

Date: _____

The diagram illustrates the process of chromosomal crossover during meiosis. It features a crossword puzzle where the words represent key concepts in genetics and cell division. The words are:

- Across:**
 - 3. CYTOKINESIS
 - 4. CENTROMERE
 - 8. CELL DIVISION
 - 9. METAPHASE
 - 10. PROPHASE
 - 11. ANAPHASE
- Down:**
 - 1. SPINDLE
 - 2. INTERPHASE
 - 5. CHROMOSOMES
 - 6. TETRAD
 - 7. MATERNAL
 - 12. PATERNAL

To the right of the crossword puzzle, a diagram shows a tetrad of four chromosomes (two green, two blue) with arrows indicating the exchange of segments between non-sister chromatids, representing crossing over. Below the diagram, four pairs of homologous chromosomes are shown, each pair consisting of one green and one blue chromosome, illustrating the genetic recombination.

3. Final stage of cell cycle
4. Chromosomes hold together to make an X shape
8. Cell divide to form daughter cells
9. Second stage of mitosis
10. First and longest phase of mitosis
11. Third stage of mitosis

1. Identical peices of dna
2. Cell grows, replicates and prepare for cell divisiom
5. Structure that contains hereditart marerial
6. Fourth and final stage of mitosis
7. Replicated chromosomes are seperated into new nuclei