**Unit 7 Study Guide**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_

Please answer all questions on your own paper!!

1. Describe the genotypes of the resulting offspring if you were to cross a homozygous recessive plant with a homozygous dominant plant.

What trait would 100% of the offspring show in this cross? Why?

1. What are genes? In addition to the definition, explain how they are related to the chromosomes.
2. Which of the following statements is true? Circle the correct answer.

*Genotype influences a person’s phenotype for a trait.*

*Phenotype influences a person’s genotype for a trait.*

1. What do we call the varying, different forms of a gene?
2. Which of the following organism could pass on the recessive trait for flower color on to their offspring? Circle all that apply.

*FF Ff Ff ff*

1. A certain species of rabbit can have white fur or brown fur. (B) represents the allele for brown fur and (b) represents the allele for white fur. What is true about both of the alleles?
2. Siamese cat fur can be influenced by genes, but can also change color at different temperatures. If temperature changes the color of the fur, is that a change caused by genes or the environment?
3. Define an acquired trait?
4. When the process of fertilization occurs in human sex cells, how many chromosomes does the sperm cell transmit to the offspring? What about the egg?
5. Explain where each chromosome in a homologous pair of chromosomes comes from.
6. If a body cell of a fruit fly has a total of 4 chromosomes, how many chromosomes will a sex cell in a fruit fly have?
7. What are the reasons cell division takes place in single-celled organisms? Star any of the reasons that are also true of cell division in multicellular organisms.
8. What are the two types of reproduction? Explain each in detail. Include the number of parents needed, what is true about the offspring, and the advantages/disadvantages of each.
9. What is the main reason living organisms reproduce?
10. How many daughter cells are produced in Mitosis? How many daughter cells are produced in Meiosis?
11. What are the three stages of the cell cycle?
12. What are the 4 stages of Mitosis? Draw a simple picture of each stage.

**\*Do not forget that this a two part test.** Multiple choice test is Thursday. YOU WILL BE TESTED OVER ALL OF THE VOCABULARY TERMS FROM UNIT 7ON FRIDAY.

1. Cytokinesis

2. Mitosis

3. Cell cycle

4. Interphase

5. chromosomes

6. DNA

7. Meiosis

8. Homologous Chromosomes

9. Fertilization

10. Sexual reproduction

11. Asexual reproduction

12. Codominance

13. Incomplete dominance

14. dominant

15. recessive

16. phenotype

17. genotype

18. alleles

19. genes

20. heredity

21. ratio

22. probability

23. punnett square

24. pedigree