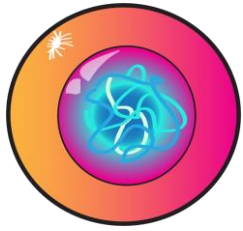
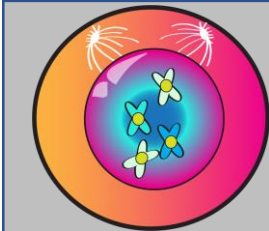


Cell Division

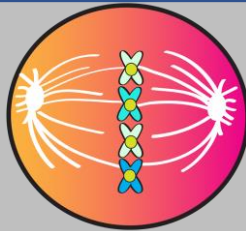
Mitosis is division of the nucleus. This process is necessary for the growth and repair of an organism.



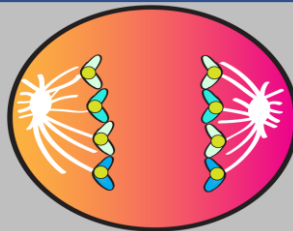
Interphase



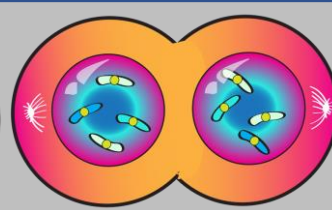
Prophase



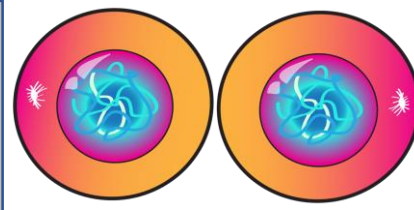
Metaphase



Anaphase



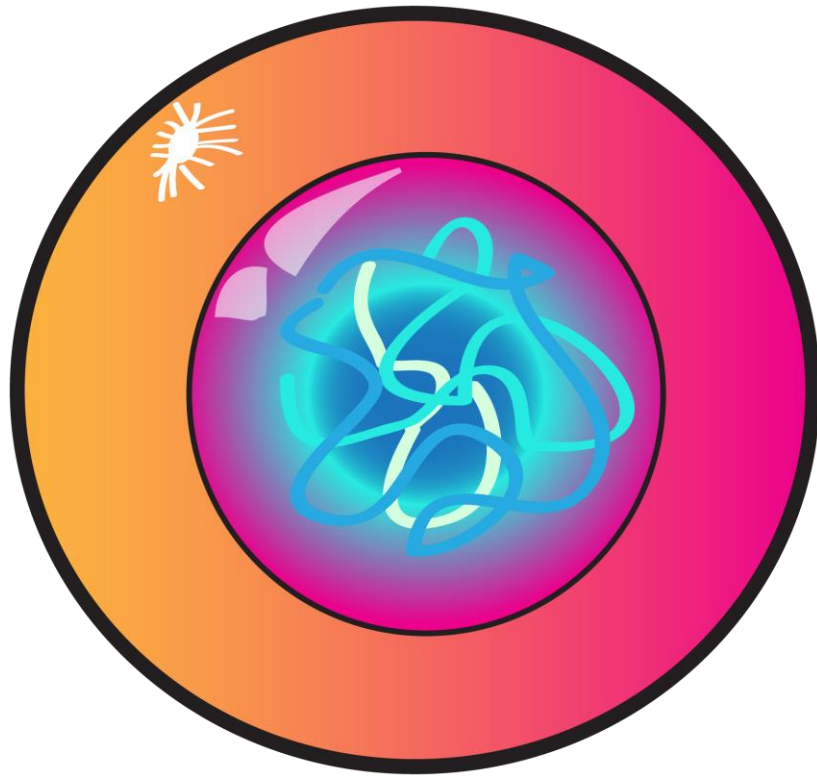
Telophase



Cytokinesis

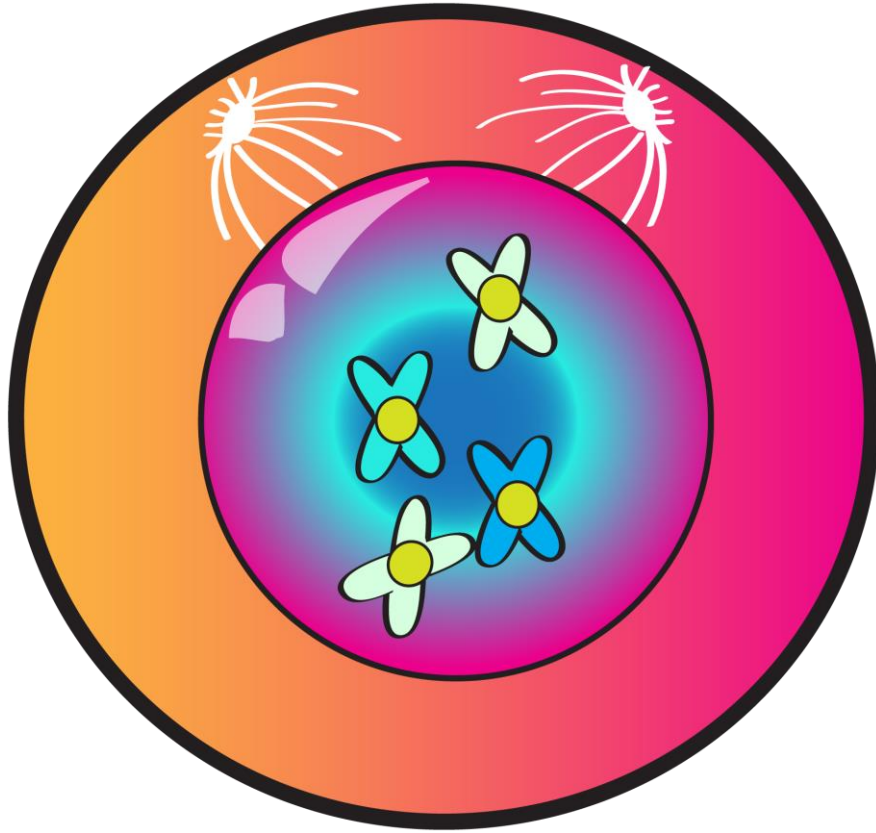
← **MITOSIS** →

Interphase



The prefix inter– means ‘between.’ An interception in football is when the ball goes between one team and another. Between divisions, DNA is copied. This takes 78% of the life of a cell.

Mitosis: Prophase

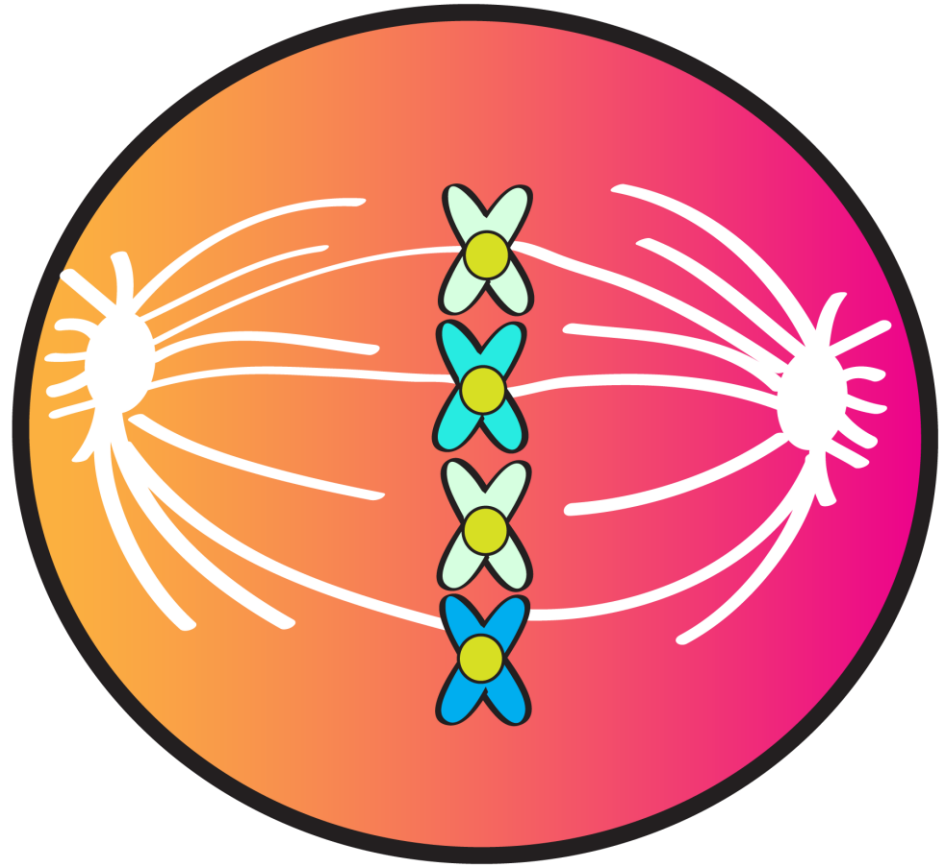


- Chromosomes condense
 - Nuclear membrane breaks down
 - Spindle fibers appear
- **Note: This is the exact opposite of telophase.**

The prefix pro- means 'before, in front of.'
This is the first phase of mitosis. It comes before the others.

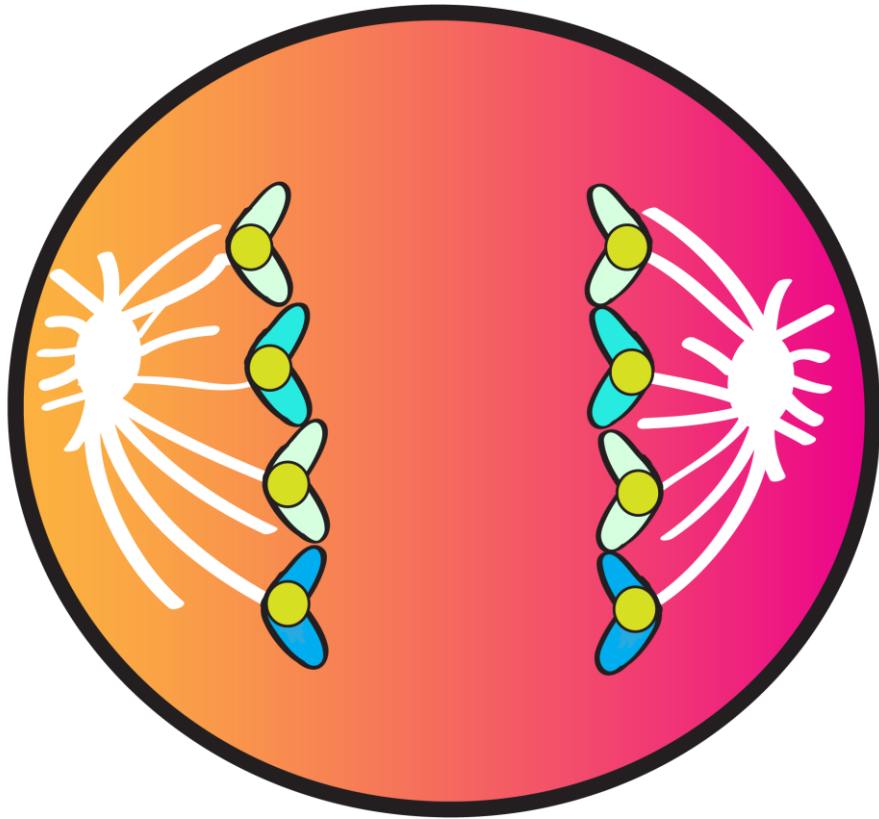
Mitosis: Metaphase

- Chromosomes line up in the middle of the cell
- Spindle fibers attach to centromere



To remember this phase, think of how the chromosomes 'met' in the middle.

Mitosis: Anaphase

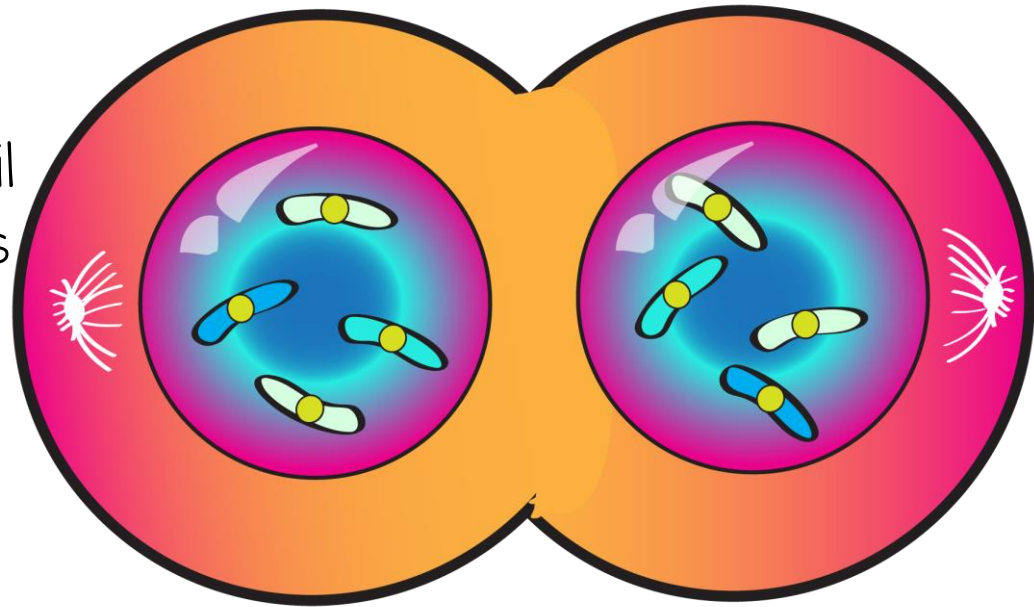


- Sister chromatids are separated at the centromere
- Daughter chromosomes are moved to the poles of the cell

After the chromosomes 'met' in the middle, mean old Ana came and pulled them apart. How dare she!

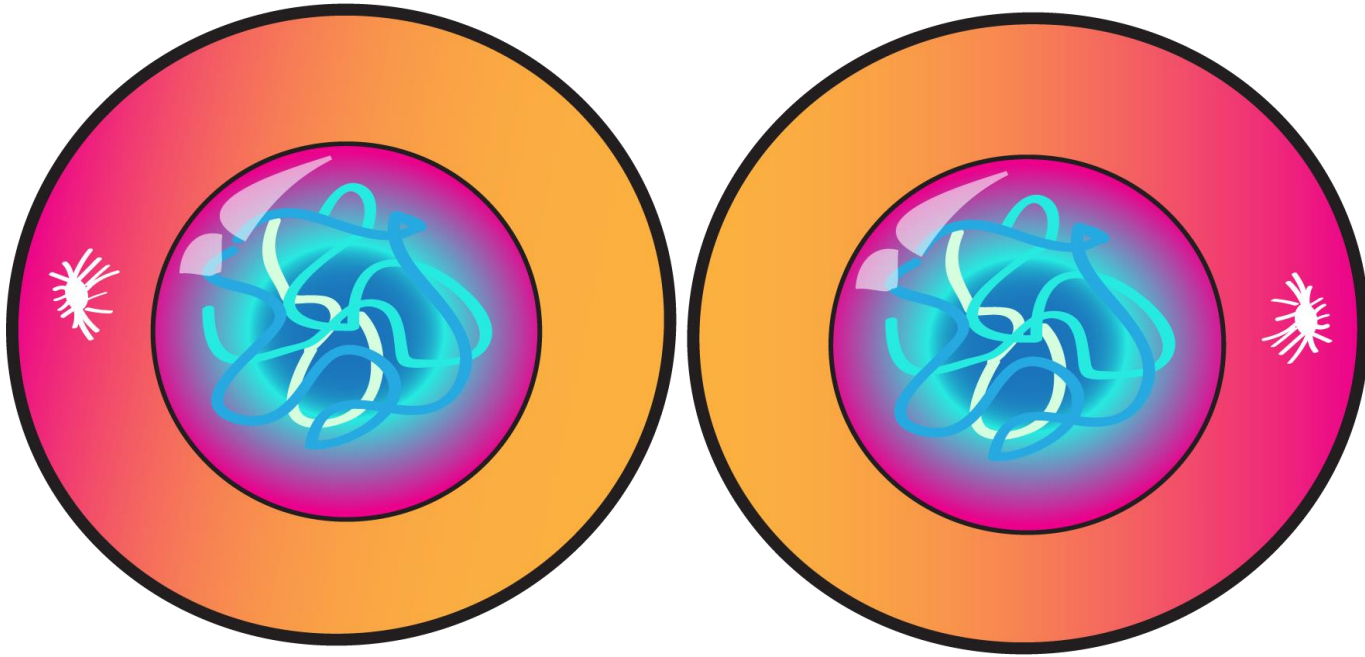
Mitosis: Telophase

- Chromosomes begin to uncoil
 - Nuclear membrane reforms around two daughter nuclei
 - Spindle fibers disintegrate
- **Note: This is the exact opposite of prophase.**



After Ana pulls the chromosomes apart,
they're so far away, they must call on
the telo-phone!

Cytokinesis



Once the nucleus is fully divided, the cell (cyto-) must continue to move (-kinesis) to finish separating.