

PROTEIN SYNTHESIS CUT AND PASTE

1. Cut each of the two boxed statements out and put on table/desk/whatever.
2. Cut each bulleted sentence out then put under whichever boxed statement it belongs with.
3. Put sentences in order under the boxed statement.
4. Cut out final three words (circled) and place where they best fit.
5. Examine for errors, get a blank paper, and glue down. Put your name on it.

RNA Transcription

RNA Translation

- Exposed bases matched with complements (thymine is replaced by uracil).
- Linear sequence of codons determines the order in which tRNA molecules arrive.
- Completed polypeptide released by ribosome, which dissociates and falls off the mRNA molecule.
- A section of DNA (gene) unwinds between base pairs at hydrogen bonds.
- As tRNA leaves, it passes its peptide chain to the tRNA-amino acid still at the ribosome.
- Sugar-phosphate bonds made between nucleotides by RNA polymerase.
- Ribosome moves along the mRNA to the right, making room for the next tRNA-amino acid.
- RNA-polymerase attaches to DNA
- The above process continues until a "stop" codon on mRNA is reached.
- mRNA released from nucleus through the nuclear pores.
- Now mRNA has a sequence of triplet codons complementary to the DNA triplet code.
- The 2 ribosomal subunits bind to mRNA forming a complete ribosome.
- The tRNA -amino acid complexes come to the ribosome where each anticodon pairs with an mRNA codon. Two such tRNA-amino acid complexes can be at a ribosome at a time.
- The amino acid is peptide-bonded to the growing polypeptide chain.
- Complementary nucleotides collide with exposed bases along one open section of DNA.
- Initiation always begins with the codon that stands for the amino acid methionine.
- Each tRNA picks up an amino acid.
- Secondary and tertiary structure of the protein forms after termination

Initiation

Elongation

Termination