Mitosis – How Cells Divide Workbook Notes

Cell Division = Mitosis- a process that allows a cell to copy itself and divide – making two new cells; constantly occurring.

Genetic Material = DNA = Deoxyribonucleic Acid – the “blueprint” or “instructions” for the cell.

- A complete copy of the DNA must be made for a cell to divide.
- Chromatin – condensed DNA; wound up DNA
- Chromosomes – two identical pieces of information.
- Sister Chromatids – identical copies of DNA on each side of a chromosome

Mitosis – P.M.A.T

1. Prophase
   - Nuclear membrane breaks down
   - DNA condenses into chromosomes
   - Centrioles appear
   - Spindles form

2. Metaphase
   - Chromosomes line up in the center of the cell

3. Anaphase
   - Chromosomes are pulled apart to opposite poles of the cell

4. Telophase
   - Nuclear membrane reappears
   - DNA condenses to chromatin
   - Centriole and spindle disappear

Cytokinesis – cell membrane pinches off/ cell plate forms creating 2 new cells.
Prophase
Metaphase
Anaphase
Telophase
Cytokinesis