Extending Mendelian Genetics
7.3 Gene Linkage and Mapping

Notes

OBJECTIVES

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Key Concept

Genes can mapped to _____ locations on _____.

Vocabulary

- **Linkage map** – diagram that shows the relative locations of genes on a chromosomes

How was Gene Linkage explained?

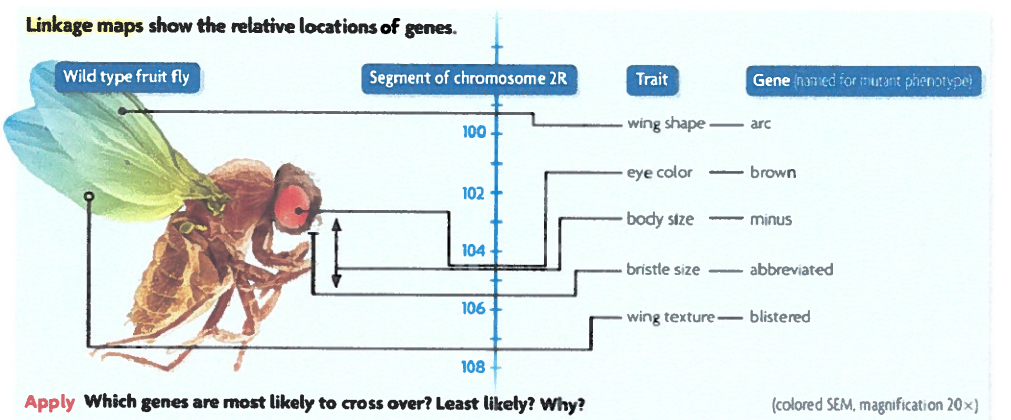
Gene linkage was explained through _____ _____.

- Morgan found that _____ _____ are on the _____ _____.
- _____, not genes, assort _____ during meiosis.
- Linked genes are _____ _____ together every time.
- Chromosomes exchange _____ genes during _____.

What are Linkage maps?

Linkage maps estimate distances between genes.

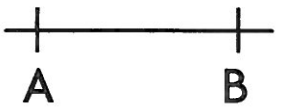
- The _____ together two genes are, the _____ likely they will be _____ together
- _____frequencies are related to _____ between genes.



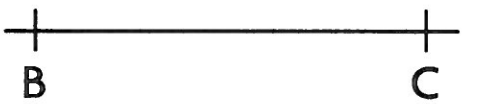
- _____ _____ show the _____ _____ of genes.

Linkage maps continued

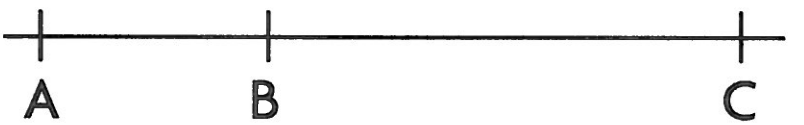
- _____frequencies can be converted into _____ _____.
  - Gene A and gene B cross over _____ percent of the time



  - Gene B and gene C cross over _____ percent of the time.



  - Gene A and gene C cross over _____ percent of the time.



EXIT TICKET QUESTIONS

Answer questions on Daily Agenda Handout under the Exit Ticket section at the bottom!

1. How is a LINKAGE MAP related to cross-overs that take place during meiosis?

2. Draw a linkage map based on the following cross-over percentages for three gene pairs:
   - A – B = 8%
   - B – C = 10%
   - A – C = 2%