Genetics Review Worksheet

1. What is a gene? What are genes made of? Where are they found in the human body?

2. What is DNA? Where can it be found? What is it made of?

3. What is a chromosome? What is it made of?

4. What is the difference between a haploid and a diploid cell?

5. What is DNA replication? Why does it happen? When does it happen? Who are the major players? What are the results?

6. What is the difference between Meiosis and Mitosis?

7. Let’s PRETEND that blue hair is dominant over pink hair. A mother has blue hair and is a hybrid and crosses with a father who has blue hair and is also a hybrid. Work out the possible offspring in a Punnett square and answer the questions below.

   a. What is the ratio that an offspring will have blue hair? Pink hair?

   b. List the possible phenotypes and the possible genotypes.

8. What is the difference between a genotype and a phenotype?

9. What is the difference between a hybrid and a purebred?