

# Cellular Reproduction

## Before You Read

Use the "What I Know" column to list the things you know about how cells work. Then list the questions you have about how cells work in the "What I Want to Find Out" column.

K What I Know	W What I Want to Find Out	L What I Learned

### Science Journal

*New cells are created in your body every day. Write about the reasons your body might need new cells.*

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# Cellular Reproduction

## Section 9.1 Cellular Growth

### Main Idea

### Details

**Scan** the titles, boldfaced words, pictures, figures, and captions in Section 1. Write three facts you discovered about cellular growth as you scanned the section.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

### Review Vocabulary

*carbohydrate*

Use your book or dictionary to define carbohydrate.

\_\_\_\_\_  
\_\_\_\_\_

### New Vocabulary

*cell cycle*

*chromatin*

*chromosome*

*cytokinesis*

*interphase*

*mitosis*

Use your book or dictionary to define each term.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Section 9.1 Cellular Growth** (continued)

**Main Idea** \_\_\_\_\_

**Details** \_\_\_\_\_

**Cell Size Limitations**

*I found this information on page \_\_\_\_\_.*

**Analyze** *movement of nutrients and wastes as cell size increases.*

If a _____ _____ _____,	transport of _____ _____ by _____ slows down.	Therefore, cells _____ before _____ _____.
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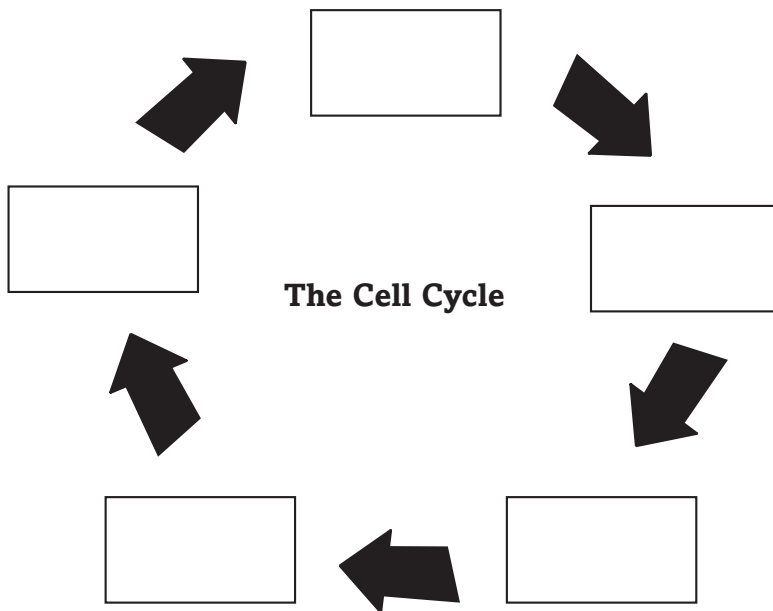
**Describe** *how surface area-to-volume ratio relates to cell size by completing the sentence.*

As a cell grows larger, its \_\_\_\_\_ increases more rapidly than its \_\_\_\_\_, thus surface area-to-volume ratio \_\_\_\_\_.

**The Cell Cycle**

*I found this information on page \_\_\_\_\_.*

**Complete** *the diagram of the cell cycle. Describe the main events in each stage.*



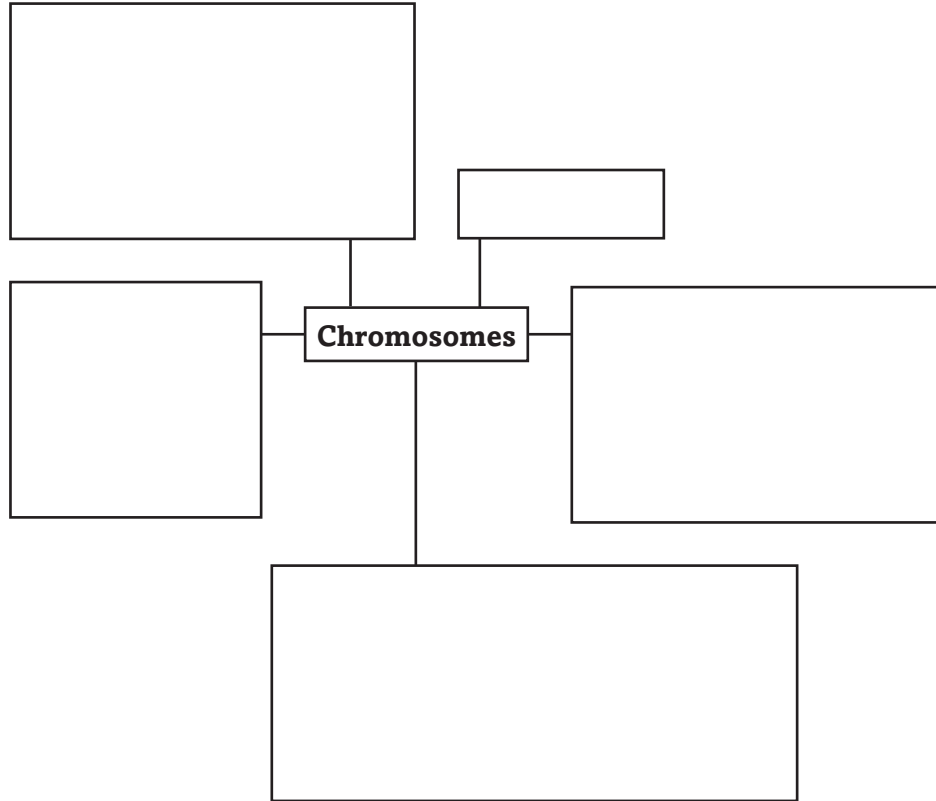
**Section 9.1 Cellular Growth** (continued)

**Main Idea** \_\_\_\_\_

*I found this information on page \_\_\_\_\_.*

**Details** \_\_\_\_\_

**Organize** information about chromosomes in the concept web.



**Identify** four events that occur in a cell during interphase.

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_

**SUMMARIZE**

Analyze the relationship between cell size and the stages of the cell cycle.

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# Cellular Reproduction

## Section 9.2 Mitosis and Cytokinesis

### Main Idea

### Details

**Scan** Section 2 of the chapter. From the headings and illustrations list the four stages of mitosis.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

### Review Vocabulary

Use your book or dictionary to define life cycle.

*life cycle*

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### New Vocabulary

Use your book or dictionary to define the following terms.

*anaphase*

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*centromere*

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*metaphase*

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*prophase*

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*sister chromatid*

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*spindle apparatus*

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*telophase*

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**Section 9.2 Mitosis and Cytokinesis (continued)**

**Main Idea**


**Details**

**Mitosis**

*I found this information on page \_\_\_\_\_.*

**Identify** *two functions of mitosis in animals.*

Function of mitosis in animals



**The Stages of Mitosis**

*I found this information on page \_\_\_\_\_.*

**Model** *the stages of mitosis and the process of cytokinesis. Draw and label a cell in each stage, name each stage, and describe what is happening.*

Name of Phase	Sketch of Cell	Description
cytokinesis		

**Summarize** *the similarities and differences of any two phases of mitosis.*

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**Section 9.2 Mitosis and Cytokinesis** (continued)

**Main Idea** \_\_\_\_\_

*I found this information on page \_\_\_\_\_.*

**Details** \_\_\_\_\_

**Summarize the function of each structure in mitosis.**

centromeres: \_\_\_\_\_

microtubules: \_\_\_\_\_

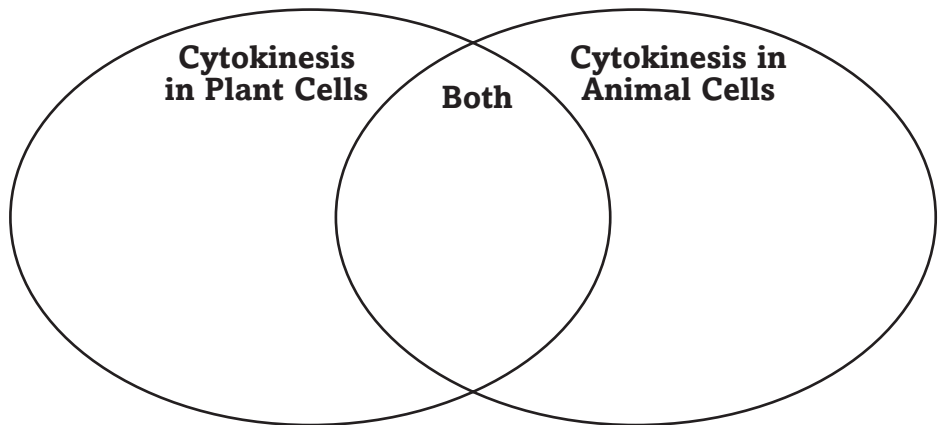
motor proteins: \_\_\_\_\_

spindle apparatus: \_\_\_\_\_

**Cytokinesis**

*I found this information on page \_\_\_\_\_.*

**Compare and contrast cytokinesis in plant and animal cells.**



**SUMMARIZE**

Create a concept map describing the stages of the cell cycle.