Glencoe

# WORLD HISTORY

# Chapter 17 Resources

## Revolution and Enlightenment, 1550–1800

Name _____ Date _____ Class _____

# Vocabulary Activity 17

## Revolution and Enlightenment, 1550–1800

**DIRECTIONS:** Match each term with its definition by writing the correct letter on the blank.

| | | | | | |
|---|---|---|---|---|---|
| **A.** | geocentric | **F.** | scientific method | **K.** | mulatto |
| **B.** | philosophe | **G.** | natural law | **L.** | heliocentric |
| **C.** | separation of powers | **H.** | rationalism | **M.** | social contract |
| **D.** | federal system | **I.** | deism | **N.** | salon |
| **E.** | ellipses | **J.** | enlightened absolutism | | |

CHAPTER 17

_____ **1.** religious philosophy based on reason and natural law

_____ **2.** reliance on reason as the best guide for belief and action

_____ **3.** oval paths in which planets move around the Sun

_____ **4.** system by which rulers tried to govern by Enlightenment principles while maintaining their royal powers

_____ **5.** universal moral law that Enlightenment thinkers believed could be understood through reason

_____ **6.** social gathering in which ideas of the Enlightenment were discussed

_____ **7.** relating to a reference system based at the center of the Sun

_____ **8.** intellectual thinker in the Age of Enlightenment

_____ **9.** power shared between the national government and the state governments

_____ **10.** offspring of Africans and Europeans

_____ **11.** entire society agrees to be governed by its general will

_____ **12.** executive legislative and judicial branches of the government limit and control each other in a system of checks and balances

_____ **13.** places Earth at the center of the universe

_____ **14.** means of attaining knowledge by repeated observation and experimentation

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## Skills Reinforcement Activity 17

# Outlining

Outlining helps you organize information for writing. An informal outline is similar to taking notes—you write words and phrases you need to remember main ideas. In contrast, a formal outline has a standard format. To formally outline information, first read the text to identify the main ideas. Label these with Roman numerals. Next, write subtopics under each main idea. Label these with capital letters. Then write supporting details for each subtopic, and label these with Arabic numerals. Each level should have at least two entries and should be indented from the level above. All entries should use the same grammatical form, whether phrases or complete sentences.

**DIRECTIONS:** Use the informal notes below and material from Section 4 of your text to create a formal outline for the American Revolution.

Seven Years' War results in need for British revenues

Stamp Act is imposed, 1765

Stamp Act is opposed and repealed, 1766

First Continental Congress, Philadelphia, 1774

Battle of Lexington and Concord, 1775

Second Continental Congress forms an army—George Washington, commander in chief

Approves Declaration of Independence, 1776—beginning of American Revolution

French supply arms and money; grant diplomatic recognition

Spain and Dutch Republic also enter war

General Cornwallis surrenders at Yorktown; British end the war

Treaty of Paris, 1783—grants independence and western territory from Appalachians to Mississippi River

CHAPTER 17

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## Critical Thinking Skills Activity 17 | Identifying Central Issues

You can better remember information presented in a reading by identifying the central issues that the writer examines. The central issues are the main points or ideas the writer presents and supports with details. Turn to the key events listed on the opening page of Chapter 17 of your textbook. These events suggest the central issues of Chapter 17: the immediate impact and long-term effects of the scientific revolution.

**DIRECTIONS:** Read the following excerpt from Jean-Jacques Rousseau's *Treatise on the Social Compact: or, the Principles of Political Law*. Then answer the questions that follow.

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> Man is born free, and yet is universally enslaved. At the same time an individual frequently conceives himself to be the lord and master over others, though only more eminently deprived of liberty. Whence can this change arise? Are there any means by which it may be rendered lawful? The former question I cannot answer, though I imagine myself capable of resolving the latter.
>
> If I took into consideration only the existence and effects of power, I should say, So long as a people are compelled to obey, they do well to be obedient; but, as soon as they are in a capacity to resist, they do better to throw off the yoke of restraint: for, in recovering their liberty on the same plea by which they lost it, either they have a just right to reassume it, or those could have none who deprive them of it. But there is an inviolable right founded on the very nature of society, which serves as the basis of all others. Man doth not derive this right, however, immediately from nature; it is founded on mutual convention.

1. What human right is the central issue of the first paragraph?

_____

2. What question does Rousseau attempt to answer in the second paragraph?

_____

_____

3. What advice does Rousseau give to the those who are under the "yoke of restraint"?

_____

_____

4. Read the cover story in a weekly newsmagazine. On a separate sheet of paper, identify the central issues in the story. If you have difficulty, review the story's beginning. Journalists usually introduce the central issues in the first one or two paragraphs, known as the "lead."

Name _____ Date _____ Class _____

# History and Geography Activity 17

## Where Is the World?

In 1543, Polish astronomer Nicholas Copernicus lay dying when his friends placed the first bound copy of his book, *On the Revolutions of the Heavenly Spheres,* in his frail hands. Copernicus stared at the book and then at his friends and said nothing. No one knew if Copernicus realized what he held. Who could have known that the ideas in the book would forever change people's thinking about the universe?

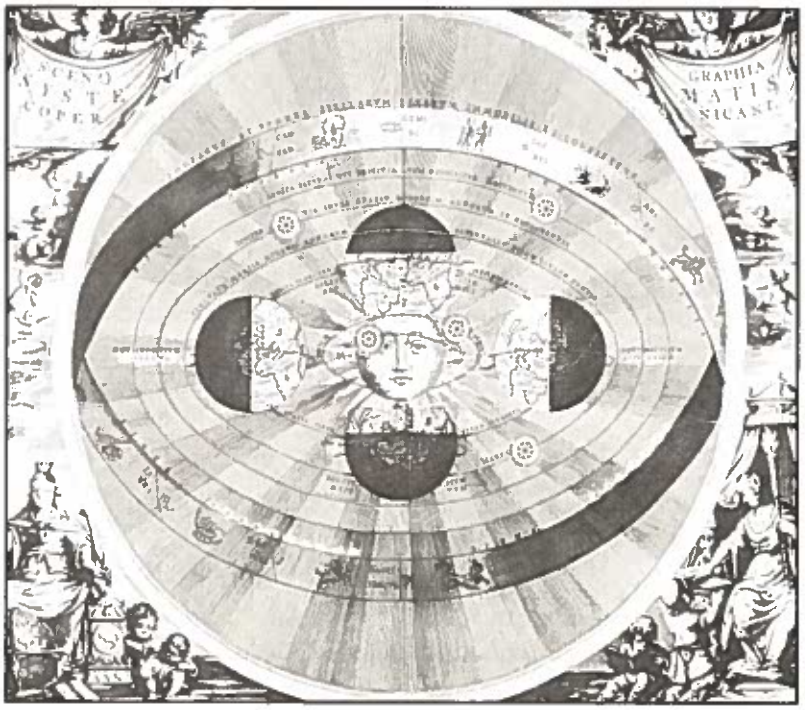
During the time of Copernicus, European ideas about the universe had come from the teachings of ancient Greeks—teachings that had been formulated nearly 1,400 years earlier. The Greek astronomer Ptolemy had taught that Earth stood still at the center of the universe and that all other spheres revolved around it. The Catholic Church reinforced this view. According to the Church, Earth, where humans lived, was the greatest planet in God's universe; all other planets revolved around it.

Copernicus's studies of the movement of planets led him to challenge this theory. He came to believe that the Sun, not Earth,

### Copernicus's Universe

***In the middle of everything is the Sun. For in this most beautiful temple, who would place this lamp in another or better position than that from which it can light up the whole thing at the same time? . . . Thus indeed, as though seated on a royal throne, the Sun rules the family of planets revolving around it.***

—Nicholas Copernicus, in *On the Revolutions of the Heavenly Spheres,* 1543



*This diagram illustrates Copernicus's radical new view of the universe.*

CHAPTER 17

## HISTORY AND GEOGRAPHY ACTIVITY 17 (continued)

was at the center of the universe. All the planets, including Earth, revolved around the Sun.

Yet Copernicus was afraid to publish his ideas lest he be branded a heretic and punished by the Church. He continued his studies in isolation.

With the publication of his ideas at his death, Copernicus launched later scientists into new investigations about the universe. No longer tied to the Church's view and to outdated teachings, astronomers such as Galileo and Kepler would prove that Copernicus was indeed right—Earth and the other planets revolved around the Sun. These new ideas and a growing interest in the natural world marked the beginning of the Scientific Revolution that transformed people's thinking in the 1600s.

As you have learned, location can be described by compass directions or in terms of relation to other landmarks. You can, for example, tell someone your house is two blocks to the east of where you are now standing. Or, depending on the person's familiarity with the area, you may say that your home is just around the corner from Town Hall. Often the description of a location reflects the point of view of a person or a group. In Copernicus's day, the description of the location of Earth and the universe itself reflected the views held by the Roman Catholic Church and by Greek teachings that were thousands of years old.

Today we find that the descriptions of many locations continue to reflect the viewpoints of particular groups and individuals.



### APPLYING GEOGRAPHY TO HISTORY

**DIRECTIONS:** Answer the questions below in the space provided.

1. Why might people give different descriptions of the location of a place?

_____

2. Why did the Catholic Church believe that the earth stood in the middle of the universe?

_____

#### Critical Thinking

3. **Recognizing Ideologies** How do institutions today mold the way people think about places in the world? Use examples from your own experience with institutions such as the government, schools, and church organizations to explain your answer.

_____

#### Activity

4. As a class, conduct a survey. Ask five people to describe the location of these places: Mexico, Russia, Ethiopia, Switzerland, and China. Compare your findings. What do the descriptions of the locations tell you about the perspectives of the direction-givers?

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# Mapping History Activity 17

## The Age of Revolution

Between 1500 and 1830, a revolution in scientific thinking spread across Europe. This Scientific Revolution affected politics, religion, philosophy, and the arts.

**DIRECTIONS:** The map below of present-day Europe shows places where significant developments in the Scientific Revolution and the Age of Enlightenment occurred. Use the map to answer the questions and complete the activity that follow.

1. Identify three nations shown on the map that did not exist in the Age of Enlightenment.

_____

_____

_____

_____

_____

2. Identify three or more cities on the map that existed when the Scientific Revolution began, around 1500.

_____

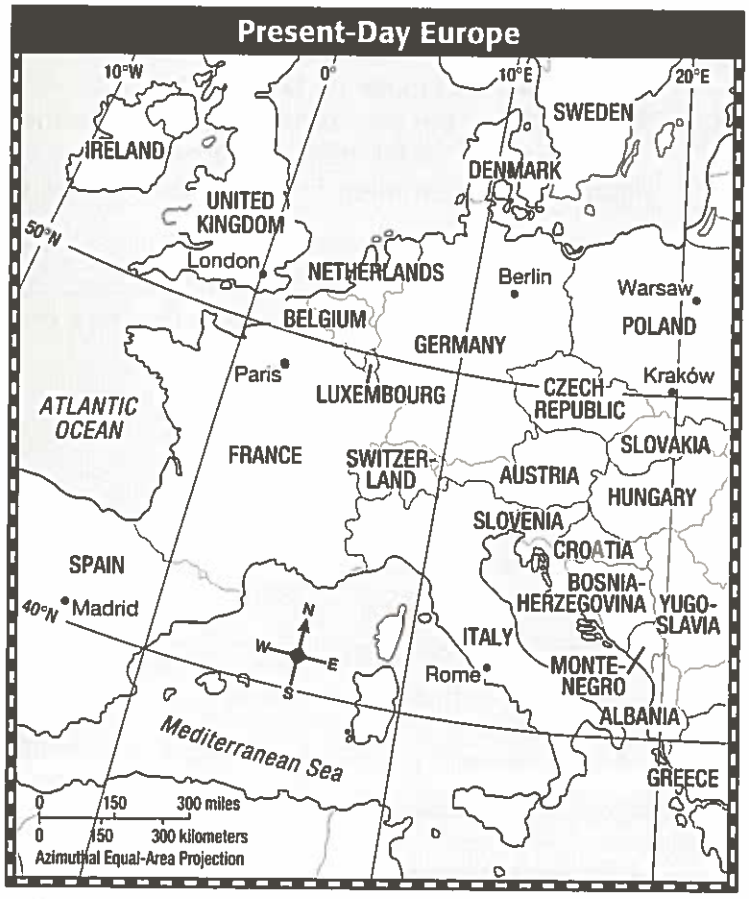
_____

_____

_____

_____

_____




3. On the map, mark and label the city or country where the following developments in the Scientific Revolution and the Age of Enlightenment occurred:

Copernicus begins his scientific career;

Galileo stands trial for his heretical ideas;

Charles II establishes the Royal Society;

Madame de Pompadour draws together enlightened thinkers in salons.

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## Historical Significance Activity 17

# The First Amendment

The basic freedoms enjoyed by Americans for more than 200 years—freedom of speech, freedom of the press, freedom of religion, and freedom of assembly—come from the Bill of Rights, which became part of the Constitution in 1791. These freedoms are such a basic part of American life that sometimes we take them for granted. Yet billions of people in countries around the world do not enjoy the freedoms that Americans have considered sacred for 200 years.

The Bill of Rights contains ten amendments to the Constitution. The First Amendment reads as follows:

> Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech or of the press; or the right of the people peaceably to assemble, and to petition the government for a redress of grievances.

**DIRECTIONS:** In the space below, describe the story from your life that best expresses the meaning of the First Amendment to you.

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# ★ Cooperative Learning Activity 17 ★

## Ideas That Changed the World

### BACKGROUND

Artistic and conceptual creations, discoveries, and revelations marked the Age of Enlightenment. These ideas and discoveries changed people's views of the universe and their role in it. Exclusive reliance on ancient authorities gave way to new forms of inquiry. New political, scientific, philosophical, and artistic theories emerged and established the basis of a modern worldview based on rationalism and secularism. By focusing on some of these ideas that changed the world, you will better appreciate the energy and momentum that fueled the Age of Enlightenment and the Scientific Revolution from 1550 to 1800.

### GROUP DIRECTIONS

1. This activity combines research skills with computer skills. You and your group will conduct research and then prepare a multimedia slide show about a leading figure of the Age of Enlightenment.
2. Use your textbook and library resources or the Internet to learn about key individuals of the Enlightenment.
3. Use a software presentation tool like PowerPoint® with its bank of clip art to create slides for each Enlightenment figure and list his or her accomplishments, personal data, and impact on the age. The information should define why his or her contribution was significant.
4. Use your multimedia slides as the basis of oral presentations to the class on each person showcased.
5. Choose from the following individuals or present your group's suggested figure to your teacher for approval.

| | |
|---|---|
| Isaac Newton | Jean-Jacques Rousseau |
| Maria Winkelman | Mary Wollstonecraft |
| René Descartes | Adam Smith |
| Blaise Pascal | Johann Sebastian Bach |
| Francis Bacon | George Frederick Handel |
| Montesquieu | Wolfgang Amadeus Mozart |
| Voltaire | Galileo Galilei |
| Denis Diderot | John Wesley |

### ORGANIZING THE GROUP

1. **Decision Making** Decide in your groups which person to study. Your teacher may reassign topics if a large number of groups opt for the same individual, depending on research resource availability.
2. **Group Work/Decision Making** Meet with your group and brainstorm the kinds of information and clip art you want to include in your multimedia slide show and oral presentation. Be sure to include some personal data on the individual

## Cooperative Learning Activity 17 (continued)

and explain, not just what the accomplishments were, but also their importance in the Age of Enlightenment. Discuss how you will prepare your presentation. Then divide up the tasks for creating your multimedia presentation.

3. **Individual Work** Research your assigned topics or conduct general research about the person, noting all sources used. Select appropriate pictures and graphics. Prepare your assigned parts of the presentation.
4. **Additional Group Work** Share your research with the group. Together, organize your group's information and illustrations into a slide show and oral presentation. If none of your own group members are familiar with software like PowerPoint®, students from other groups or classes may be able to provide a quick tutorial. Decide who will design, create, and present each part of the report so that all members have a role in the presentation.
5. **Group Sharing** Groups should take turns making their presentations to the rest of the class. Together, discuss the similarities and differences among these "enlightened" individuals.



### GROUP PROCESS QUESTIONS

- What is the most important thing you learned about the individual you researched from this activity? What was "enlightened" about her or his contribution?
- What part of the project did you enjoy most?
- If you did a multimedia presentation, what special problems did this form of report pose for the group?
- How did you solve the problems?
- How was it helpful to work with others?

### Quick CHECK

1. Was the goal of the assignment clear at all times?

_____

2. Did you have problems working well together? If so, how did you solve them?

_____

3. Was your group's presentation as good as you thought it would be? How could it be improved?

_____

_____

HISTORY SIMULATION ACTIVITY 17

# Science on Trial

**During the Scientific Revolution, Galileo and others made the assertion that the planets revolved around the Sun. In spite of scientific evidence that supported this view, the Inquisition of the Catholic Church condemned Galileo and his ideas as heresy. After a trial, Galileo was forced to recant his idea, though many think he did so only under extreme pressure.**

**TEACHER MATERIAL**

**Learning Objective** To understand the divisions that existed between scientists of the Enlightenment and the Catholic Church.

**Activity** Groups of students will role-play a trial of Galileo by the Church. Students will take the parts of Galileo, three members of the Church, and a jury. Each side will present its arguments, and then the jury will decide which has made the best case.

**Teacher Preparation** Provide several copies of the next page to each group. Help students locate reference sources including books, magazine articles, and Internet addresses related to history or science.

## Activity Guidelines

1. Introduce the activity by reviewing important points about Galileo's ideas. Include some of the background information found in the Chapter Preview and Section 1 of this chapter. Then discuss how Galileo's ideas conflicted with those of the Catholic Church.
2. Organize students into groups of 10 to 12 each. Explain that each group will conduct a mock trial of Galileo. Group members will play the following roles: Church members who will defend the position of the Catholic Church, Galileo, and jury members who will judge the case.
3. Distribute the planning forms and direct students to divide among group members the roles that each will play. Have Church members and Galileo research information that they can use to argue their case. Have members of the jury conduct general research about the dispute.
4. As students conduct their research, have them use the planning form and additional sheets of paper if necessary to record the points they will make during the trial. Those supporting Galileo should be well versed about his ideas and the scientific principles upon which he based his conclusions. Those supporting the Church should thoroughly understand the Church's position and why Galileo's ideas threatened it.
5. When students have completed their research, discuss with them how the trial will be conducted. Point out that at an Inquisition trial there was no jury and that defendants had no rights. Explain that they will not follow this style in order to allow the arguments of both sides to be heard. Students work together to agree on an order of presentation and cross-examination.
6. When both sides have finished presenting their arguments, have the jury discuss the case and come to a verdict by voting. Then have the jury report their decision.
7. After the trial, have the groups come together to discuss what they have learned. Ask students:
   - What new information did you learn about Galileo and his ideas about the solar system?
   - What new information did you learn about why the Church was so strongly opposed to Galileo's ideas?
   - Why is a jury an important part of a trial? How did having a jury make this trial different from Galileo's experience with the Inquisition?

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HISTORY SIMULATION ACTIVITY 17

HANDOUT MATERIAL

# Science on Trial—Planning Form

**Galileo** _____

**Church Members** _____

_____

**Jury Members** _____

_____



**Research Notes:**

**Information about Galileo:**

_____

_____

_____

_____

_____

_____

**Information about the Church:**

_____

_____

_____

_____

_____

_____

**Most important points to make:**

_____

_____

_____

_____

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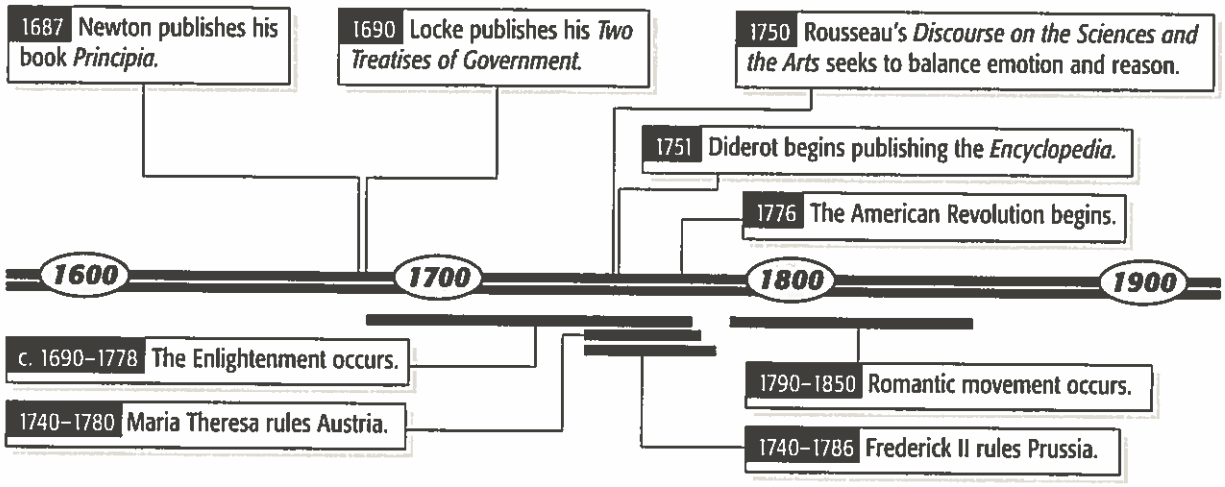
## Time Line Activity 17

# Revolution and Enlightenment

**DIRECTIONS:** During the Scientific Revolution, ideas changed the world. Look at the events listed on the time line. Write each event in the box next to the field of study it affected. Then describe the significance of the event. Events may be placed in more than one box.




**Significance of Historical Events**

| Field | Event | Significance |
|---|---|---|
| **Science/Mathematics** | | |
| **Government/Politics** | | |
| **Philosophy/Religion** | | |
| **The Arts** | | |

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Linking Past and Present Activity 17

# Leeuwenhoek and Modern Biology



**THEN** Because many things are impossible to see with the naked eye, people who lived before and during the Middle Ages had mistaken concepts about material reality. They could not see the eggs that fleas and lice laid. Therefore, they believed that such vermin sprang from nonliving matter. Since the germs that cause diseases are even tinier than insect eggs, they supposed that a mysterious vapor brought plague.

Antonie van Leeuwenhoek (1632–1723) did not change these mistaken ideas during his lifetime. However, he did make discoveries that eventually helped to correct them. Leeuwenhoek was a fabric merchant who experimented with the microscope, which had been invented around 1595. Two scientists, Robert Hooke of England and Jan Swammerdam of the Netherlands, had made microscopes and used them before Leeuwenhoek. Hooke's book, *Micrographia*, turned Leeuwenhoek's attention to the microscopic world.

Leeuwenhoek developed a lens that magnified objects to appear 200 times larger. He used the lens on ordinary things, such as pond water and the tartar from his own teeth. In these, he discovered fabulous creatures that he called animalcules. He was the first to observe such things as bacteria, sperm cells, blood cells, rotifers, and nematodes. Leeuwenhoek's work led to the understanding of the composition of blood and the development of ways to control diseases caused by microbes.

**NOW** Biology is the science most deeply indebted to Leeuwenhoek's discoveries. Its principle tool remains the microscope. This instrument has, of course, advanced far beyond the simple device used in the sixteenth century. Stereoscopic microscopes allow scientists to dissect extremely small specimens by showing these specimens in three dimensions. Electron microscopes magnify images of objects over one million times. With these and other new instruments and techniques, modern biologists are probing even more deeply into the mysteries of life. Some of the more recent—and most exciting—medical discoveries follow.

Some of biology's most exciting advances have been in genetics, or the study of genes. Genes determine the essence and appearance of living organisms. Scientists have learned to manipulate them to modify living organisms. For example, they can change the genetic structures of plants to make them more resistant to disease.

The manipulation of genes has led to a process called cloning. In 1997 Ian Wilmut, a Scottish scientist, cloned a sheep; that is, he reproduced a sheep from one cell of the animal. Biologists hope that cloning will lead to creating animals whose organs can be used to replace damaged human organs.

In 1999 members of the Human Genome Project decoded virtually all the genetic information in a human cell. This knowledge will enable doctors and scientists to help people in a number of ways. For example, a doctor could identify whether a patient has a gene that makes that person susceptible to a particular disease.



## CRITICAL THINKING

**Directions:** Answer the following questions on a separate sheet of paper.

1. **Drawing conclusions:** Why do you think Leeuwenhoek was interested in the microscope?
2. **Making inferences:** Why might it be helpful for people to learn that they have a gene that makes them susceptible to a disease?
3. **Extending prior knowledge:** How do you think Leeuwenhoek's work led to the control of disease? Do research in the library and on the Internet to learn about scientists who fought microbes. Write a brief report of your findings.

Name _____ Date _____ Class _____

People in World History Activity 17 — Profile 1

# Nicholas Copernicus (1473–1543)

In the early 1500s, most people believed Ptolemy's theory of the universe. More than 1,000 years earlier, the Greek astronomer had concluded that the earth was the center of the universe. According to Ptolemy, the earth was stationary, and all the other planets moved around it in complicated paths, or orbits. Copernicus, however, dared to disagree with his theory.

Born in Toruń, Poland, Copernicus began his studies at the University of Kraków. His uncle was a prelate, a powerful church official. When Copernicus was 24, his uncle used his influence to have him appointed a canon, an official of the cathedral in Frombork, Poland. Copernicus used the income from this position to finance his studies in mathematics, astronomy, and medicine in Italy. When he was 33, he earned a doctorate from the University of Ferrara. Then he returned to Poland and his position as church canon.

While finishing his formal education, Copernicus became aware of serious problems within the Ptolemaic theory. Most significantly, Ptolemy's theory of the planets' movement in the galaxy seemed too complicated. Looking for a way to make sense of this defective logic, Copernicus began to review other theories of the universe.

After years of careful study, Copernicus came to believe that the Sun is stationary and located near the center of the universe. Further, he theorized that the earth is a planet like all the other planets in the sky. As a result, the earth must move like the other planets. Copernicus believed the earth to be in the third planetary orbit around the Sun.

Disturbing fixed ideas about the universe was a dangerous thing. Copernicus's theory of the universe not only challenged Ptolmey's theory; it also refuted the Church's view of the universe. If Copernicus's theory became known, he could have been severely punished. Copernicus, however, was careful, and he shared his ideas only with those people with whom he could trust his life. Nonetheless, news of his thesis spread rapidly. Copernicus's masterpiece, *On The Revolutions of the Heavenly Spheres*, was published right before his death in 1543. For his achievements, Copernicus is considered the founder of modern astronomy.

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## REVIEWING THE PROFILE

**Directions:** Answer the following questions on a separate sheet of paper.

1. How was Copernicus's theory of the universe different from Ptolemy's theory?
2. **Critical Thinking** **Determining Cause and Effect.** Why would the Church have been angered by Copernicus's theory?
3. **Critical Thinking** **Recognizing Ideologies.** Why do you think people in Copernicus's time reacted so negatively to his ideas?

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People in World History Activity 17 — Profile 2

# Adam Smith (1723–1790)

How can social order and human progress be possible in a society where people follow their own self-interests? This is the problem that Adam Smith set out to solve.

Smith argued that people's personal interests lead to progress and order. To make money, people make things that other people want to buy. People spend money for the things they want the most. Buying and selling creates social harmony. Smith claimed that all this would happen without control, as if by an "invisible hand." This belief came to be called laissez-faire economics, the policy that a government should impose the fewest possible restrictions on prices and trade. Laissez-faire is a French phrase meaning "let do" or "leave them alone." As a result of his work with freedom and order, economic process, and a unified social theory, Adam Smith is considered the founder of modern economics.

Smith was born in Kirkcaldy, Scotland, to a distinguished family. His father was an important lawyer and public official; his mother was a member of the upper class. His college education was the best that could be had: first at Scotland's University of Glasgow and then at England's Oxford University. Smith left Oxford when he was 23 years old. Two years later, he became a professor at the University of Edinburgh, where he taught literature, law, and philosophy. In 1751, he was made a professor of logic at the University of Glasgow. Later that year Smith accepted a post as professor in moral philosophy.

At Glasgow, Smith wrote his first book, *The Theory of Moral Sentiment* (1759). He then was hired to tutor the Duke of Buccleuch. While accompanying the young duke on a tour of France, Smith began his most important book, *The Wealth of Nations*.

When Smith returned to England in 1766, the young duke's stepfather provided him with a regular income. Freed from the need to earn a living, Smith was able to leave teaching and spend the next decade writing and studying. He published the first edition of *The Wealth of Nations* in 1776 and revised it five times during his life. The book became a major influence on economic policy in the early nineteenth century.

## REVIEWING THE PROFILE

**Directions:** Answer the following questions on a separate sheet of paper.

1. What social dilemma did Smith address in *The Wealth of Nations*?
2. What is laissez-faire economics?
3. **Critical Thinking** **Recognizing Bias.** What assumptions about human nature did Adam Smith make?
4. **Critical Thinking** **Identifying Alternatives.** What might be the advantage of a government that controls trade—"hands-on" as opposed to Smith's "laissez-faire" ideal?

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# PRIMARY SOURCE READING 17

## Of the *Encyclopedia*

**Voltaire was one of the most influential philosophers of the Enlightenment. A man with a sharp tongue and an even sharper pen, he was twice imprisoned in the Bastille for his comments. He spent two years in England, where he was impressed by England's greater freedom of thought. Back in France, he wrote philosophy and satire and, through the influence of Madame de Pompadour, was made a member of the French Academy.**

**In the passage below, Voltaire ridicules French responses to Diderot's *Encyclopedia*, to which Voltaire himself was a contributor.**

**Guided Reading** *In this selection, read to learn why Diderot's* Encyclopedia *was banned in France and why it should not have been.*

A servant of Louis XV told me that while his master, the king, was dining one day at Trianon with a small group, the conversation turned first on hunting and then on gun powder. Someone said that the best powder is made with equal parts of saltpeter, sulphur and coal. The Duke de La Vallière, who knew better, argued that to make good gun powder all you needed was one part of sulphur and one of coal to five parts of saltpeter that had been well filtered, well evaporated, and well crystallized.

"It is funny," said the Duke de Nivernois, "that we amuse ourselves daily by killing partridges in the park at Versailles, and sometimes by killing men or by being killed ourselves at the frontier, without knowing exactly with what we kill."

"Alas! We are reduced to that state for most things of this world," answered Madame de Pompadour; "I do not know what the rouge I put on my cheeks is made of, and I should be very much embarrassed if someone asked me how the silk hose I am wearing is made."

"It is a pity," the Duke de La Vallière then said, "that His Majesty confiscated our encyclopedic dictionaries, each of which cost us a hundred gold pieces: there we would quickly find the answer to all our questions."

The king justified the confiscation: he had been warned that the twenty-one folio volumes that were found on all the ladies' dressing tables were the most dangerous thing in the world for the French kingdom; and he wanted to know for himself if this were true before allowing anyone to read this work. At the end of the dinner he sent three of his servants for a copy, each of whom returned carrying seven volumes with great difficulty.

They saw at the article "Powder" that the Duke de La Vallière was right; and soon Madame de Pompadour learned the difference between the old Spanish rouge that the ladies of Madrid used to color their cheeks, and the rouge of Parisian ladies. She learned that Greek and Roman ladies were painted with purple that came from seashells, and that consequently our scarlet was the purple of the ancients; she learned that there was more saffron in Spanish rouge, and more cochineal in the French.

She saw how her stockings were manufactured; and the operation of this process delighted her with wonder. "Oh, the fine book!" she exclaimed. "Sire, did you confiscate this storehouse of useful things so as to possess it alone and be the only wise man of your kingdom?"

They all jumped at the volumes like the daughters of Lycomedes at Ulysses' jewels; every one found at once what he was looking for. Those who had lawsuits were surprised to find there the judgment of their cases. The king read all the rights of the crown. "But really," he said, "I don't know why I was told so many bad things about this work."

"Well, don't you see, Sire," said the Duke de Nivernois, "it's because it is very good? Men do not attack the mediocre and the dull of whatever sort. If women try to ridicule a new comer, it is

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# PRIMARY SOURCE READING 17

certain that she is prettier than they."

All the while the others kept leafing through the pages, and the Count de C . . . said aloud: "Sire, you are too fortunate that there should be under your reign men capable of knowing the arts and of transmitting them to posterity. Everything is here, from how to make a pin to how to make and direct your canons; from the infinitely small to the infinitely great. Thank God for having made men born in your kingdom who have thus served the entire universe. Other nations must either buy the *Encyclopedia* or copy it. Take all my property if you like; but give me back my *Encyclopedia*."

"Yet they say," replied the king, "that there are many faults in this so necessary and so admirable work."

"Sire," rejoined the Count de C . . . , "there were two spoiled sauces at your dinner; we did not eat them, and we ate very well. Would you like to have the whole dinner thrown out the window because of these two sauces?"

The king felt the strength of reason; every one recovered his property: it was a happy day.

Envy and ignorance did not hold themselves beaten; these two immortal sisters continued their outcries, their schemes, their persecutions: ignorance is very learned in these matters.

What happened? Foreigners brought out four editions of this French work, banned in France, and made about eighteen hundred thousand gold pieces.

Frenchmen, try henceforth to understand your interests better.



## INTERPRETING THE READING

**Directions** *Use information from the reading to answer the following questions. If necessary, use a separate sheet of paper.*

1. Why did King Louis XV ban Diderot's *Encyclopedia*?

_____

2. After King Louis XV read the rights of the crown, he stated, "I don't know why I was told so many bad things about this work." Give three reasons why his guests argued not to ban the *Encyclopedia*.

_____

_____

3. What did Voltaire mean by "Envy and ignorance did not hold themselves beaten"?

_____

### Critical Thinking

4. **Synthesizing Information** In one of Voltaire's letters, he states, "Twenty *in-folio* volumes will never cause a revolution; it's the little portable 30 cent books which are to be feared." Discuss why a smaller, less expensive book could have a greater effect on peoples' ideas and beliefs and how it might lead people to revolt against their country.

_____

_____

Name _____ Date _____ Class _____

# Reteaching Activity 17

## Revolution and Enlightenment

In the Age of Enlightenment, innovative ideas in astronomy, physics, mathematics, medicine, chemistry, and philosophy changed the way people viewed the physical and social world. New theories and beliefs based on the scientific method and on reason replaced old beliefs based on magic, mysticism, and ancient writings.

**DIRECTIONS:** The outline below lists fields that changed tremendously in the Age of Enlightenment and people who initiated or contributed to these changes. In the space provided, record the discoveries, contributions, or ideas of these individuals.

**I.** Astronomy, Physics, and Mathematics

- **A.** Copernicus _____
- **B.** Kepler _____
- **C.** Galileo _____
- **D.** Newton _____

**II.** Biology

- **A.** Vesalius _____
- **B.** Harvey _____

**III.** Chemistry

- **A.** Boyle _____
- **B.** Lavoisier _____

**IV.** Government

- **A.** Rousseau _____
- **B.** Montesquieu _____

**V.** Literature

- **A.** Voltaire _____
- **B.** Diderot _____

Name _____ Date _____ Class _____

# ★ Enrichment Activity 17 ★

## The Commotion Galileo Caused

In Chapter 17, you read about the reaction of the Catholic Church to Galileo's ideas, which conflicted with Church teachings. Galileo's hypothesis that the earth was not the center of the universe threatened to undermine the religious world-view that pervaded every aspect of European society. Read the excerpt below from Bertolt Brecht's play *Galileo.*

*Around the corner from the market place a* BALLAD SINGER *and his* WIFE, *who is costumed to represent the earth in a skeleton globe made of thin bands of brass, are holding the attention of a sprinkling of representative citizens, some in masquerade, who were on their way to see the carnival procession. From the market place the noise of an impatient crowd.*

BALLAD SINGER *(accompanied by his* WIFE *on the guitar):*

When the Almighty made the universe
He made the earth and then he made the sun.
Then round the earth he bade the sun to turn—
That's in the Bible, Genesis, Chapter One.
And from that time all beings here below
Were in obedient circles meant to go:
Around the pope the cardinals
Around the cardinals the bishops
Around the bishops the secretaries
Around the secretaries the aldermen
Around the aldermen the craftsmen
Around the craftsmen the servants
Around the servants the dogs, the chickens, and the beggars.

*A conspicuous reveller—henceforth called the* SPINNER—*has slowly caught on and is exhibiting his idea of spinning around. He does not lose dignity, he faints with mock grace.*

BALLAD SINGER:

Up stood the learned Galileo
Glanced briefly at the sun
And said: "Almighty God was wrong
In Genesis, Chapter One!"
Now that was rash, my friends, it is no matter small:
For heresy will spread today like foul diseases.
Change Holy Writ, forsooth? What will be left at all?
Why: each of us would say and do just what he pleases!

—From *Galileo* by Bertolt Brecht, translated by Charles Laughton, edited by Eric Bentley, copyright © 1940 by Arvid Englind, copyright © 1952 by Bertolt Brecht, copyright © 1966 by Eric Bentley.

**DIRECTIONS:** Answer the questions below in the space provided.

1. Write a one-sentence summary of the message the Ballad Singer tries to convey. _____

2. Write your own ballad, poem, or short play about either Copernicus or Diderot and the persecution either man faced for expressing his views. If necessary, use a separate sheet of paper. _____

Name _____ Date _____ Class _____

# World Art and Music Activity 17

## John Singleton Copley

John Singleton Copley (1738–1815) had two artistic careers. He spent most of the first half of his life in prerevolutionary Boston as a respected portrait painter. At the peak of his fame, he moved to London, where he painted large historical paintings.

**DIRECTIONS:** Read the passage below about this expatriate artist. Then answer the questions in the space provided.



John Singleton Copley, *The Copley Family,* oil on canvas (1776–1777)

Copley was born in Boston in 1738. As a young boy, he was already drawing and painting. His stepfather was an engraver who exposed the young Copley to prints of English paintings and taught him to engrave and paint. At age 13 he was forced to go to work to help support his family, and so he became a printer and engraver.

It was common at the time for an artist to study and copy the work of other artists. At first, the works available to Copley were not very accomplished, so

*(continued)*

Name _____ Date _____ Class _____

# World Art and Music Activity 17

neither were his copies. As he painted more and more portraits of real people, however, he gradually improved and began to acquire a style of his own. Most portrait painters of the time emphasized their subjects' clothes and jewels. Copley did this as well, but he was more interested in their faces and the aspects of character to be found there. Not only did he paint an individual's appearance, but Copley's paintings also conveyed aspects of the subject's personality.

The family portrait on page 171 is an interesting combination of Copley's early and mature styles. The stiff pose and expressionless face of the child in the center suggest a wooden doll, appealing to the viewer only for her pretty dress. The other three children, however, are rendered like real children–falling all over their parents, laughing and active. Their personalities are captured as clearly as they would be in a modern snapshot.

Copley's most famous portrait is of Paul Revere. The silversmith poses in his shirtsleeves, holding one of his teapots. This relaxed informality is not a Copley characteristic: he must have seen something unique in Revere. Although Revere is relaxed, his face is intelligent, thoughtful, and alert.

In 1774 Copley left for England. Copley had long wanted to visit Europe; he felt that Europe was the center of the art world at that time and he wanted to experience all that it had to offer. He quickly gained fame in London and wealthy Englishmen and -women commissioned many portraits. In between portrait commissions, he worked on larger works featuring groups of people and historical scenes, such as *The Death of Chatham.* This canvas details the earl of Chatham suffering from a fatal stroke while addressing the House of Lords. More than 50 nobles surround the dying prime minister and each individual is unique and detailed, down to silver shoe buckles. This elevates the work from historical fact to emotional reality.

It has been said that John Singleton Copley was more concerned with painting truth than beauty. In fact, he did both.

## Reviewing the Selection

1. What kind of art was Copley known for in America?

_____

2. How was his work in England different?

_____

## Critical Thinking

3. **Making Generalizations** What people or institutions supported Copley's art? What do you think this says about colonial Boston?

_____

_____

4. **Determining Cause and Effect** Artists often try to explore problems through painting. These can be the artist's own personal concerns, central issues in society, or aesthetic concerns. Copley' greatest talent was showing the person behind the face. What—if any—problems do you think this attempted to solve?

_____

_____

CHAPTER 17

Glencoe

# WORLD HISTORY

## Chapter 17

### Section Resources

Name _____ Date _____ Class _____

# Guided Reading Activity 17-1

## The Scientific Revolution

**DIRECTIONS:** Answer the following questions as you read Section 1.

1. What did the writings of Ptolemy and Archimedes make obvious?

2. What new invention helped to spread new scientific ideas quickly and easily?

3. Where is Earth placed in the universe according to the Ptolemaic system?

4. Contrary to Ptolemy, what did Copernicus argue concerning the construction of the universe?

5. What discoveries did Galileo make using a telescope?

6. Why did the Church order Galileo to abandon the Copernican idea of the nature of the universe?

7. What did Isaac Newton define in his first book, *The Principia?*

8. What did William Harvey's observations and experiments show?

9. What field of science in Germany provided opportunities for women?

10. What did René Descartes emphasize and assert?

11. Who developed the scientific method?

SECTION 17-1

Name _____ Date _____ Class _____

## Guided Reading Activity 17-2

### The Enlightenment

**DIRECTIONS:** Fill in the blanks below as you read Section 2.

The **(1)** _____ was an eighteenth-century philosophical movement of intellectuals who were greatly impressed with the achievements of the **(2)** _____ Revolution. **(3)** _____, natural law, hope, and **(4)** _____ were common words to the thinkers of the Enlightenment.

Montesquieu's analysis of the system of checks and **(5)** _____ through separation of powers was his most lasting contribution to political thought. Voltaire was especially well known for his criticism of **(6)** _____ and his strong belief in religious toleration. Diderot's most famous contribution to the Enlightenment was the **(7)** _____, or *Classified Dictionary of the Sciences, Arts, and the Trades.*

The **(8)** _____, a French group, were interested in identifying the natural economic laws that governed human society. They believed the state should not interrupt the free play of natural economic forces by imposing government **(9)** _____ on the economy. This doctrine became known as **(10)** _____ meaning "to let do."

Jean-Jacques Rousseau argued for a social **(11)** _____ between the government and the people. Through a social contract, an entire society agrees to be **(12)** _____ by its general will. The English writer Mary **(13)** _____ advanced the strongest statement for the rights of women.

Many Enlightenment philosophes **(14)** _____ the Christian churches. But many people also sought a deeper personal **(15)** _____ to God. **(16)** _____ proved that the need for spiritual experience had not been eliminated by the eighteenth-century search for reason.

SECTION 17-2

Name _____ Date _____ Class _____

# Guided Reading Activity 17-3

## The Impact of the Enlightenment

**DIRECTIONS:** Fill in the blanks below as you read Section 3.

**I.** The Enlightenment brought important changes in art, _____, and literature.

- **A.** By the 1730s, a new artistic style known as _____ had spread over Europe.
- **B.** The eighteenth century was one of the greatest periods in the history of _____ music.
  - **1.** Johann Sebastian _____ was one of the greatest composers of all time.
  - **2.** Wolfgang Amadeus _____ was a true child prodigy of the age.
- **C.** The eighteenth century was important in the development of the European _____.

**II.** Enlightenment thought had an effect on _____ life in European states.

- **A.** Frederick II of _____ was well-versed in the ideas of the Enlightenment
- **B.** Joseph II of Austria said, "Philosophy is the _____ of my empire."
- **C.** Catherine II of Russia said Diderot's _____ theories "would have turned everything in my kingdom upside down."

**III.** The philosophes _____ war as a foolish waste of life and resources.

- **A.** In 1740, a major war broke out in connection with the succession to the _____ throne.
- **B.** The _____ Years' War had three major areas of conflict: Europe, India, and North America.
- **C.** The struggle between Britain and France in the rest of the world, known as the _____, was fought in India and North America.

SECTION 17-3

Name _____ Date _____ Class _____

## Guided Reading Activity 17-4

### Colonial Empires and the American Revolution

**DIRECTIONS:** Fill in the blanks below as you read Section 4.

1. In the sixteenth century, Portugal came to dominate _____. Spain's empire included parts of _____, _____, and _____ America.
2. By 1501, Spanish rulers permitted _____ between Europeans and Native Americans, whose offspring became known as _____.
3. A noticeable feature of Latin American _____ was the dominant role of the large landowner.
4. Portuguese Brazil and Spanish Latin America were colonial _____ that lasted over three hundred years.
5. Catholic missionaries, especially the _____, _____, and _____, fanned out to different parts of the Spanish Empire.
6. The United Kingdom of Great Britain came into existence in 1707, when the governments of _____ and _____ were united.
7. William Pitt the Elder expanded the British Empire by acquiring _____ and _____ in the Seven Years' War.
8. On July 4, 1776, the Second Continental Congress approved a declaration of _____ written by Thomas Jefferson.
9. The _____, signed in 1783, recognized the independence of the American colonies.
10. The proposed Constitution of the United States created a _____ system in which power would be shared between the _____ government and the _____ governments.

SECTION 17-4