**Pre-AP Genetics Review:** *67 Multiple Choice questions from chapters 11, 12 and 13. Review the animations, video clips, and presentations on the class website.*

**Ch. 11:**

Know basic genetics vocab: gametes; alleles; Gregor Mendel; probability; homozygous vs. heterozygous

* **Big Picture importance of Meiosis and genetic variation**
* Know how to interpret Punnett Squares
* understand the principles of independent assortment and segregation
* How many different allele combinations are found in GgNn? \_\_\_\_\_\_\_\_\_\_
* Analyze and set up 2 trait Punnett Squares
* Incomplete dominance
* Codominance
* Crossing over
* diploid # vs. haploid #

**Ch. 12:**

* Understand Avery's experiment
* Understand the Hershey Chase experiment
* Understand Griffith's experiment
* bacteriophages
* What is a nucleotide - draw and label
* Chargaff's base pairing rules
* Be able to calculate the % of nitrogenous bases
* Rosalind Franklin/Watson and Crick's contributions
* Understand DNA structure and function
* Create the base pairs for the other side of this DNA strand - CCTAGAT
* Know DNA polymerase and RNA polymerase enzymes; what are their functions?

**Ch. 13:**

* Differences between DNA and RNA…………………….
* 3 types of RNA and what they do
* Understand how and where transcription/translation occur
* Be able to read both versions of the codon charts
* Viruses are the exception to the DNA - to RNA - to protein rul - why?
* Know your types of mutations and recognize drawings of them
* Basic idea of operons (lac): promoters; repressors; TATA box
* Gene regulation is more complex in eukaryotes - why?

**Short Answers:**

Mostly diagram interpretation so look at the pictures and diagrams in your chapters!

* Know all the steps of mRNA processing before it leaves the nucleus (from your notes or book)
* Recognize the steps of DNA to RNA to protein
* Interpret a 2 trait punnett square
* Interpret an incomplete dominance cross
* Interpret a codominant cross

**PREPARE!!!!**