

Protein Synthesis Review Worksheet

1. How are DNA and mRNA alike?

2. How are DNA and mRNA different? Fill in the table below.

DNA		mRNA
	Shape	
	Nitrogen bases	
	Sugars	
	Location	

Transcription: DNA to mRNA:

- How many strands of mRNA are transcribed from the two “unzipped” strands of DNA? _____
- If the following were part of a DNA chain, what mRNA bases would pair with it to transcribe the DNA code onto mRNA? G-G-A-T-C-G-C-C-T-T-A-G-A-A-T-C

- If DNA is described as a double helix, how should mRNA be described? _____
- How are the accuracy of DNA and mRNA codes assured? _____

Translation: mRNA to PROTEIN:

- Name and describe the three types of RNA's involved in protein synthesis?
- What is located at EACH end of a tRNA molecule? _____
- Where must an mRNA attach before protein production can begin? _____
- How many bases are needed to specify an mRNA codon? _____
- If a strand of mRNA contain the sequence, U-A-G-C-U-A-U-C-A-A-U, what tRNA anticodons would be needed to translate the sequence? _____
- How does mRNA get out of the nucleus? _____
- What is the difference between an amino acid and a protein? _____

- What type of bond is formed between amino acids? _____

Protein Synthesis Flow Chart

Directions: Fill in the flow chart below, using the following words: **Amino acids, mRNA, mRNA codon, nucleus, nuclear pore, peptide bonds, ribosome, transcription.**

The first part of protein synthesis is

