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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1. 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>

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-

**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\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. 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?

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**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!