Life Science Exam 3 Study Guide

* Review Chapters 7, 8 and 9
* Review Powerpoints and Activities
* Review DNA structure and RNA structure
* Be familiar with the process of protein synthesis (translation and transcription)
  + What does DNA code for?
  + Where does translation occur in the eukaryotic cell? What is the result of transcription? – DNA, mRNA or tRNA?
  + Remember that the DNA is the template for translation
  + Where does translation occur? What is the template for translation? What does the tRNA do?
* What are recombinant protiens? What does recombinant bovine growth hormone do?
* What are GMOs?
* What is a frame shift mutation? Neutral mutation? What could be the 3 results of mutations?
* What is gene therapy?
* What are stem cells?
* What is a theory in science?
* What is the theory of common descent?
* What is natural selection? Artificial selection?
* What is a vestigial structure?
* What is a homologous structure?
* Does evolution lead to perfection?
* What is the experiment that Urey and Miller did?
* Who is Darwin? Be familiar with darwin’s 4 observations: individuals within a population vary, some of that variation will be passed onto the offspring, survival and reproduction are NOT random, organisms produce more offspring than can survive
* What is tuberculosis?
* Remember that traits that lead to greater fitness
* What is directional selection? Stabilizing selection? Diversifying selection?