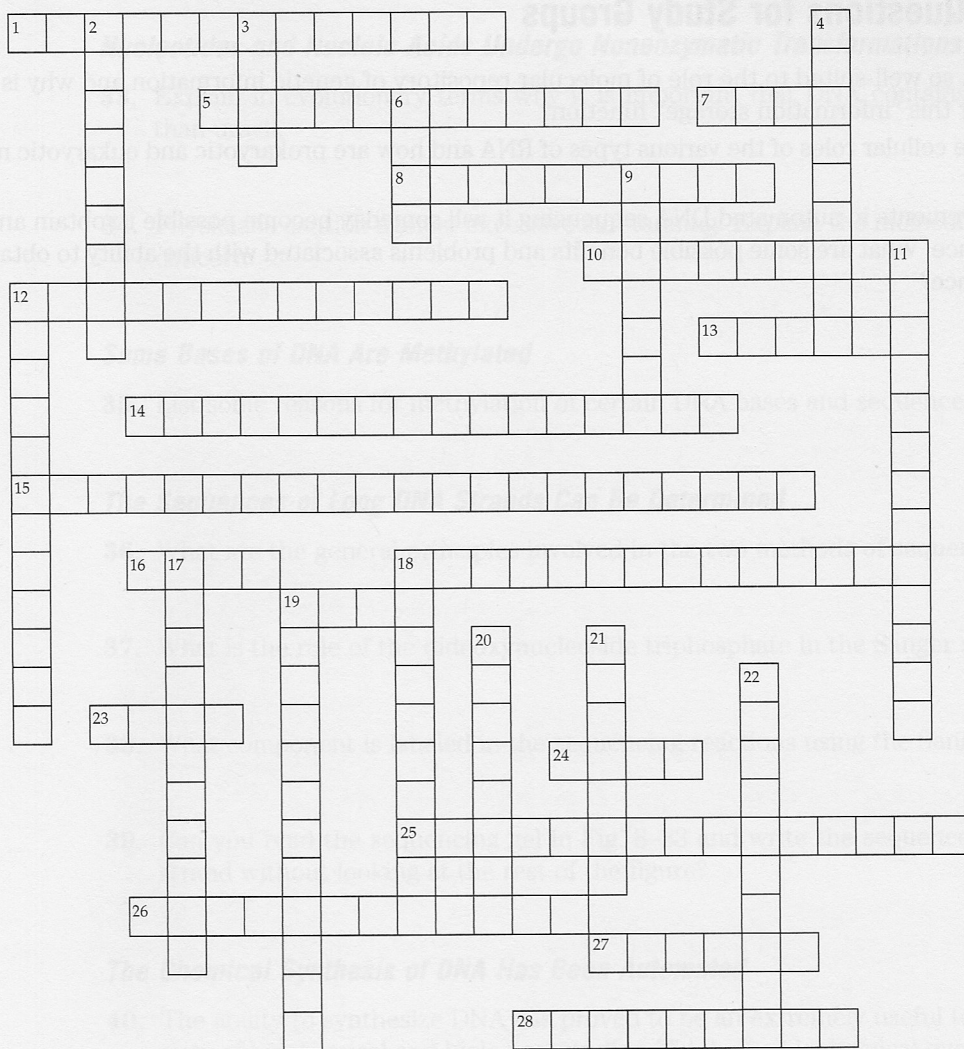


SELF-TEST

Do You Know the Terms?



ACROSS

1. These two strands are _____ to each other.
AATGCGGTCCTAT
TTACGCCAGGATA
5. 3' → 5'
5' ← 3'
7. A ribonucleic acid involved in protein synthesis; it binds amino acids.
8. Contains a phosphate group in an ester linkage to a ribose sugar and a nitrogenous base.
10. A common intracellular signaling molecule. (2 words)
12. Most eukaryotic mRNA codes for a single polypeptide and is _____.
13. What two complementary strands of DNA spontaneously do to form an intact duplex.
14. Thymidylate is a nucleotide found primarily in _____ acids.

15. A common protein domain found in proteins that bind ATP. (3 words)
16. A major structural component of the protein synthetic machinery of cells.
18. Covalent bonds that link the individual nucleotide residues in DNA and RNA.
19. Structure containing polypurine tracts and mirror repeats; forms a triple helix.
23. Left-handed double-helical structure.
24. Right-handed, Watson-Crick double helix.
25. Short polymers of nucleotides (50 or less), often used as complementary DNA "probes" for hybridization techniques.
26. AACCTTTTCCAA
TTGAAAAGGTT (2 words)
27. DNA duplex formed from DNA of different species.
28. Non-Watson-Crick, or _____ pairing; allows formation of triplex DNA strands.

DOWN

2. Hydrogen peroxide, a byproduct of aerobic metabolism, is a common cause of these in DNA.
3. Carries genetic information from DNA to the ribosomes.
4. Contains a purine attached to a phosphorylated ribose; the base was first isolated from bird manure.
6. Dehydrated, compact form of DNA.
9. A major pyrimidine; has a methyl group at C-5.
11. Describes mRNA that is translated into more than one protein.
12. Determined for a solution of DNA by measuring UV light absorption as a function of temperature. (2 words)
17. Uracil is a nitrogenous base found predominantly in _____ acids.
18. AACCAATTGGTT
TTGGTTAACCAA
19. The increase in UV light absorption when double-stranded DNA is denatured is referred to as the _____ effect.
20. A major pyrimidine; has an amino group at C-4.
21. Uracil attached through N-1 to ribose.
22. Purine or pyrimidine base covalently bound to furanose through an *N*- β -glycosidic bond.