

The Cell Cycle and Mitosis Webquest

Synthesize information from the following websites to answer the questions below. Some questions will require information from two or more of the websites to answer fully.

- [Cornell Whitefish Mitosis](#)
- [Cell Division: Binary Fission and Mitosis](#)
- [The Cell Cycle & Mitosis Tutorial](#)
- [Cell's Alive Interactive](#)
- [SUNY mitosis reading](#)
- [Mitosis animation 1](#)
- [Mitosis animation 2](#)
- [Mitosis lecture](#)
- [Cytokinesis](#)

1. What is the purpose of mitosis?

2. Complete this table in which you illustrate and describe the events in each of the phases of the cell cycle.

Name of Phase	Illustration	Description
Interphase – G1		
Interphase – S		
Interphase – G2		
Prophase		

Metaphase		
Anaphase		
Telophase		
Cytokinesis		

3. What is a centriole? What does it do? Which cells (plants or animals) have them?

4. What is the equatorial plate?

5. What is the difference in cytokinesis in plant cells and animal cells?

6. List some of the features necessary for regulation of the cell cycle, and in which errors can lead to cancer.

7. Define chromosome, chromatin, and gene.

8. Draw pictures to illustrate chromatin, chromatid, unreplicated chromosome and a replicated chromosome.

9. Indicate when during the cell cycle each is present in the cell.

10. What are kinetochores and kinetochore microtubules?