

Name _____

Period _____

Ms. Foglia

Date _____

AP: CHAPTER 15: THE CHROMOSOMAL BASIS OF INHERITANCE

1. Describe some of the pieces of information that scientists discovered that contributed to the "Chromosome Theory of Inheritance"?

2. Summarize the Chromosomal Theory of Inheritance.

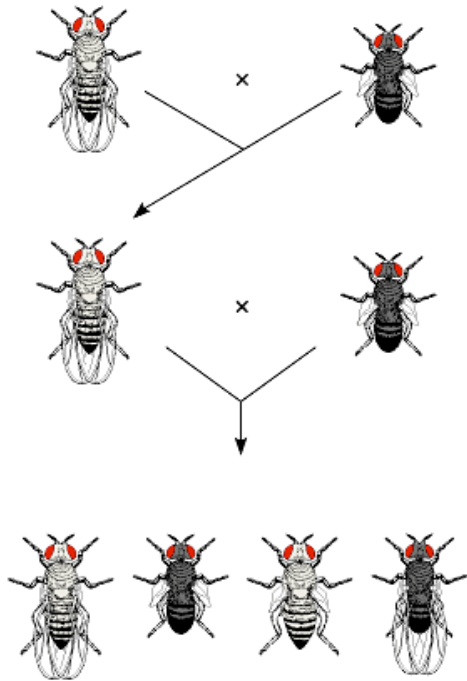
3. Why was Thomas Hunt Morgan's choice of the fruit fly a good model organism?

4. Describe Morgan's first mutant. Why was it so significant from the wild type?

5. Show the cross P, F1, F2 for the white-eyed male mutant.

6. What happens when we trace the inheritance of traits found on the same chromosome?

7. Use the diagram to trace the body color and wing shape in this linked two trait cross.



8. What is recombination and when does it occur? _____

9. How is recombination frequency calculated? _____

10. What determines sex in humans? _____

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11. In what ways are sex-linked traits distinct from autosomal traits? _____

12. Why are sex-linked recessive traits more common in human males than females?

13. How many X chromosomes are typically expressed in humans and cats?

14. What happens to X chromosomes that are inactivated? _____

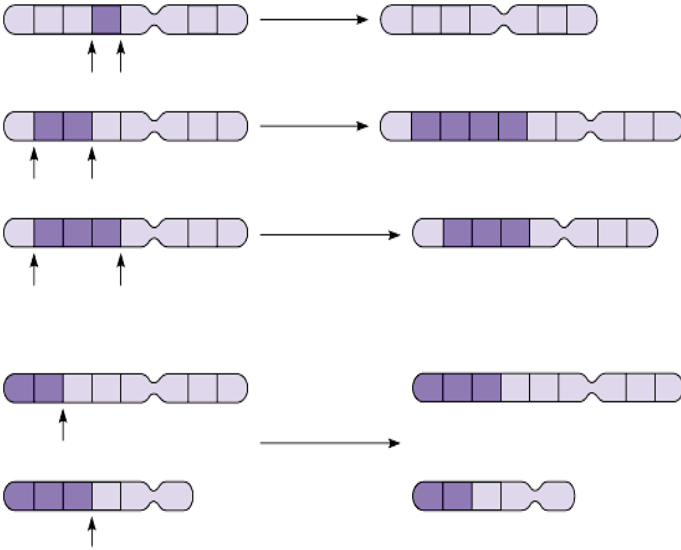
15. How many Barr bodies would be found in a person with: XXY _____ XO _____ XXX _____.

16. Define each term & and indicate when each occurs.

a. aneuploidy _____

b. polyploidy _____

17. Identify the each of the alterations of chromosome structure.



18. List and describe a few specific examples of non-disjunctions that occur in humans.

19. Describe genomic imprinting and give an example.
