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these regions of growth are good for studying the cell cycle because at any given time you can find cells that are undergoing mitosis in order to examine cells in the tip of an onion root a thin slice of the root is placed onto a microscope slide and stained so the chromosomes will be visible the cells you ll be looking at in this activity

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compare and contrast mitosis and meiosis both mitosis and meiosis are involved in making new cells both start with diploid 2 sets of chromosomes o interphase occurs before both duplicating chromosomes before division o both mitosis and meiosis go through pmat prophase metaphase anaphase telophase meiosis goes through pmat twice i

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the cell cycle results in the formation of two genetically identical daughter cells from the division of a parent cell in this lab you will be observing plant cells onion in the various stages of mitosis and make time calculations based on the data you collect

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observing mitosis analysis and conclusion questions 1 mitosis is much the same in animal cells as in the plant cells you have examined what can you infer from this about the origins of mitosis a i can infer that the start of cell all came from one cell and where that cell came from we do not know but it was the start from that cell it when through the process of binary fission

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mitosis introduction in this lab you will examine the dividing root tip cells of an onion you will examine the specimen to identify the various phases of the cell cycle to see which phases cells spend more time in and you will answer related analysis questions to further your understanding of the eukaryotic cell cycle pre lab

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sep 14 2021 the process of mitosis is only a short period of the lifespan of cells mitosis is traditionally divided into four stages prophase metaphase anaphase and telophase the actual events of mitosis are not discreet but occur in a continuous sequence separation of mitosis into four stages is merely convenient for our discussion and organization

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jul 25 2019 procedure 1 create a data table with the following headings across the top number of cells percentage of all cells time min and the stages of mitosis down the side prophase metaphase anaphase telophase 2 carefully put the slide on the microscope and focus it under low power 40x is preferred 3

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feb 23 2022 many cells will be in various stages of mitosis number of words 244 words aim to study the image of onion cells under a microscope and identify actively dividing cells throughout mitosis during the cell cycle s phases materials and

methods refer to the practical activity handout dna observing mitosis results

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discuss the answers to the questions with a partner think pair share and then the class activity 2 observe the stages of mitosis in onion root cells plant cells also use mitosis for growth maintenance and repair

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after completing this lab exercise you should be able to identify and describe the stages of the cell cycle mitosis and meiosis recognizing the events that occur during each stage distinguish between mitosis and cytokinesis as they take place in animal and plant cells

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the onion root is also a good place because this is the area where the plant is growing remember that when cells divide each new cell needs an exact copy of the dna in the parent cell this is why mitosis is only visible in cells that are dividing like the whitefish embryo and the onion root tip mitosis can take several hours to complete

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exercise 1 observing mitosis under the microscope examine prepared slides of both plant cells onion allium root tip and animal cells whitefish blastula under the microscope at 400x

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in general mitosis occurs through several stages that include prophase divided into prophase and prometaphase metaphase anaphase telophase because of the rapid rate at which onion root tips grow as a result of rapid cell division it s possible to observe and identify the different stages of mitosis

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exercise 2 observing mitosis in cells in this exercise you will observe the steps of mitosis in both plant and animal cells procedure review the images of onion root tip cells undergoing the different phases of mitosis shown in figure 10 figure 10

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