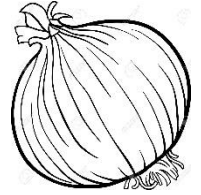


ONLINE ONION ROOT TIPS ACTIVITY HOMEWORK



Objective: To determine time spent in different phases of the cell cycle

Directions: Go to http://www.biology.arizona.edu/cell_bio/activities/cell_cycle/cell_cycle.html

Part 1: Read through the 3 paragraphs at the home page at the link above. Summarize your findings in the box below.

Part 2: Click the Next button at the bottom of the page. Read through the steps and make a quick sketch of each in the table below.

Interphase	Prophase	Metaphase	Anaphase	Telophase

Part 3: Click on the Next button at the bottom of the page. In this activity, you will be presented with cells from the tip of an onion root. You will classify each cell based on what phase it is in. At the end you will count up the cells found in each phase and use those numbers to predict how much time a dividing cell spends in each phase. You can base your calculation on a total cell cycle of 24 hours. Enter your data in the table below. Click Next to begin.

Data:

	Interphase	Prophase	Metaphase	Anaphase	Telophase	Total
number of cells						36
percent of cells						100%

After placing all of the cells, scroll down the page and count up all of the cells in each category, and enter your findings in the top row of your table.

Then, calculate the percentage of cells in each phase, and enter those values on the bottom row of the table.

Analysis Questions: Answer the questions below using complete sentences. It is okay to use the book or the internet for help.

1) When does mitosis occur in a cell?

2) During which phase do chromosomes become condensed?

3) During which phase are two (2) distinct nuclei present?

4) What is formed at the end of mitosis?

5) Heart muscle cells cannot undergo mitosis, so why is it important to take care of your heart?

