



Name

Period

Date

SECTION
5.1

THE CELL CYCLE
Study Guide

KEY CONCEPT

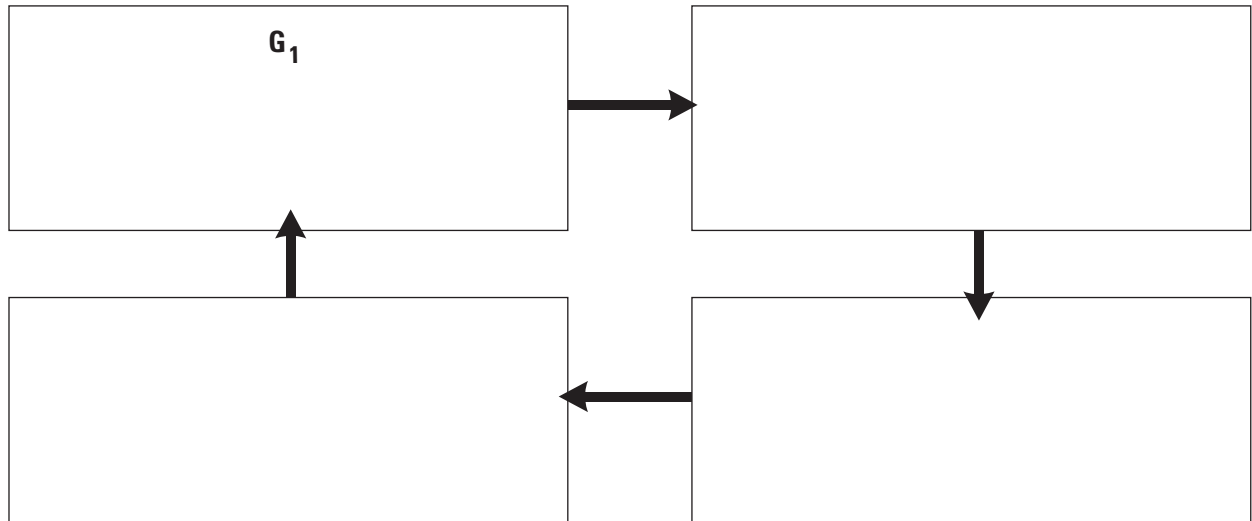
Cells have distinct phases of growth, reproduction, and normal functions.

VOCABULARY

| | |
|------------|-------------|
| cell cycle | cytokinesis |
| mitosis | |

MAIN IDEA: The cell cycle has four main stages.

Summarize what happens during each stage of the cell cycle in the boxes below.



1. How did the G₁ and G₂ stages get their names?

2. Cells must pass through a critical checkpoint during which two stages of the cell cycle?

3. Where does DNA synthesis happen in eukaryotic cells?

4. What two processes make up the M stage?

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CHAPTER 5
Cell Growth and Division

Section 5.1 STUDY GUIDE CONTINUED

MAIN IDEA: Cells divide at different rates.

5. Among different types of cells, which stage of the cell cycle varies most in length?

6. Why does a skin cell divide more often than a liver cell?

7. What is G_0 ?

MAIN IDEA: Cell size is limited.

8. Write an analogy to explain why cell size is limited.

9. Which typically increases faster as a cell grows, surface area or volume?

10. For cells to stay the same size from generation to generation, what two things must be coordinated?

Vocabulary Check

11. Think of an example of a cycle. What does this cycle have in common with the cell cycle?

12. What process divides a cell's cytoplasm? How do the two word parts of your answer help you remember it?

13. What process divides the cell nucleus and its contents?
