Unit Three
Cell Division, Genetics, Evolution

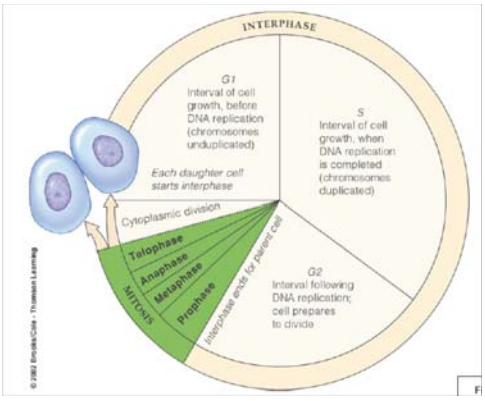
1. Cell Division

A. Mitosis

1) cell cycle G_1 >S > G_2

cytokineses - cell division

karyokinesis - nuclear division



2)Chromosomes

nucleosome- cluster of 8 histones

histones - proteins

homologous - similar chromosomes

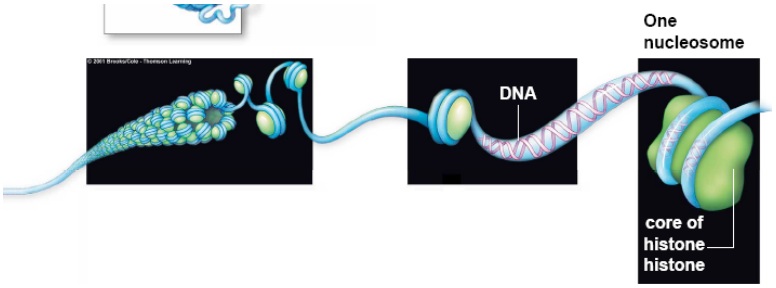
chromatids - duplicate chromosome

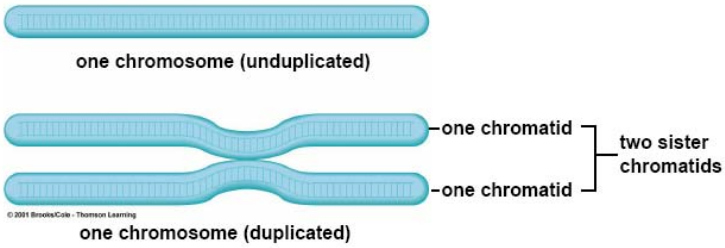
centromere - non-genetic portion

spindle - formed structure

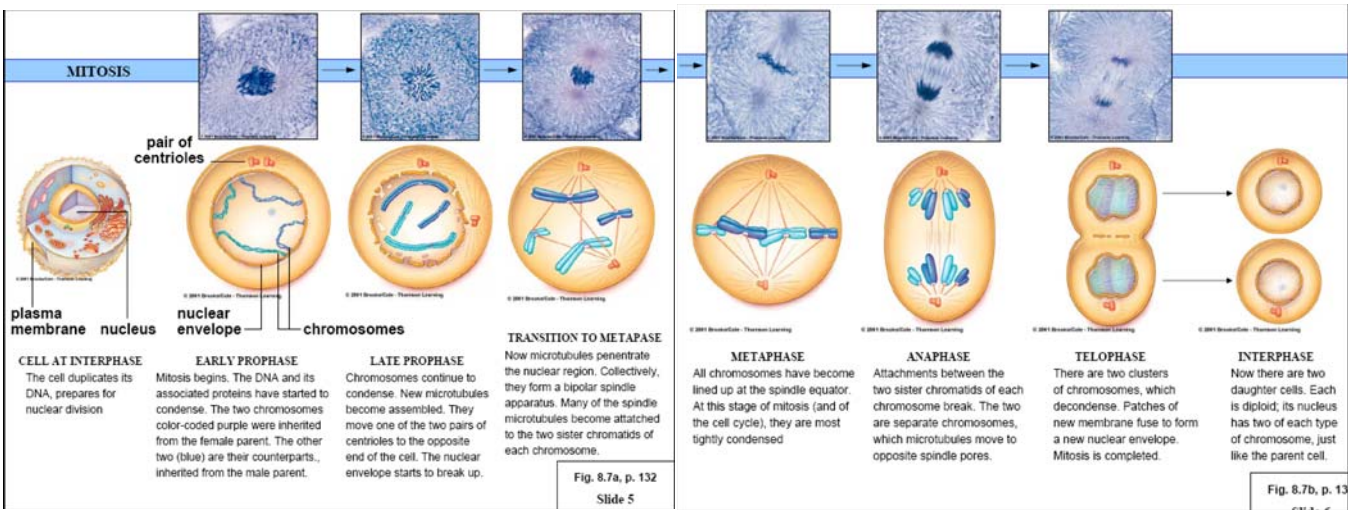
asters - star-like formation

centrioles - non functional

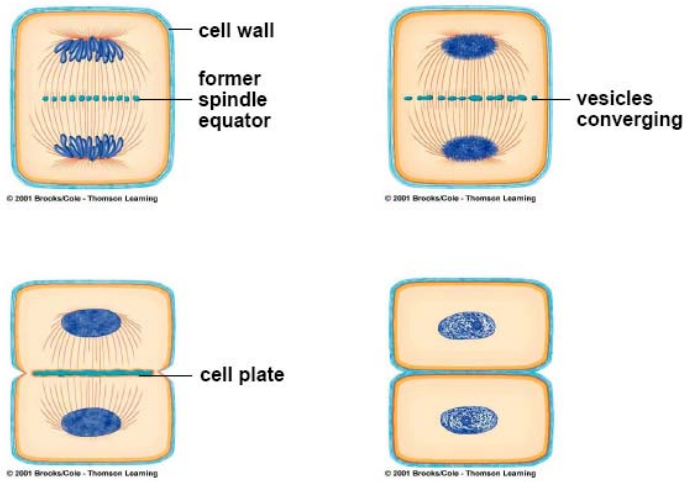




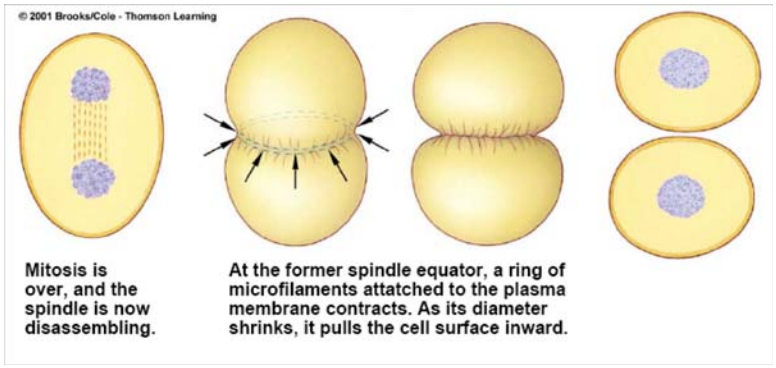
3) Phases
prophase
metaphase
anaphase
telophase



Plant Mitosis
Cell plate - start of cell wall



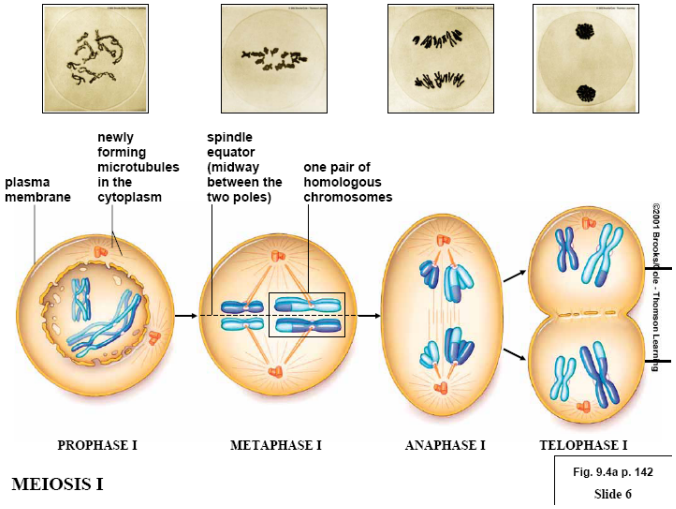
Animal Mitosis
Cleavage furrow - pinches



B. Meiosis-Occurs in the sexual organs of animals ie ovaries and testis

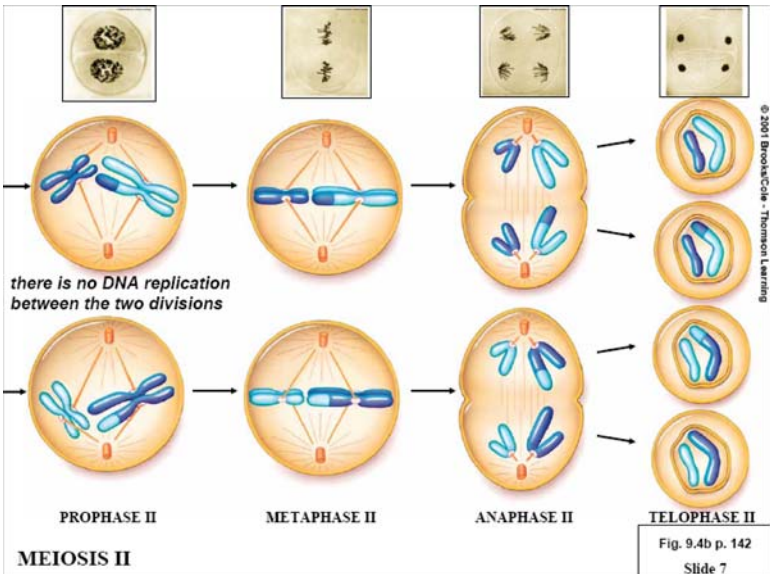
Meiosis I

1) prophase I
2) metaphase I
3) anaphase I
4) telophase I



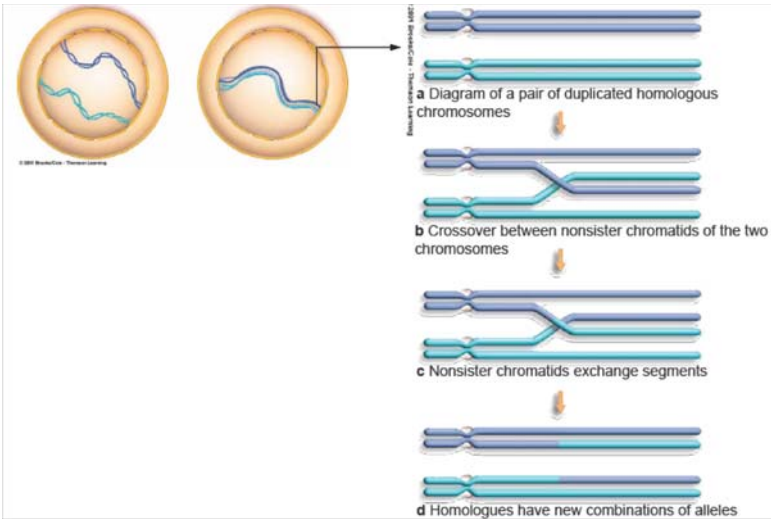
Meiosis II

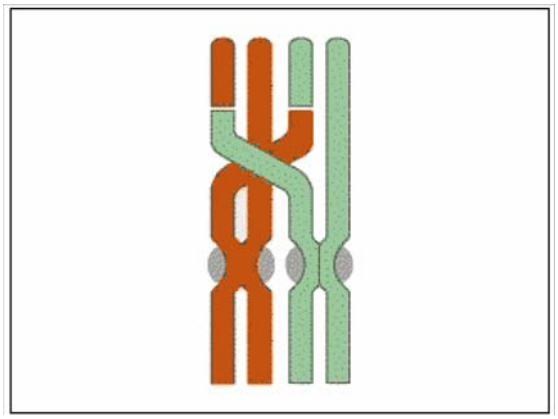
5) prophase II
6) metaphase II
7) anaphase II
8) telophase II



terms:

synapsis - coming together
crossing over
tetrads - 4 chromosomes
diploid - both homologs
haploid - 1 homolog
spermatogenesis -sperm
oogenesis - egg production
nondisjunction - homolog sticking
polyploidy - many sets
parthenogenesis - virgin birth
tetraploid - 4 times chromosomes





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