**Chromosomes and DNA Quiz Study Guide**

**Vocabulary**:

Chromosome Cytosine

Gene Thymine

Histone Guanine

Nucleosome Adenine

Autosome Nucleotide

Sex Chromosome Double helix

Homologous pair Karyotype

Diploid Fertilization

Haploid Gamete

Bacteriophage Bacterial transformation

Semi-conservative replication DNA polymerase

**You Need to Know/Be Able to…**

* Describe Griffith’s experiment, including its historical significance
* Describe Avery’s experiment, how it was related to Griffith’s, and what he concluded
* Describe the Hershey-Chase experiment, including the structure of bacteriophages, and explain their conclusion
* Know who Watson, Crick, Franklin, and Wilkins were, and what they did
* Understand and explain the relationship between DNA, genes, and chromosomes
* Know the structure and function of nucleosomes
* Accurately define diploid and haploid
* Understand why gametes are haploid
* Identify sex given a karyotype
* Answer questions about a given karyotype
* Draw a nucleotide and label the sugar, the phosphate, and the nitrogen base (does not need to be a detailed molecular structure; a “cartoon” is acceptable)
* Know the base-pairing rules
* Draw DNA and label the sugar, the phosphate, and the base pairs [A, T, C, and G] (does not need to be a detailed molecular structure; a “cartoon” is acceptable)
* Given one strand of DNA, write the complementary strand
* Describe what happens during DNA replication