

DNA Coloring - Transcription & Translation

Transcription

RNA, Ribonucleic Acid is very similar to DNA. RNA normally exists as a single strand (and not the double stranded double helix of DNA). It contains the same bases, adenine, guanine and cytosine. However, there is no thymine found in RNA, instead there is a similar compound called uracil.

Transcription is the process by which RNA is made from DNA. It occurs in the nucleus. Label the box with the x in it near the nucleus with the word TRANSCRIPTION and proceed to color the bases according to the key below

Thymine = orange

Adenine = dark green

Guanine = purple

Cytosine = yellow

Uracil = brown

Color the strand of DNA dark blue (D) and the strand of RNA light blue (R). Color the nuclear membrane (E) gray.

Translation

Translation occurs in the cytoplasm, specifically on the ribosomes. The mRNA made in the nucleus travels out to the ribosome to carry the "message" of the DNA. Here at the ribosome, that message will be translated into an amino acid sequence. Color the ribosome light green (Y) and note how the RNA strand threads through the ribosome like a tape measure and the amino acids are assembled. The RNA strand in the translation area should also be colored light blue, as it was colored in the nucleus.

Label the box with the X in the translation area with the word TRANSLATION.