Chiasmata: (singular = chiasma) the structure that forms at the crossover points after genetic material is exchanged

Crossing over: (also, recombination) the exchange of genetic material between homologous chromosomes resulting in chromosomes that incorporate genes from both parents of the organism forming reproductive cells

Fertilization: the union of two haploid cells typically from two individual organisms

Meiosis I: the first round of meiotic cell division; referred to as reduction division because the resulting cells are haploid

Meiosis II: the second round of meiotic cell division following meiosis I; sister chromatids are separated from each other, and the result is four unique haploid cells

Recombinant: describing something composed of genetic material from two sources, such as a chromosome with both maternal and paternal segments of DNA

Somatic cell: all the cells of a multicellular organism except the gamete-forming cells

Synapsis: the formation of a close association between homologous chromosomes during prophase I

Tetrad: two duplicated homologous chromosomes (four chromatids) bound together by chiasmata during prophase I

Kinetochore: a protein structure in the centromere of each sister chromatid that attracts and binds spindle microtubules during prometaphase

Metaphase plate: the equatorial plane midway between two poles of a cell where the chromosomes align during metaphase

Mitotic spindle: the microtubule apparatus that orchestrates the movement of chromosomes during mitosis