

# Cell Cycle/Mitosis Internet Lesson

In this internet lesson, you will review the steps of mitosis and meiosis and view video simulations of cell division. You will also view an onion root tip and calculate the percentage of cells at each of the stages of cell division.

## Mitosis Tutorial

<http://www.cellsalive.com/>

On the left side of the screen is a navigation bar, click on the link to "MITOSIS" Read the text on this page and view the animation, you can slow down the video by clicking step by step through the phases.

1. Which stage does the following occur

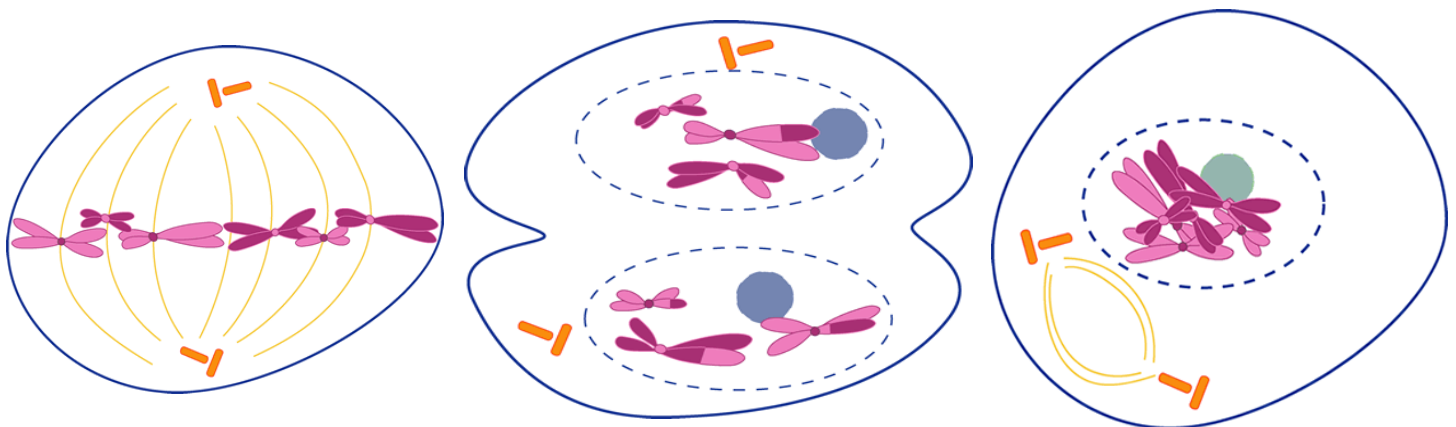
- Chromatin condenses into chromosomes \_\_\_\_\_
- Chromosomes align in center of cell. \_\_\_\_\_
- Longest part of the cell cycle. \_\_\_\_\_
- Nuclear envelope breaks down. \_\_\_\_\_
- Cell is cleaved into two new daughter cells. \_\_\_\_\_
- Daughter chromosomes arrive at the poles. \_\_\_\_\_

Watch the video carefully.

2. The colored chromosomes represent chromatids. There are two of each color because one is an exact duplicate of the other.

- How many chromosomes are visible at the beginning of mitosis? \_\_\_\_\_
- How many are in each daughter cell at the end of mitosis? \_\_\_\_\_
- The little green T shaped things on the cell are: \_\_\_\_\_
- What happens to the centrioles during mitosis? \_\_\_\_\_

3. Identify the stages of these cells:



## Mitosis Animation

[www.sci.sdsu.edu/multimedia/mitosis/](http://www.sci.sdsu.edu/multimedia/mitosis/) \*this takes a while to load, be patient.

1. What is a eukaryote? \_\_\_\_\_
2. What is a non-reproductive cell? \_\_\_\_\_

Click on What is Mitosis after the page has loaded to view the animation and complete the following table.

Phase	What happens during this phase?
Interphase	
Prophase	
Prometaphase	
Metaphase	
Anaphase	
Telophase	

## Another Mitosis Animation

Go to [www.johnkyrk.com/mitosis.html](http://www.johnkyrk.com/mitosis.html)

View the animation and sketch the cell in:

Prophase	Metaphase	Telophase

## Onion Root Tip - Online Activity

[http://www.biology.arizona.edu/cell\\_bio/activities/cell\\_cycle/cell\\_cycle.html](http://www.biology.arizona.edu/cell_bio/activities/cell_cycle/cell_cycle.html)

Read the introduction, then click the “next” button.

You will have 36 cells to classify. When you’re finished, record your data in the chart below.

	Interphase	Prophase	Metaphase	Anaphase	Telophase	Total
Number of cells						36
Percent of cells (calculate: number of cells divided by total cells x 100 )						100 %