Add Pg #s

Genetics Fill-in Notes
6.6 Meiosis and Genetic Variation

Objectives

1. Key Concept:

2. Vocabulary

3. What causes Genetic Variation?

4. What is Independent Assortment?

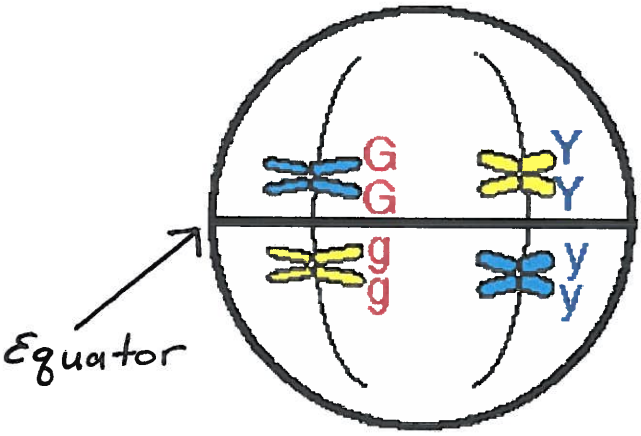
Notes

1. _____ _____ and _____ _____ during meiosis result in genetic diversity.

2. Vocabulary
   - **Crossing Over:** Exchange of chromosome segments between homologous chromosomes during Meiosis I.
   - **Genetic Linkage:** Tendency for genes located close together on the same chromosome to be inherited together.

3. Genetic Variation
   - Sexual reproduction creates _____ combination of genes.
     - _____ _____ of chromosomes in meiosis
     - Crossing over
   - Unique physical features may give a _____ advantage to some organisms.

4. Independent Assortment
   - _____ chromosomes line up randomly along the _____ of the cell



   - The side the homologous chromosome ends up on is determined by _____.
     - How many possible variations are there for a cell with two pairs of chromosomes?
       _____
     - How many possible variations when the two gamete cells combine?
       _____

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Notes

!!!!POSSIBLE EXTRA CREDIT QUESTION ON TEST!!!!!

- What is the total possible variations in a human cell?

_____

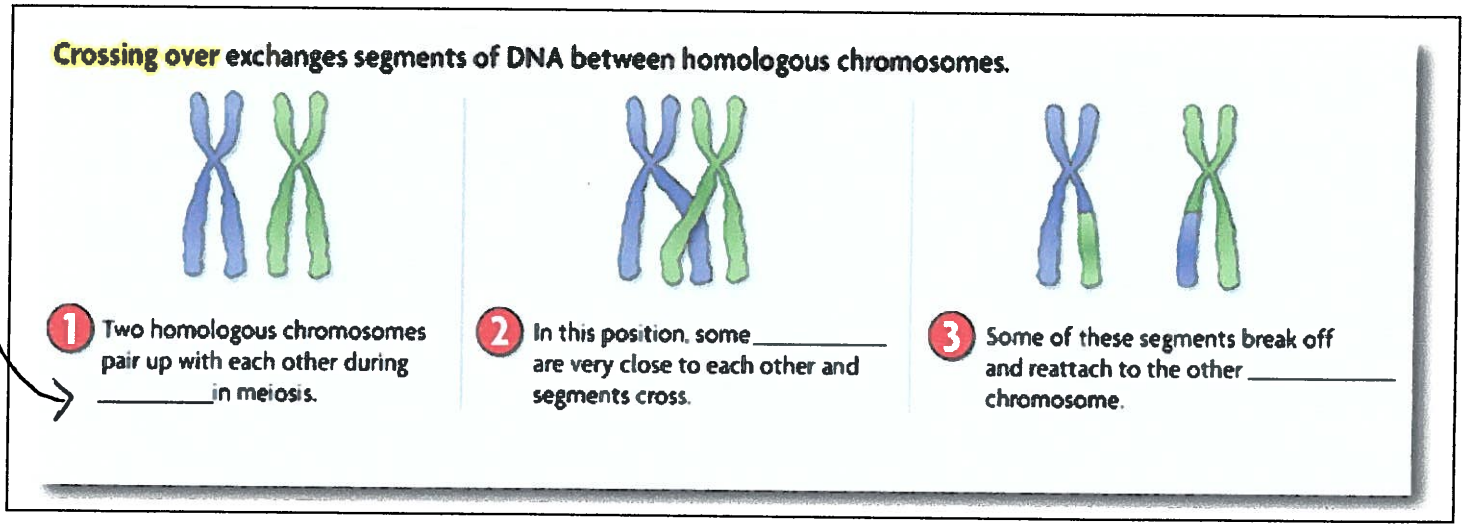
5. Question # 1

5. If a Mosquito has 3 pairs of chromosomes, how many different total combinations can be produced?

6. What is crossing over?

6. Crossing Over
   - Crossing over is the _____ of chromosome _____ between _____ chromosomes.
     - Occurs during _____ of meiosis I
     - Results in _____ _____ of genes

Make sure students see this part



7. Question #2

7. What is Crossing over? _____

_____

_____

_____

_____

Genetic Fill-in Notes
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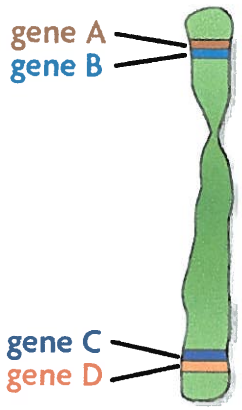
Notes

8. What is Genetic Linkage



8. Genetic Linkage
   - Chromosomes contain many _____
     - The _____ apart two genes are located on a _____, the more likely they are to be _____ by crossing over
     - Genes located _____ together on a chromosome tent to be _____ together, which is called _____ _____.

9. Question #3

Get a better Picture that will work in Black and white.

9. Which is more likely to happen in the crossing over example? Circle the correct answer

Use the colors on the PowerPoint as a guide to answer the question.