Name: _____

Unit 6 – Genetics

1. Match the vocabulary terms to their definitions:

_____ Dominant allele

_____ F1 generation

_____ F2 generation

_____ genotype

_____ Gregor Mendel

_____ heterozygous

_____ homozygous

_____ P generation

_____ phenotype

_____ Punnett square

_____ recessive allele

A. Organism with two different alleles for the same trait

B. Genetic make up

C. Parental generation

D. Physical characteristics

E. Organism that has two identical alleles for a trait

F. Tool that can predict and compare genetic variation

G. Allele that can be masked

H. Austrian monk who worked with garden peas

I. First offspring generation

J. Allele that can mask other alleles

K. Second offspring generation

2. Describe Mendel's idea of dominance.

3. Describe Mendel's law of segregation.

4. Describe Mendel's law of independent assortment.

5. If a dominant allele does not completely mask the recessive allele, there is a blend of the two traits, it is called _____ dominance.

6. When both alleles are expressed equally in the phenotype, such as in human blood type, it is called _____.

7. Sex-linked traits are found on the _____ chromosomes. **Males / females** inherit these disorders more frequently.

8. What is genetic engineering? Choose an issue and side; develop an argument supporting your opinion.

Name: _____

Unit 6 – Genetics (cont'd)

1. Label the parts of the nucleotide on the right.

2. DNA has ___ strands and the bases ___denine, ___hymine, ___ytosine, and ___uanine.

3. RNA has ___ strand and the base ___racil instead of _____.

4. What is the function of

   mRNA?   tRNA?   rRNA?

5. Describe the base pairing rule for DNA and RNA.

6. What is replication?

7. What occurs during transcription? Where does it occur?

8. What occurs during translation? Where does it occur?

9. What is a codon? What does it "code" for? _____

10. What does AUG code for? _____ What do UGA, UAA, and UAG code for? _____

11. What is the biological definition of a mutation? _____

12. Describe each of the following types of mutations and whether or not there will be a change in phenotype.

    a. Substitution mutation

    b. Insertion point mutation

    c. Deletion point mutation

    d. Duplication chromosomal mutation

    e. Deletion chromosomal mutation

    f. Inversion chromosomal mutation

    g. Translocation chromosomal mutation

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