

# CORNELL NOTES

**Name:** \_\_\_\_\_ **Period:** \_\_\_\_\_

**Class:** \_\_\_\_\_ **Date:** 4-5 November

**Topic:** Chapter 8, Section 1 Cell Division and Mitosis

*Question Column*

*Notes Column*

Why is Cell Division Important?	So the Organism can reproduce. The organism growth.
Cell Cycle:	Time period in which cell division begins and ends, and then begins again. Different cells have different cell cycles –Time
Interphase:	Is the long time period in the cell cycle in before mitosis occurs. Includes cell growth and development, DNA is copied, chromosomes duplicate, cell grows and prepares For mitosis.
Mitosis:	The process in which the nucleus divides into two different Nuclei and a new cell develops. Occurs in all cells except Sex cells.
Chromosomes:	Structure in the nucleus that contains hereditary material, Called DNA, they come in pairs (humans have 23 pairs)
Chromatids:	Single chromosomes (humans have 46 single)
Steps of Mitosis:	Prophase: Chromatid pairs are visible and spindle fibers begin to appear. Nucleus and nuclear membrane begin to Disintegrate. Centrioles appear at the opposite end of the cell, and stretch the spindle fibers and chromosomes begin To attach themselves to the spindle fibers. Metaphase: Chromosomes (chromatid pairs) line up in the Center of the cell. Attached to the spindle fibers. Anaphase: Chromosomes have separated and begin to move To the opposite sides of the cell. Telophase: Spindle fibers disappear, chromosomes uncoil, And a new nucleus appears

## Cornell Notes Continued:

Division of Cytoplasm: We have two identical cells. Cell membrane forms.  
Called Cytokinesis

Results of Mitosis: A new cell, with the right number of chromosomes for that Organism. Contains all the DNA to make the organism. Also includes the copy of the X and Y chromosome (Sex determination chromosomes)

Asexual Reproduction: An organism making an exact copy of itself, we call this Binary Fission. (example: bacteria cell dividing and making An exact copy of itself.)

Cellular Asexual Reproduction: A part of a plant can grow an organism (potato, And strawberry horizontal stems carry exact copies of DNA.

Budding: A bud of tissue from an organism, breaks off and grows a New organism. Animals.

Regeneration: Starfish – you break off a leg and a new one grows. Lizard Tail, you break it off and a new one grows again. Tissues Are being regenerated.

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