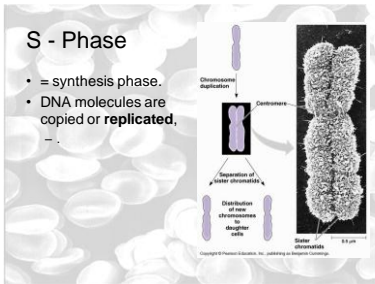


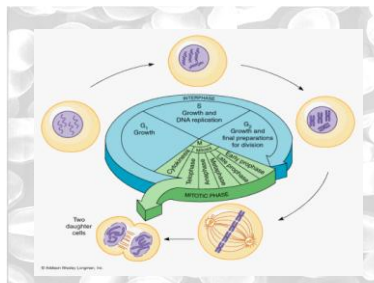
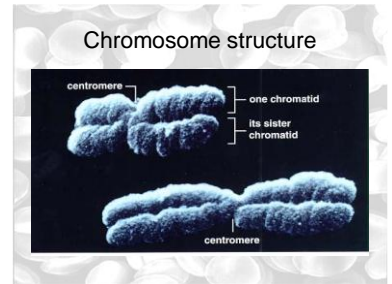
### Interphase

- **Interphase:**
  - most of the cells "lifer" (G1, S, G2 phase)
- **Parts of Interphase:**
  - **G1 phase:**
    - spends most of its functional life
    - performing their assigned tasks, metabolizing, synthesizing etc.
    - something **triggers** the cell to begin a **cell division event**



### Gap 2 or G2 Phase

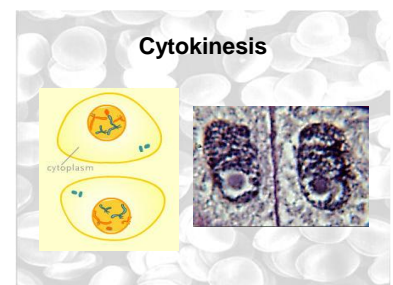
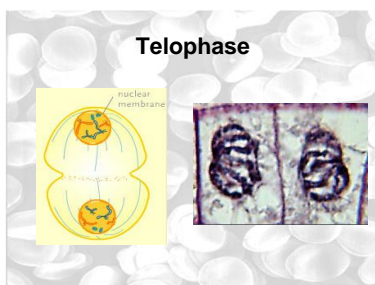
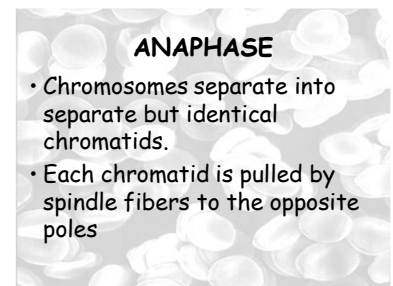
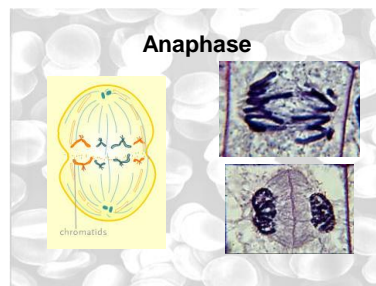
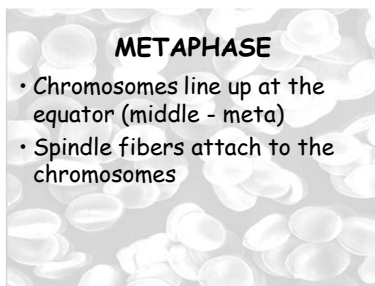
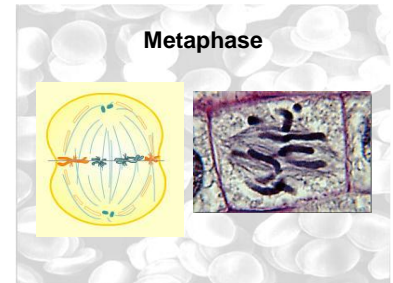
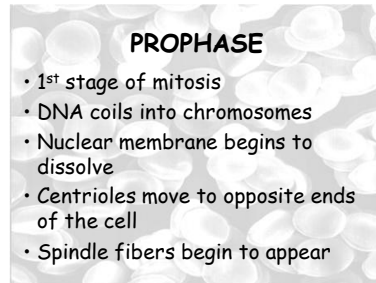
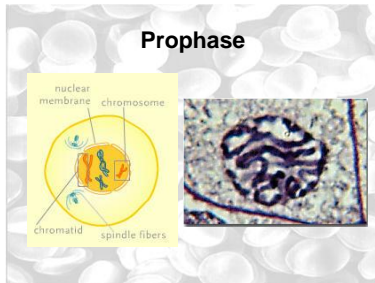
- The cell is preparing for the actual division events (much protein synthesis).
  - **tubulin** synthesized (protein of which microtubules)
  - used to manufacture the **spindle apparatus**
- G2 completes interphase now the cell is prepared for mitosis.



### MITOSIS

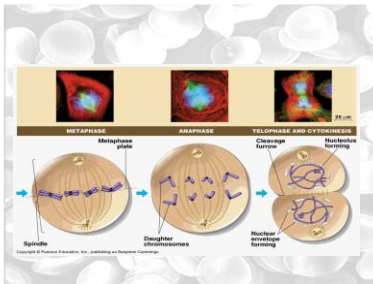
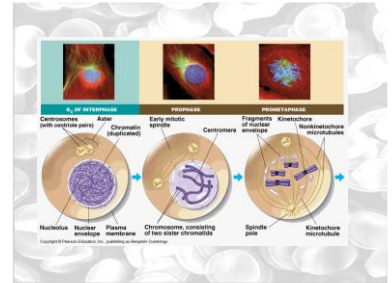
**Definition:** The process by which the nucleus of a cell divides into 2 identical cells. Cell Division.

Diploid → 2 diploid



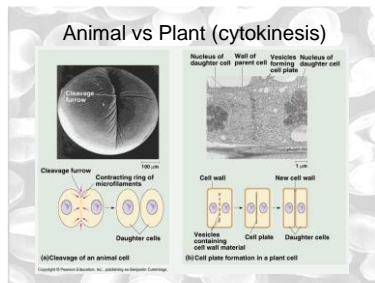
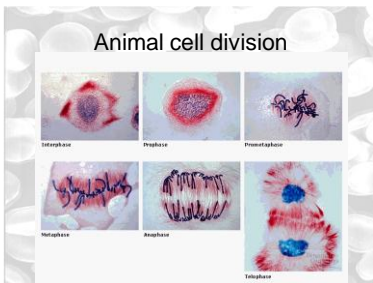
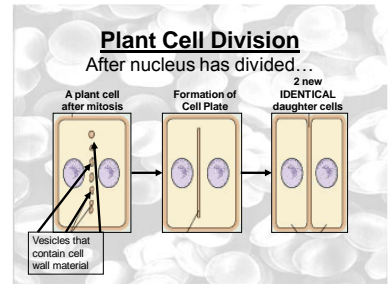
### Cytokinesis

- Cytoplasm divides
- Each cell has identical DNA
- Cells are completely separate now.
- Ready for Interphase



### Plant cell division

- absence of centrioles
- Cytokinesis different
  - simply generate a new cell wall between the developing telophase nuclei
  - CELL PLATE
  - The cell plate originates from the fusion of several (many) vesicles which originate from the golgi.



### Cell Cycle v. Cell division

- Interphase, prophase, metaphase, anaphase and telophase (IPMAT) = Cell cycle.
- Prophase, metaphase, anaphase and telophase (PMAT) = Mitosis otherwise known as cell division of body cells (non-sex cells).

