

# Cell Cycle Webquest:

## **Part 1:**

Visit Website: <http://plaza.ufl.edu/alallen/pgl/modules/rio/stingarees/module/what.html>

1. What are the functions of mitosis? List 2 functions and explain the example that is used in the video.

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2. Click on the left side of the screen "Built-in Controls in Mitosis"- What happens if proteins are altered by mutation?

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## **Part 2:**

Visit Website: [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)

1. Read the introduction, then click "next" button at the bottom of the page.
2. Read the descriptions of each phase and write out 3 key terms/phrases from the paragraph to describe that phase.
  - Interphase-
  - Prophase-
  - Metaphase-
  - Anaphase-
  - Telophase-
  - Cytokinesis-
3. You will have 36 cells to classify. Follow the given directions on the website. When you are finished, record your data in the chart below.

	<b>Interphase</b>	<b>Prophase</b>	<b>Metaphase</b>	<b>Anaphase</b>	<b>Telophase</b>	<b>Total</b>
<b>Number of cells</b>						<b>36</b>
<b>Percent of cells seen</b>						<b>100%</b>

(Use an online calculator to calculate percent= number of cells seen in each phase divided by total number of cells X 100)

### **Part 3:**

Visit Website: <http://www.cellsalive.com/mitosis.htm>

1. Read the text on this page and view the animation. Watch the video carefully!! You can slow down the video by clicking step by step through the phases. Hint: The term 'Kinetochores' mean centromeres, the proteins between sister chromatids. Answer these questions:

2. 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 daughter cells\_\_\_\_\_

Daughter chromosomes arrive at poles\_\_\_\_\_

3. Next: 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 centrioles. What happens to the centrioles during mitosis?

\_\_\_\_\_  
\_\_\_\_\_

### **Part 4:**

Visit Website: <http://www.quia.com/rr/89527.html>

1. Rags to Riches! Play this game until you win \$1,000,000!
2. Raise your hand until I come and initial your paper to verify your success in learning the cell cycle!