**Genetics Test Study Guide**

1. Heredity vs. genetics
2. Traits vs. genes
3. Alleles
4. Contributions of Gregor Mendel
   1. What he worked with and why
   2. What was he studying?
5. Recap of fertilization
6. How did Mendel control plant crosses?
7. Number of traits pea plants have; how many were studied at one time?
8. True-breeding/Purebred vs. Hybrid
9. Parent generation, F1, and F2
10. Dominant vs. recessive traits
    1. Description
    2. How are they written?
    3. In Mendel’s example, which plant was dominant? Recessive?
    4. What kind of letters do you need to be a recessive trait?
    5. What kind of letters do you need to be dominant?
11. Self-pollination vs. cross-pollination
12. What were the original plants Mendel cross? What were the results?
13. Who was involved in his second cross? What were the results?
14. Phenotype vs. Genotype
    1. Definition
    2. Examples
15. Homozygous vs. Heterozygous
    1. Definition
    2. Examples
    3. Which is considered purebred?
    4. Which is considered a hybrid?
16. Be able to complete a Punnett square
    1. Where are parents placed? Offspring?
17. Probability
    1. Definition
    2. Purpose
    3. What does it show?
18. Monohybrid vs. Dihybrid cross
19. Be able to complete a dihybrid cross (study the one we did in class)
20. Be able to figure out how many allele combinations you can make from one parent (ex: Tt Bb)
21. Mendel’s 3 rules/laws
    1. Know description
22. Incomplete dominance vs. Codominance
    1. Description and examples
23. Multiple alleles vs. Polygenic inheritance
    1. Description and examples
24. Thomas Hunt Morgan
    1. What he studied and why
    2. Accomplishments
25. What is each chromosome made up of?
26. What sort independently, genes or chromosomes?
27. How do genes separate? What can this produce?
28. Who is more likely to sort, genes close together or farther apart?
29. Gene map
    1. Description
    2. What are they based on?
30. Simple dominant heredity