

Mitosis Quiz Outline (Science 9)

GUIDING QUESTIONS:

- Why do cells need to divide?
- What are the stages of cell division? What happens in each stage?
- What happens when something goes wrong?

LEARNING MAP CRITERIA:

Relevance	Extending	Proficient	Developing	Emerging
☑	<p>Demonstrate a sophisticated understanding of all the stages of the cell cycle and how they are intimately linked.</p> <p>Engage in a thoughtful discussion of broader implications of errors at any given point in the cell cycle. (Examples: “Suppose DNA does not replicate in interphase. What will happen when the cell tries to divide?” or “Suppose one chromosome does not attach properly to the spindle fibers in prophase. How will the daughter cells be affected?”)</p>	<p>Match microscope images (onion cell mitosis, whitefish mitosis) with corresponding cell cycle stages.</p> <p>Complete all the tasks listed under “Developing”, with a high degree of accuracy, clarity, and confidence.</p>	<p>Explain the importance of cell division.</p> <p>Match diagrams with corresponding cell cycle stages.</p> <p>Describe what happens at each stage of the cell cycle (including mitosis steps).</p> <p>Label a diagram of a chromosome. Count the number of chromosomes and chromatids in an image.</p> <p>Differentiate between chromosomes and chromatin.</p>	<p>Recognize that all cells are produced through cell division.</p>

VOCABULARY:

(Disclaimer: This is not meant to be an exhaustive list. Vocabulary words may appear on the test that are not in this list.)

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| <ul style="list-style-type: none"> - Cell cycle - Growth and development stage <ul style="list-style-type: none"> o Interphase - Division stage <ul style="list-style-type: none"> o Mitosis <ul style="list-style-type: none"> ▪ Prophase ▪ Metaphase ▪ Anaphase ▪ Telophase o Cytokinesis | <ul style="list-style-type: none"> - Chromosome - Chromatin - Centromere - Chromatid - Sister chromatid - Spindle fiber - Nuclear envelope - Nucleus - DNA - DNA replication (also known as DNA duplication, DNA copying) |
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PRIMARY STUDY MATERIAL:

- Science Connections 9 Textbook pages 25-27
- Science Connections 9 Workbook
 - o Page 12
 - o Page 17
 - o Pages 21-22 #19-24
- Topic 1.2 Powerpoint, slides #3-21
- In-class worksheets and activities (e.g. onion cell dry lab, amoeba sisters videos)