

Define the following terms:

1. AMINO ACIDS: building blocks of proteins
2. ANTICODON: three nucleotides on the RNA that are complementary to the sequence of a codon in mRNA
3. CHROMOSOMES: rod shaped form of genetic material in the cell nucleus that controls all cell activities through protein synthesis
4. DEOXYRIBOSE: 5-carbon sugar in DNA
5. DEOXYRIBONUCLEIC ACID: (DNA) nucleic acid that makes up chromosomes, controls protein synthesis and all other cell activities in all organisms
6. DOUBLE HELIX: twisted ladder
7. GENE: unit of heredity, enough DNA to instruct for the synthesis of one protein
8. GENETIC CODE: instructions for building proteins carried by the order of bases on DNA
9. MESSENGER RNA: (mRNA) copies DNA's code and carries the genetic information to the ribosomes to perform protein synthesis
10. NUCLEIC ACIDS: complex biological compounds made of chains of nucleotides.
11. NUCLEOTIDE: 3 part units that make up nucleic acids, contain 1 sugar group, 1 phosphate group, and 1 nitrogen containing base
12. PROTEIN SYNTHESIS: the process through which cells build the proteins they need and of which they are made
13. PURINES: double ring of carbon and nitrogen atoms, adenine and guanine
14. PYRIMIDINES: single ring of carbon and nitrogen atoms, thymine and cytosine
15. REPLICATION: when DNA makes an exact copy of itself to be used when cells divide or to pass the code for making proteins to offspring
16. RIBONUCLEIC ACID: (RNA) near copy of DNA that carries the code (or instructions) for protein synthesis from the nucleus to the cytoplasm
17. RIBOSOMAL RNA: (rRNA) globular form of RNA that makes up ribosomes, along with protein
18. RIBOSOMES: site of protein synthesis in the cytoplasm of the cell
19. TRANSCRIPTION: the process through which a single strand of mRNA is produced from a DNA strand
20. TRANSFER RNA: (tRNA) transfers amino acids to the ribosomes where proteins are synthesized
21. TRANSLATION: process of decoding the mRNA into a protein
22. TRIPLET CODONS : group of 3 bases on a mRNA strand that act as a code word for a specific amino acid
23. FREDRICK GRIFFITH: conducted an experiment on mice to show that bacteria are capable of transformation
24. CHASE AND HERSHEY: performed the blender experiment
25. WATSON AND CRICK: in 1953 put together a model of DNA
26. ROSALIND FRANKLIN: In 1952 used x-ray diffraction photographs of DNA crystals to show the structure of DNA
27. ERWIN CHARGAFF: showed the amounts of the four bases in DNA
28. OSWALD AVERY: conducted an experiment to conclude that DNA is responsible for transformation in bacteria
29. The DNA structure: made of alternating phosphate groups and sugar (deoxyribose) groups on the sides, 4 bases (A, T, C, G), complementary bases are A-T and G-C
30. The RNA structure: contains phosphate and sugar (ribose) groups on the side, single stranded, 4 bases (A, T, C, G), complementary bases are A-U, G-C