**Describe the process of gene expression, by which a gene affects the phenotype of an organism.**

**What are the similarities and differences in the initiation of gene transcription in bacteria and eukaryotes?**

**What function do the 5’ cap and the poly-A tail serve on a eukaryotic mRNA?**

**What function do tRNA’s serve in the process of translation?**

**What will be the results of chemically modifying one nucleotide base of a gene? What role is played by DNA repair systems in the cell?**