

# Chapter 17, Section 1

## The Scientific Revolution

(Pages 511–517)

### Reason To Read

**Setting a Purpose for Reading** Think about these questions as you read:

- How did the Scientific Revolution begin?
- What is the scientific method?

### Main Idea

As you read pages 511–517 in your textbook, complete the table below by identifying the contributions of Copernicus, Kepler, Galileo, and Newton to a new concept of the universe.

<b>Copernicus</b>	
<b>Kepler</b>	
<b>Galileo</b>	
<b>Newton</b>	

### Sequencing Events

As you read, place the following events on the time line below.

- Harvey publishes *On the Motion of the Heart and Blood*
- Galileo's *Starry Messenger* is published
- Galileo faces the Inquisition
- Copernicus publishes *On the Revolutions of the Heavenly Spheres*

◆ 1545    ◆ 1560    ◆ 1575    ◆ 1590    ◆ 1605    ◆ 1620    ◆ 1635

**Background to the Revolution** (pages 511–512)

**Previewing**

*Preview the section to get an idea of what's ahead. Write a sentence or two below explaining what you expect to learn. After you have finished reading, revise your statements as needed.*

---

---

---

---

**Academic Vocabulary**

*Define the following academic vocabulary word from this lesson.*

**obvious**

---

---

**Terms To Review**

*Write the definition of each of the following terms that you studied earlier.*

**intense**

(Chapter 10, Section 2)

---

---

**technical**

(Chapter 4, Section 5)

---

---

**A Revolution in Astronomy** (pages 512–515)

**Summarizing**

*As you read, think about the discoveries in astronomy. Then write a paragraph summarizing the work of the four mathematicians that had an impact on astronomy.*

---

---

---

---

**Terms To Know**

*Write the letter of the correct definition next to each of these terms from this lesson.*

- |                                     |   |
|-------------------------------------|---|
| ___ 1. geocentric                   | <b>a.</b> geocentric model of the universe named after astronomer Ptolemy               |
| ___ 2. Ptolemaic system             | <b>b.</b> explains why the planetary bodies continue in elliptical orbits about the Sun |
| ___ 3. heliocentric                 | <b>c.</b> earth-centered  |
| ___ 4. universal law of gravitation | <b>d.</b> the belief that reason is the chief source of knowledge                       |
|                                     | <b>e.</b> sun-centered  |

**Breakthroughs in Medicine and Chemistry** (page 515)

**Evaluating**

*As you read this lesson, think about a recent medical breakthrough you might have heard about in the news. How do you think it compares to the breakthroughs of Vesalius and Harvey?*

---

---

---

---

**Academic Vocabulary**

*Use the following academic vocabulary word from this lesson in a sentence.*

**instances**

---

---

**Terms To Review**

*Write the definition of the following term that you studied in an earlier chapter.*

**volume**  
(Chapter 8, Section 5)

---

---

**Women and the Origins of Modern Science** (pages 515–516)

**Connecting**

*As you read, compare the role of women scientists during the Scientific Revolution with the role of women scientists today. Summarize your thoughts in a paragraph.*

---

---

---

---

**Academic Vocabulary**

*Define the following academic vocabulary word from this lesson.*

denied

---

---

**Descartes and Reason** (pages 516–517)

**Skimming**

*Read the title and quickly look over the lesson to get a general idea of its content. Then write a sentence or two explaining what the lesson is about.*

---

---

---

---

**Terms To Know**

*Define or describe the following key term from this lesson.*

rationalism

---

---

**The Scientific Method** (page 517)

**Monitoring Comprehension**

*As you read the lesson, write down any questions you may have below. When you have finished reading, answer your questions.*

---

---

---

---

**Terms To Know**

*Define or describe the following key terms from this lesson.*

**scientific method**

**inductive reasoning**

---

---

---

---

**Section Wrap-up**

*Now that you have read the section, answer these questions from Setting a Purpose for Reading at the beginning of the section.*

How did the Scientific Revolution begin?

---

---

---

What is the scientific method?

---

---

---