**Messenger RNA**

So, now, we know the nucleus controls the cell's activities through the chemical DNA, but how?  It is the sequence of bases that determine which protein is to be made.  The sequence is like a code that we can now interpret.  The sequence determines which proteins are made and the proteins determine which activities will be performed.  And that is how the nucleus is the control center of the cell.  The only problem is that the DNA is too big to go through the nuclear pores.  So a chemical is used to to read the DNA in the nucleus.  That chemical is messenger RNA.   The messenger RNA  (mRNA) is small enough to go through the nuclear pores.  It takes the "message" of the DNA to the ribosomes and "tells them" what proteins are to be made.  Recall that proteins are the body's building blocks. Imagine that the code taken to the ribosomes is telling the ribosome what is needed - like a recipe.

Messenger RNA is similar to DNA, except that it is a single strand, and it has no thymine. Instead of thymine, mRNA contains the base Uracil. In addition to that difference, mRNA has the sugar ribose instead of deoxyribose. RNA stands for Ribonucleic Acid. Color the mRNA as you did the DNA, except:  
Color the ribose a DARKER BLUE, and the uracil brown. uracil

