Vocabulary: RNA and Protein Synthesis

Vocabulary

- Amino acid – an organic molecule containing a carboxyl and an amino group
  - Amino acids combine to form proteins.
- Anticodon – a region of a tRNA molecule that consists of three bases that are complimentary to an mRNA codon.
- Codon – a set of three nucleotides that encodes an amino acid or signifies a start signal or stop signal.
- Gene – a DNA sequence that codes for a specific protein.
  - By coding for proteins, genes determine many traits of living things.
- Messenger RNA – (mRNA) a strand of RNA that encodes information to make a protein.
- Nitrogenous base – a component of DNA that forms the “rungs” in the DNA structure.
  - There are four nitrogenous bases in RNA: adenine, uracil, cytosine, and guanine.
- Nucleotide – a subunit of a nucleic acid molecule (DNA or RNA) that consists of a sugar, a phosphate, and a nitrogenous base.
- Ribosome – a cell organelle that is the site of protein synthesis.
  - Ribosomes are composed of RNA and protein.
- RNA – (ribonucleic acid) a nucleic acid that plays a role in protein synthesis.
  - The three main types of RNA are messenger RNA (mRNA), transfer RNA (tRNA), and ribosomal RNA (rRNA).
- RNA polymerase – an enzyme that enables the process of transcription by separating a strand of DNA and forming a complimentary strand of mRNA.
- Transcription – the process of forming a nucleic acid by using another molecule as a template.
  - Transcription starts the process of protein synthesis by using a strand of DNA to form a complementary strand of mRNA.
- Transfer RNA – (tRNA) a strand of RNA that transfers amino acids to the growing end of a protein molecule during translation.
- Translation – the process of using the codons in an mRNA molecule to specify the sequence of amino acids in a protein molecule.
  - Translation takes place in a ribosome.

Reproduction for educational use only. Public sharing or posting is prohibited. © 2019 ExploreLearning® All rights reserved