

Across

1. full name of DNA
5. base that matches with cytosine in DNA and RNA
8. any mistake or change in the DNA sequence
11. sequence of Nitrogen-bases along 1 strand of DNA is a code to make proteins
13. the structure of DNA was announced on \_\_\_\_\_ 28, 1953
16. organism studied to help scientists figure out the genetic code
17. school in England where the DNA structure was discovered
18. # of possible codons
20. lacking one or more chromosomes
22. 20 different structures that make up proteins
23. complex polymers of amino acids
24. set of 3 Nitrogen-bases
25. remaining 3 codons signal the chain to \_\_\_\_\_
27. people credited with the discovery of the structure of DNA
30. the zygote usually \_\_\_\_\_ if it has a chromosomal mutation
31. copy that carries the information from DNA out into the cytoplasm of the cell
33. brings amino acids to the ribosomes so they can be assembled into proteins
35. change in a single base-pair in DNA
38. failure of chromosomes to separate during meiosis
42. simple sugar of RNA
43. random event that causes a change in the DNA sequence
44. changing the information in a sequence of mRNA bases to a sequence of amino acids that make up proteins
45. gamete has 3 complete sets of chromosomes
46. cytosine, thymine & uracil

Down

1. shape of DNA, looks like a twisted ladder
2. also called Trisomy 21
3. base that matches with uracil in RNA
4. making an RNA copy from DNA
6. group shared by DNA & RNA
7. international research program that mapped the sequence of DNA in humans
9. the zygote has an extra chromosome
10. smaller subunits of DNA

12. single base is added or deleted from DNA
14. type of bonds that join the bases together in DNA
15.  $N$  = haploid,  $2N$  = diploid, and  $3N$  = \_\_\_\_\_
17. base that matches with guanine in DNA and RNA
19. did not get a Nobel prize for her work with DNA
21. if the zygote with a chromosomal mutation develops, it is usually  
\_\_\_\_\_
26. occurs when part of a chromosome is broken off and lost during cell division
28. made of protein & DNA
29. helps produce enzymes needed to bond Amino Acids together when making proteins
32. type of protein that breaks the H-bonds in DNA to unzip the molecule
34. copying DNA
36. base that matches with adenine in RNA
37. adenine & guanine
39. simple sugar of DNA
40. # of codons that code for an amino acid
41. base that matches with adenine in DNA