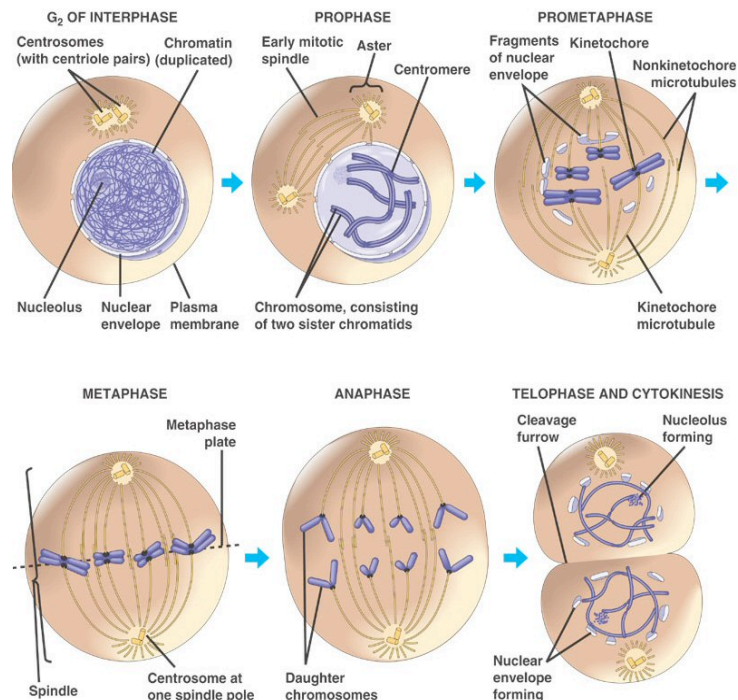


# Mitosis

Mitosis is nuclear division plus cytokinesis, and produces two identical daughter cells during prophase, prometaphase, metaphase, anaphase, and telophase. Interphase is often included in discussions of mitosis, but interphase is technically not part of mitosis, but rather encompasses stages G<sub>1</sub>, S, and G<sub>2</sub> of the cell cycle. Answer the following questions and/or statements dealing with the process of mitosis.



- Title the project MITOSIS with each group members name below it.
- Describe each of the following organelles: nucleus, nucleolus, mitochondria, ribosomes and centrioles. **Include a picture of an animal cell.**
- Briefly describe cell division in a prokaryotic cell like bacteria. **Include a picture.**
- Describe interphase being sure to include what happens in each section of the cell cycle (G<sub>1</sub>, S, and G<sub>2</sub>) and **include a cell cycle diagram.**
- Why are nerve cells considered to be in the G<sub>0</sub> phase?
- How can the DNA condense in the cell without getting tangled? Be sure to include the special protein we learned about in class.
- Describe the difference between a sister chromatid and homologous chromosomes.
- **Include a picture of the stages of mitosis.**
- **Include an actual picture of a plant going through mitosis.**

**Mitosis info:** [http://www.biology.arizona.edu/cell\\_bio/tutorials/cell\\_cycle/cells3.html](http://www.biology.arizona.edu/cell_bio/tutorials/cell_cycle/cells3.html)

**Diagram:** <http://royaleb.wordpress.com/2009/04/27/mitosis/>