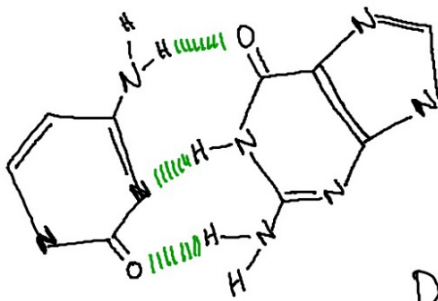


BioChem Unit 5 Review

- | | | | | | |
|-------|-------|-------|-------|-------|-------|
| 1. A | 11. A | 21. D | 31. D | 41. A | 51. B |
| 2. D | 12. C | 22. A | 32. D | 42. D | 52. B |
| 3. A | 13. D | 23. B | 33. C | 43. C | 53. A |
| 4. B | 14. D | 24. B | 34. A | 44. B | 54. A |
| 5. B | 15. A | 25. D | 35. C | 45. A | 55. C |
| 6. D | 16. C | 26. A | 36. C | 46. C | 56. B |
| 7. A | 17. C | 27. C | 37. C | 47. B | 57. B |
| 8. B | 18. C | 28. B | 38. C | 48. D | 58. D |
| 9. A | 19. A | 29. B | 39. A | 49. C | 59. C |
| 10. B | 20. A | 30. A | 40. B | 50. A | 60. C |

61.



||||| represents H bonds.

62. purines #9 nitrogen
 pyrimidines #1 nitrogen
 growth at 3' end

DNA	TAC	CGC	GCC	GAC	AAT	ACT
-----	-----	-----	-----	-----	-----	-----

mRNA	AUG	GCG	CGG	CUG	UUA	UGA
------	-----	-----	-----	-----	-----	-----

nonsense - new codon is STOP

tRNA	UAC	CGC	GCC	GAC	AAU	ACU
------	-----	-----	-----	-----	-----	-----

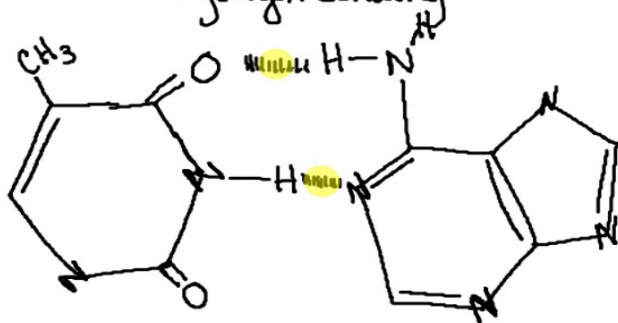
missense - code for diff. A.A.

A.A.	met	ala	arg	Leu	Leu	STOP
------	-----	-----	-----	-----	-----	------

silent - code for same A.A.

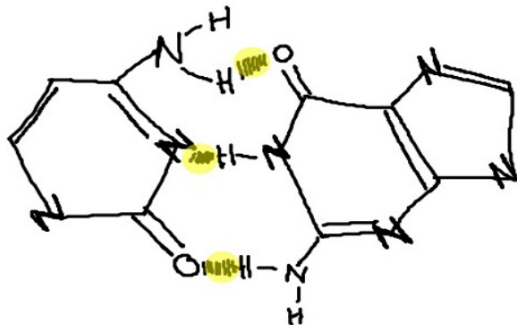
Illustration of the hydrogen bonding in the double helix.

A = T

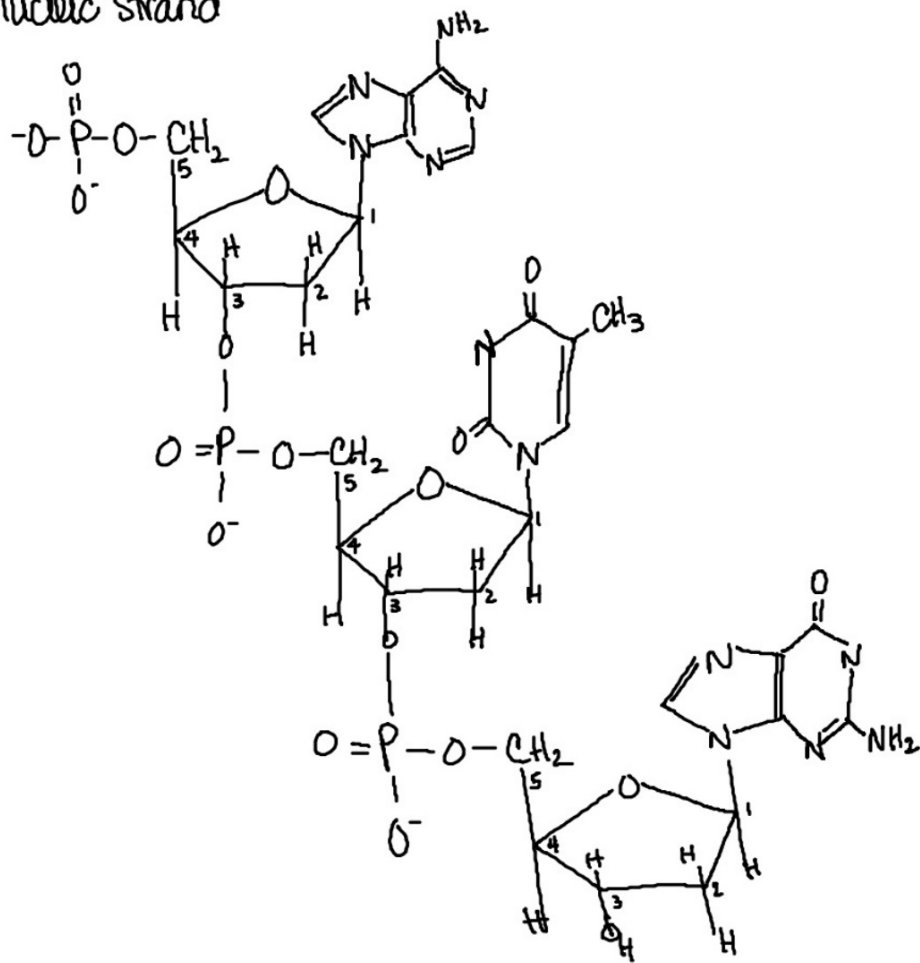


← hydrogen bond

C = G



Nucleic strand



Important Enzymes:

Helicase - unwinds the double helix

DNA polymerase - replication on leading strand ($5' \rightarrow 3'$)

RNA polymerase - synthesize new RNA

Primase - primer for DNA synthesis, created by RNA

DNA ligase - catalyzes the phosphodiester bonds (linkages)

Nucleases - enzymes that can hydrolyze the phosphodiester bonds

Peptidyl transferase - promotes the formation of peptide bonds between the amino acids during translation