

MCC Biology
Chapter 14 Guided Reading Assignment

Name _____

1. Who were the two strong influences on Mendel's education?
2. Define the following terms:
 - a. Character
 - b. Trait
 - c. True-breeding
 - d. Hybridization
 - e. P generation
 - f. F1 generation
 - g. F2 generation
 - h. Alleles
 - i. Punnett Square
 - j. Homozygous
 - k. Heterozygous
 - l. Phenotype
 - m. genotype
3. In your own words, what is Mendel's Law of Segregation?
4. Give an example of a monohybrid cross and a dihybrid cross.
5. What is the Law of Independent Assortment and how does this "law" relate to meiosis?

6. Write your own example for the Law of Independent Assortment.
7. Define and then explain in your own words both the Rules of Multiplication and the Rules of Addition.
8. Contrast codominance and incomplete dominance.
9. Why do we need to look at genetics at both organismal and the molecular level?
10. Does having a dominant allele mean that it will be found in greater frequency in the population?
11. What are multiple alleles?
12. What does the term Pleiotropy mean?
13. In your own words, explain epistasis.
14. What would be your "clue" that a character would have polygenic inheritance pattern?

15. What is a pedigree and how does it help in our understanding of genetics?

16. Describe and discuss the genetics of the following inherited disorders:

a. Cystic Fibrosis

b. Sickle cell disease

c. Achondroplasia

d. Huntington's disease

17. Contrast amniocentesis and chorionic villus sampling