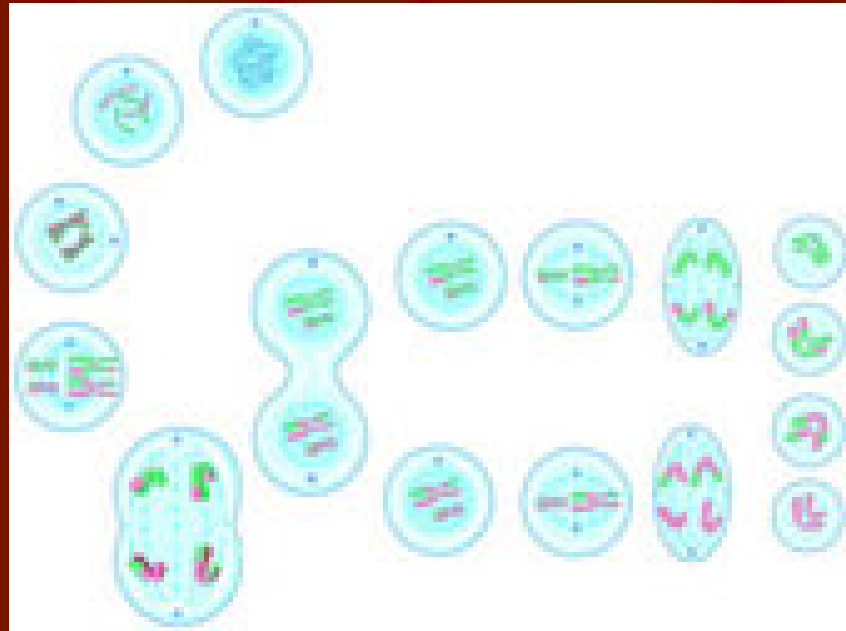


Meiosis

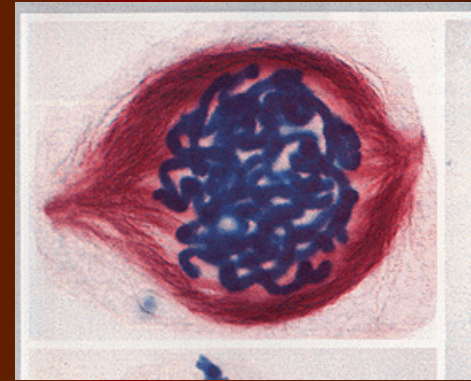
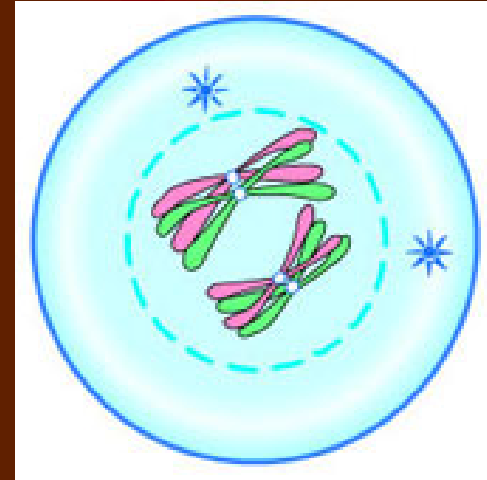


- Humans have 46 chromosomes or 23 pairs
- Genes are segments of DNA
- DNA=Deoxyribonucleic Acid
- 1 chromosome comes from mom and 1 from dad called homologous chromosomes

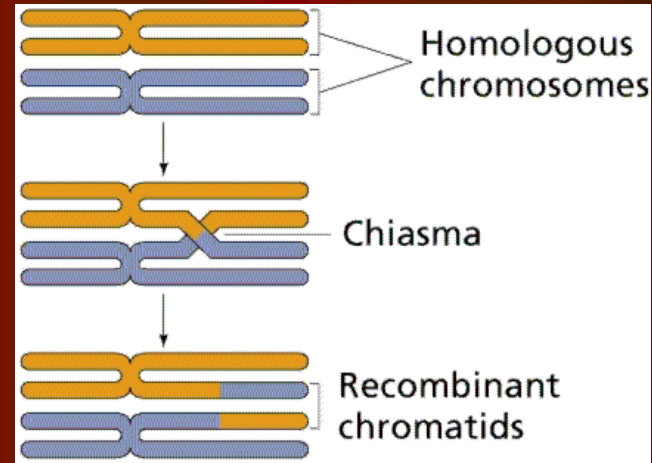
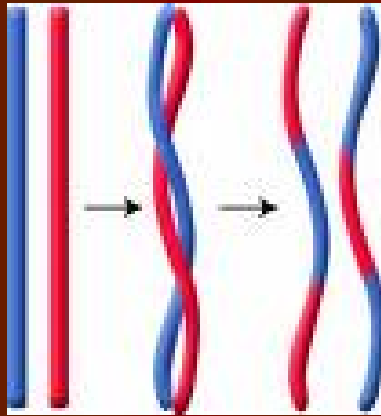
- During meiosis the # of chromosomes are cut in half (haploids)
- After fertilization 2 haploid come together to create a diploid cell
- Haploid cells contain n number of cells
- Diploid cells contain $2n$ number of cells
- $n+n=2n$ or $(23+23=46)$

Prophase I

- Pairing of homologous chromosomes
- Crossing over
- Nuclear envelope breaks down
- Spindles form



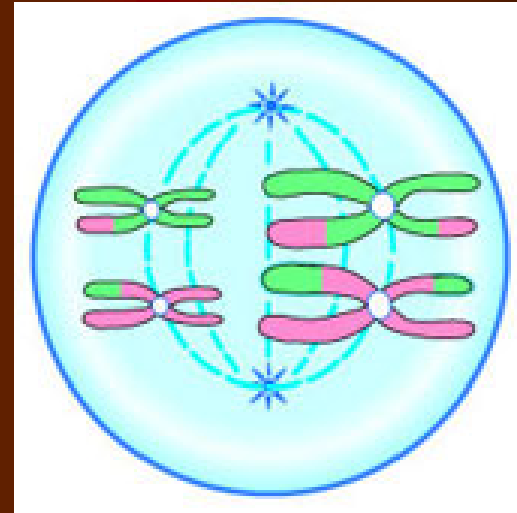
Crossing Over



- Mother and father chromosomes exchange parts of their DNA.
- This makes for more genetic diversity
- Why your brother or sister look different than you.

Metaphase I

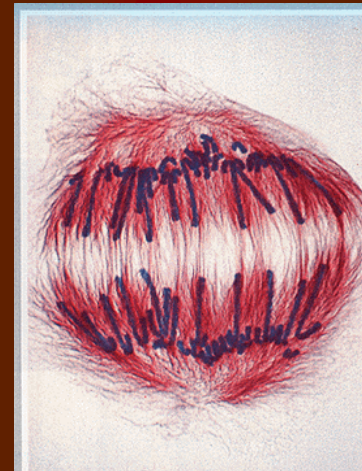
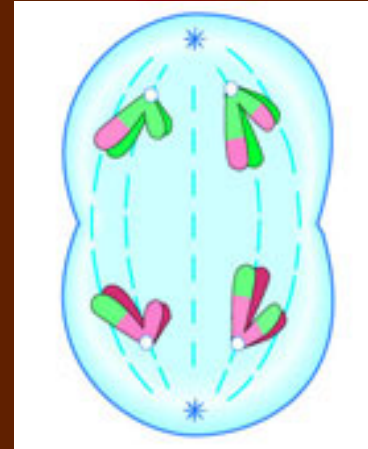
- Homologous chromosomes line up at the equator.



Plant cells in various stages of mitosis: (a) prophase; (b)

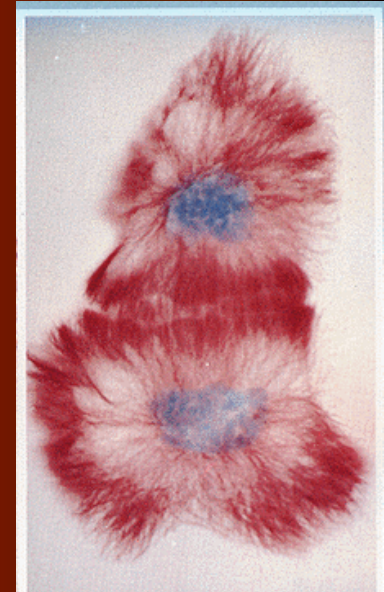
Anaphase I

- Homologous chromosomes separate and move to opposite poles of the cell



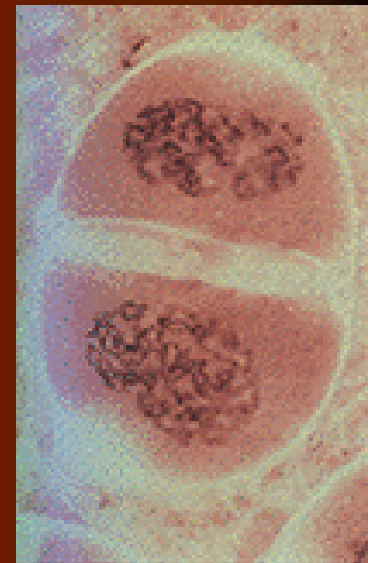
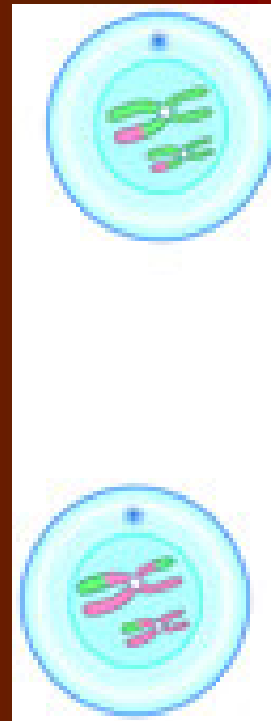
Telophase I

- Spindles break down
- Chromosomes uncoil & form two nuclei
- The cell divides



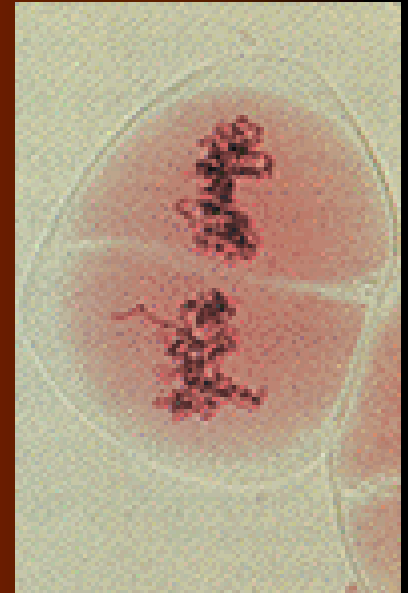
Prophase II

- Chromosomes condense
- Spindles form & attach to chromosomes



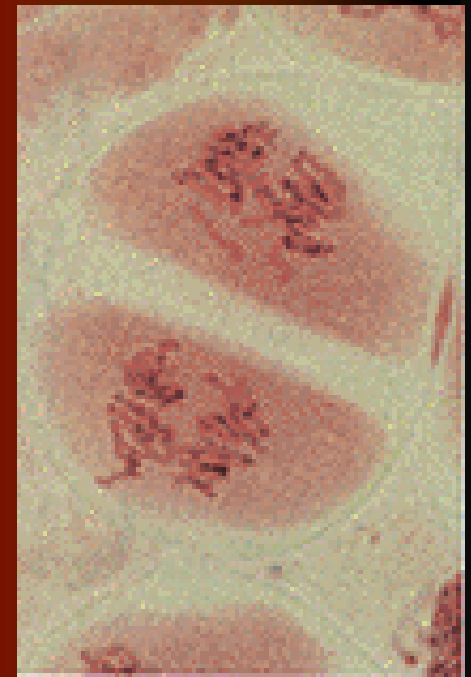
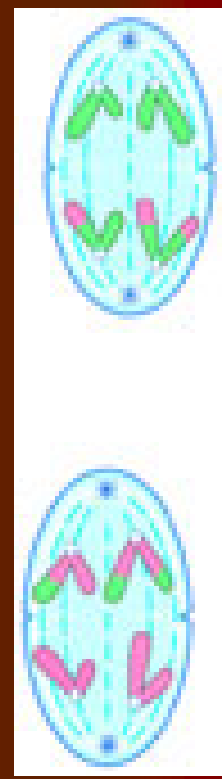
Metaphase II

- Chromosomes line up at the equator



Anaphase II

- Centromeres split
- Sister chromatids separate and move to opposite poles



Telophase II

- Four nuclei form
- Spindles break down
- Cells divide

