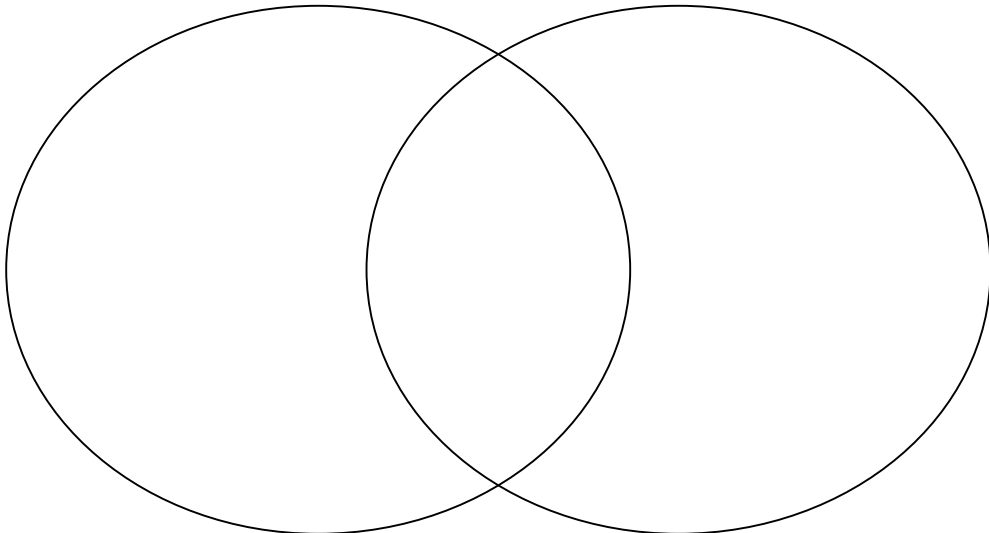


1. What scientists are attributed with discovering the structure of a DNA molecule?
2. What shape is a DNA molecule?
3. In DNA Adenine pairs with \_\_\_\_\_ and Guanine pairs with \_\_\_\_\_.
4. Complete the following DNA sequence if one strand of DNA read:

T A A C G C G A T T A T C C C

5. What are the three parts of a nucleotide
  - a.
  - b.
  - c.
6. Compare and contrast RNA and DNA



7. What type of bond is present in a DNA molecule and is responsible for holding together nitrogenous bases?
8. In RNA Adenine pairs with \_\_\_\_\_ and Cytosine pairs with \_\_\_\_\_.
9. Describe the three different types of RNA molecules.
  - a. Transfer RNA (tRNA)
  - b. Messenger RNA (mRNA)
  - c. Ribosomal RNA (rRNA)

10. Complete the diagram to determine where the stage of protein synthesis occurs and the end result of each stage:

	Occurs in	Results in
<b>Transcription</b>		
<b>Translation</b>		

11. Determine the following sequences based on the gene sequence of the DNA strand

DNA	TAC	CAC	GCT	CCC	TAA	AGG	ATT
mRNA							
Amino Acid							
tRNA							

12. mRNA is always read three nucleotides at a time, what do we call three consecutive nucleotides?

13. In the above sequence what would the resulting amino acid sequence be if the C in the second codon was deleted?

14. What type of mutation occurred in the above question?

15. In the above sequence what would the resulting amino acid sequence be if the T in the third codon was changed to an A?

16. What type of mutation occurred in the above question?