

AP Daily 5.3 Mendelian Genetics Video Two

1. What is a gene? What is a trait?
2. How is an allele related to a gene?
3. Define the following terms:
 - a. Dominant
 - b. Recessive
 - c. Phenotype
 - d. Genotype
 - e. Heterozygous
 - f. Homozygous

NOTE: Mendel had no idea that chromosomes existed when he developed his laws of segregation and independent assortment in the mid-19th century. In the 20th century when chromosomes were discovered, the movement of chromosomes during meiosis supported Mendel's laws, this shows Mendel was "ahead of his time"!

4. Chromosomes carry _____, and homologous chromosomes carry alleles for the _____ trait.
5. During which phase(s) of meiosis do alleles segregate? (Review your notes on the phases of meiosis to help you answer this question).
6. What is Mendel's Law of Independent Assortment?
7. During which phase of meiosis does independent assortment occur?

8. What does it mean when two genes are not linked? (keep going, more on next page!)
9. What is the difference between a monohybrid and dihybrid cross?

10. What is a pedigree?

11. What does autosomal mean?

12. How would a pedigree for an autosomal dominant trait differ from a pedigree for an autosomal recessive trait?