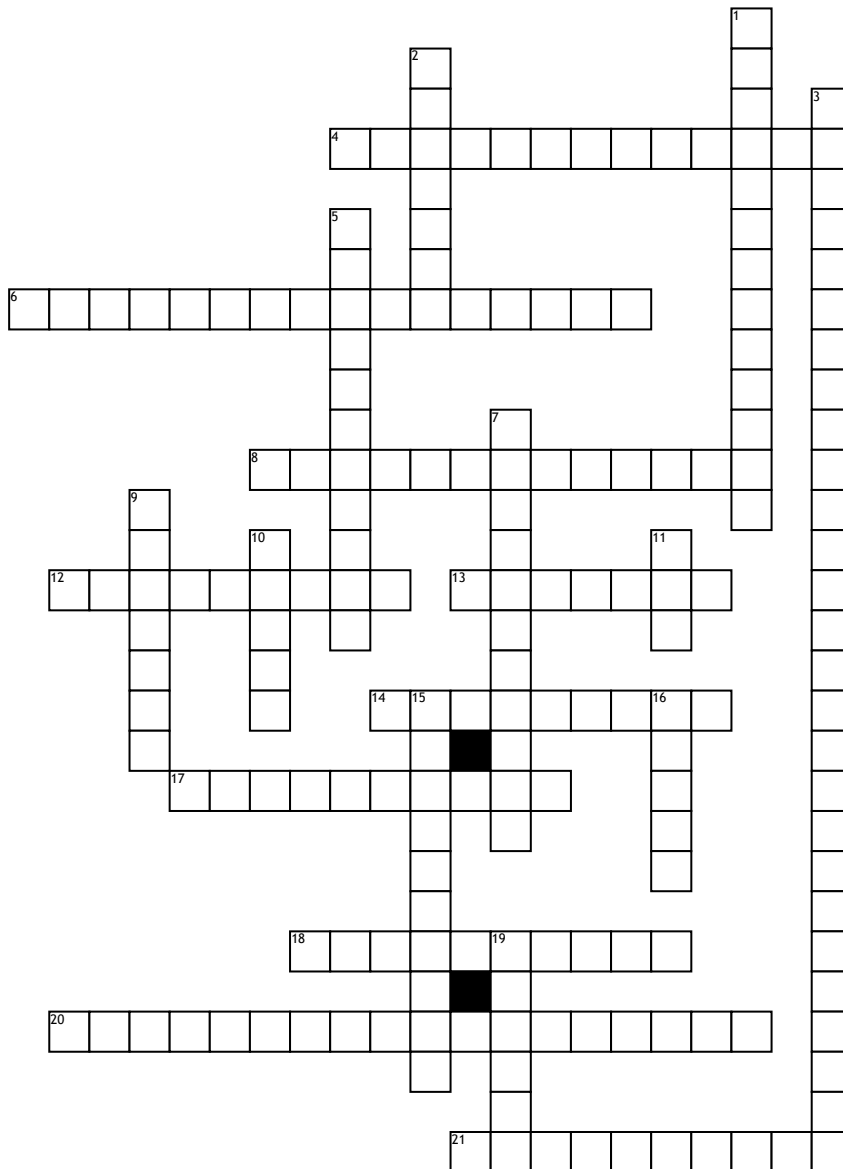


DNA Structure and Function



Across

4. What has a dimeric structure that each strand binds a parent strand? This travels toward 5' end of each parent strand, nucleotides added to 3' end of daughter strands

6. What is much shorter in eukaryotes because of differences in polymerases?

8. What is the process that takes DNA to RNA?

12. What determines amino acid attached to tRNA, complementary to mRNA codon?

13. What strand is synthesized in Okazaki Fragments, 200-2000 base pairs separated by 50 bp gaps

14. What is numerous at ends of eukaryotic chromosomes, has one that is lost from ends of chromosome with each replication, and prevents damage to coding regions, when last one is lost, more replication causes chromosome damage?

17. What is mRNA posttranscriptionally modified by miRNA, moved from nucleus?

18. What is the area of a eukaryotic chromosome with repeating bases? The two sister chromatids remain connected here until disjunction in mitosis or meiosis.

20. What enzymes have topoisomerases that relax supercoiling: helicases that disrupt H-bonds between bases

21. What is the first step of Transcription?

Down

1. What has multiple linear chromosomes, is much larger than circular prokaryotic chromosomes; is supercoiled around histone proteins, and has multiple origins of replication

2. What strand is synthesized continuously?

3. What process has 2 DNA strands unzip, each being a template for complementary nucleotides to form new strands. This process creates 2 identical chromosomes/

5. What is the third and final step of Transcription?

7. What is mRNA translated to protein by ribosomes in cytoplasm?

9. What are the noncoding sequences in primary mRNA, spliced out?

10. What is every 3 nucleotides in mRNA? Each one of these codes for an amino acid

11. What is the single origin of replication; two replication forks move in opposite directions around chromosome

15. What is the second step of Transcription?

16. What are the coding sequences in primary mRNA?

19. What are adjacent genes expressed together called?