

The Enlightenment

A Revolution in Reason



Patrice Sherman

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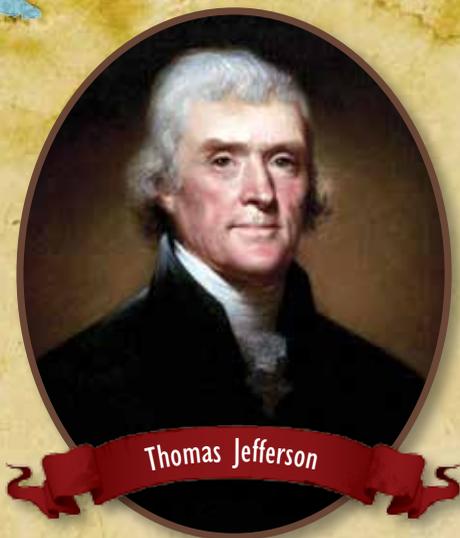
Words That Changed the World

In June 1776, future U.S. president Thomas Jefferson wrote these famous words: “We hold these truths to be self-evident, that all men are created equal.” Jefferson did not live in a world of equality. Men who owned land had more power than those who did not. Women had very few rights. Slavery still existed. The **Declaration of Independence**, which Jefferson helped author, did not change those things. Yet Jefferson’s words meant something. They presented a **radical** idea. His words were a sign that things were beginning to change.

Jefferson was part of a movement called the **Enlightenment** (en-LAHYT-n-muhnt). Enlightenment **philosophers** sought wisdom. These scholars, or thinkers, used **reason** to solve problems. They believed in religious freedom, individual rights, and self-government.

a gathering of Enlightenment leaders





The Enlightenment not only changed politics, it changed science and art, too. Scientists used reason to conduct experiments. They learned from observation. Artists expressed new ideals of truth and beauty. The Enlightenment transformed Europe and America. It offered hope for human rights and freedom.

To Enlighten

To enlighten means to give knowledge. In 1784, philosopher Immanuel Kant (ih-MAN-yoo-uhl kahnt) wrote an essay on enlightenment. Kant stated that people should not be afraid to think for themselves. Later, historians used the word *enlightenment* to refer to the period of time when people in the Western world developed new approaches to science, government, and education.

Man of the People

Thomas Jefferson was a philosopher, scientist, and politician. He was also the third president of the United States and helped establish the Library of Congress.



Setting the Stage for New Ideas

The Thirty Years' War

From 1618 to 1648, the countries of Europe engaged in a series of conflicts known as the Thirty Years' War. Tension between **Protestants** and **Catholics** helped start the war. Political battles among royal families also played a part.

At the start of the seventeenth century, European nations did not have fixed borders. Most people did not think of themselves as **citizens** of a state. They gave their loyalty to the lord who held power over their area. Fights over land were common and violent. Soldiers, called *mercenaries* (MUR-suh-ner-eez), were paid to fight. Mercenaries were often poor men willing to work for whichever lord promised them the most money.

battle during the Thirty Years' War, Germany, 1631



Over 20 nations took part in the Thirty Years' War. The Protestant nations included England, Scotland, Sweden, and Prussia. The Catholic nations included France and the Holy Roman Empire.

The long war caused a massive shortage of food. This led to widespread hunger. Destruction and disease devastated Central Europe. Soldiers looted villages and burned farms. Thousands of people were driven from their lands. By the 1630s, Europeans, both rich and poor, had become tired of constant conflict.



The Holy Roman Empire

The Holy Roman Empire lasted from 962 to 1806. At its height, it stretched from Italy to France. During the Thirty Years' War, the empire consisted mainly of German and Austrian states. The empire started as Roman Catholic, but after 1555, Lutheranism (LOO-ther-uhn-izhm) was allowed.

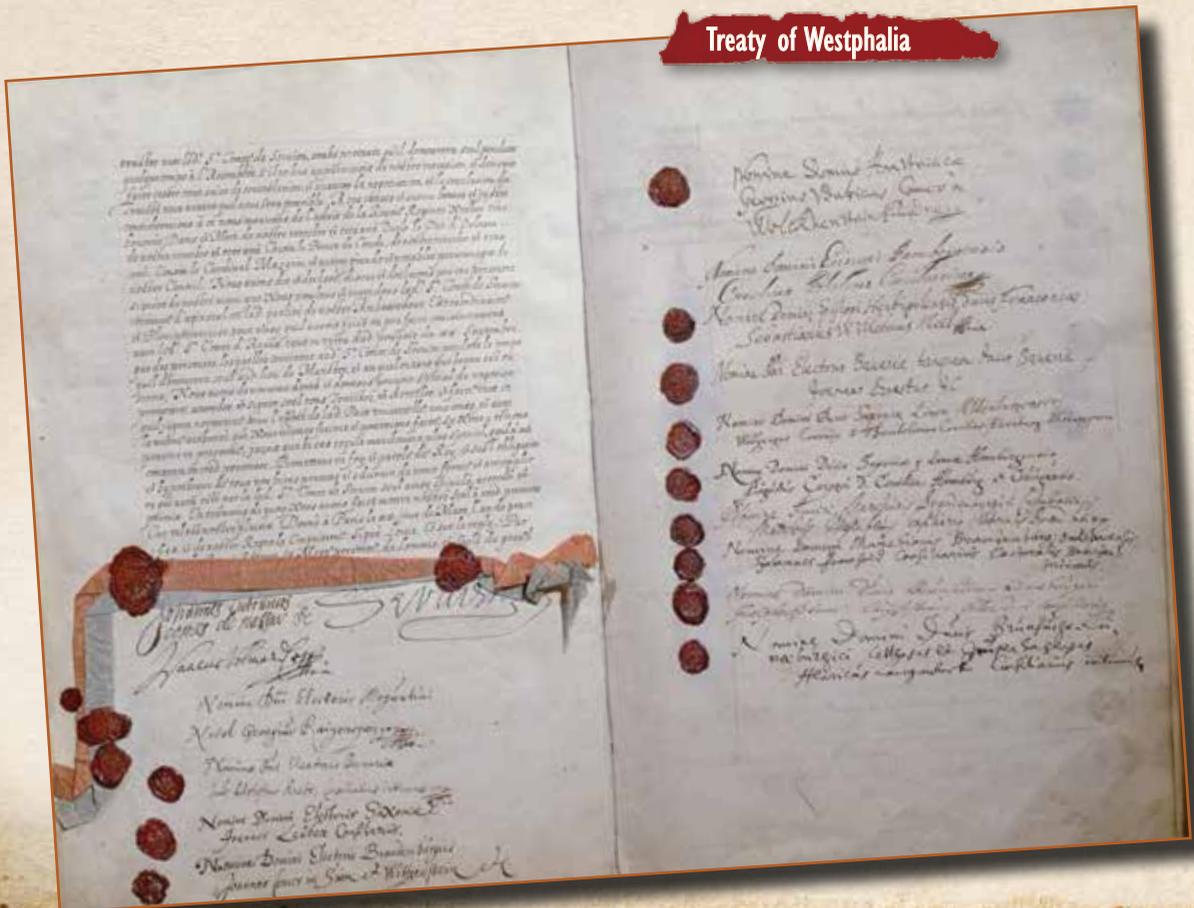
The Protestant Reformation

In 1517, a German priest named Martin Luther began a movement protesting the power of the Catholic Church. Although Luther originally wanted to reform the Church, his movement became a separate branch of Christianity. Its followers were called Protestants because their religious beliefs were rooted in Luther's protest.

The Peace of Westphalia

Between 1643 and 1648, representatives of the nations involved in the war met in Münster, which is in modern-day Germany. There they signed a series of peace treaties, or agreements. The Thirty Years' War was finally over.

Known as the Peace of Westphalia (west-FEY-lee-uh), the treaties did several important things. First, they set clear borders between nations. This created the nation state of modern Europe. The treaties also said that nations now had the right to defend their borders from invasion.





signing the treaty of Münster, which became part of the Peace of Westphalia

The Natural Lawyer

Born into a wealthy Dutch family, Hugo Grotius (GROH-shee-uhs) studied at the University of Leiden (LAHYD-n) at age 11. He believed that all nations should respect certain laws. He called this *natural law*. His ideas later became the basis for international law.

The Great Educator

John Comenius (kuh-MEE-nee-uhs) was one of the first people to believe that everyone should have access to education. He helped establish schools throughout Europe. His methods included using books with pictures to teach children.

Religion was also addressed in the treaties. Each ruler would have the right to decide on the official religion of his country. Protestants in Catholic countries and Catholics in Protestant countries would still have the right to observe their own religion as long as they followed certain rules. They might not be allowed to hold public services. Or, they might be limited to meeting only at certain times of the day. This was not complete religious freedom. However, it was a big step toward tolerance, or acceptance.

After the Peace of Westphalia, Europeans began to focus on law, education, and science. This was the beginning of the Enlightenment.

England's Glorious Revolution

During the 1660s, England began to experience increasing tension between the king and **Parliament** (PAHR-luh-muhnt). In 1685, James II, a Catholic, took the throne. England was a Protestant nation. People feared that James would try to force his faith on them. James's behavior did not help matters. He believed that the king should have absolute power. When Parliament objected to his actions, James tried to get rid of Parliament.

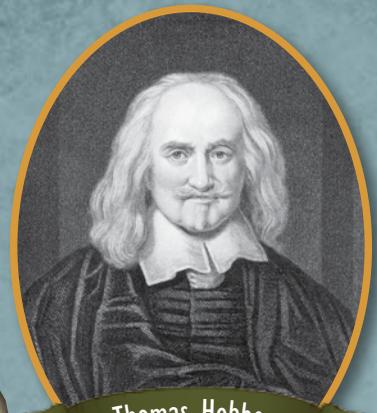
In 1688, James II was overthrown and replaced by King William and Queen Mary. The new rulers agreed to a written **constitution**. The constitution limited the power of the king and increased the power of Parliament.

William and Mary become king and queen.



In 1689, Parliament passed England's first Bill of Rights. Under this bill, the king could not get rid of Parliament. Individuals had the right to **petition** the government. **Cruel and unusual punishment** was also forbidden.

In addition, the Bill of Rights supported the Habeas Corpus (HEY-bee-uhs KAWR-puhs) Act of 1679. This act stated that anyone arrested must be charged with a crime. If they were not charged, then they had to be released. This meant that people could not be arrested simply for expressing their political or religious beliefs.



Thomas Hobbes

The Social Contract

Thomas Hobbes (hobz) was the first philosopher to introduce the **social contract** theory. He believed that kings could only rule with the consent of their subjects. Though he did not live to see the Glorious Revolution, his ideas provided the foundation for the Bill of Rights.

Parliament

Parliament is England's ruling body. It includes the House of Lords and the House of Commons. Members of the House of Lords are **aristocrats** who inherit their seats in Parliament. Members of the House of Commons are **commoners** elected by the people.



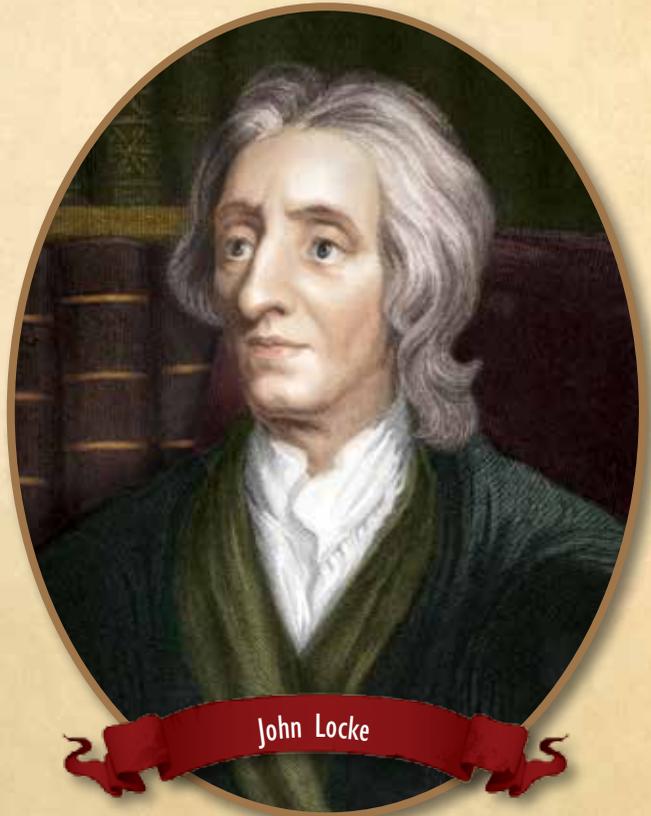
Philosophy: An Age of Ideas

After the Thirty Years' War ended, people throughout Europe began to think about the kind of society they wanted. What kinds of laws were best? How could people use reason to understand the world around them? Philosophical questions were not just for scholars. They were for everyone.

John Locke

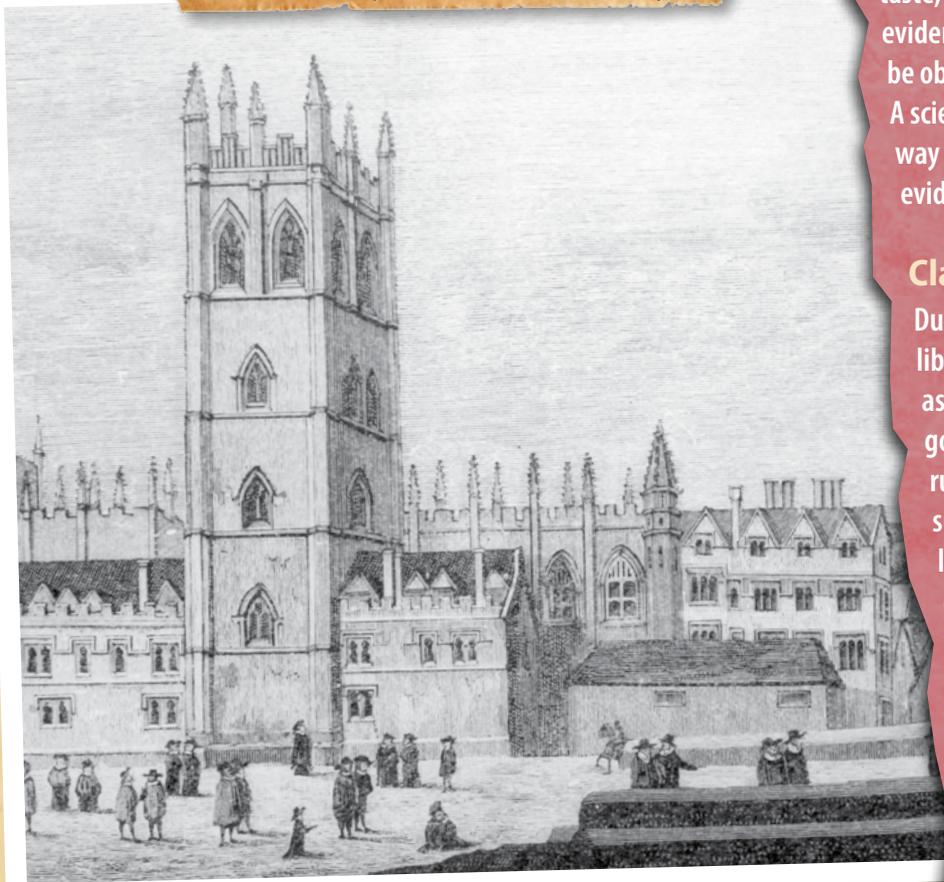
In England, John Locke (lok) became one of the leading philosophers of the Enlightenment. Locke studied medicine at Oxford (OKS-ferd) University. After he graduated, he worked as a doctor.

Locke thought deeply about how people acquired knowledge. In 1689, he wrote *An Essay Concerning Human Understanding*. Locke argued that humans were not born with knowledge. He said that they gain it through education. Locke believed the mind at birth was like a blank slate, or *tabula rasa* (TAB-yuh-luh RAH-suh). Reason was the most important function of the mind. All people, Locke declared, could learn to use reason.



Locke also promoted the ideas of the social contract and the separation of church and state. Locke's theories were daring and new. His influence stretched far beyond England to France and America.

Oxford University in the seventeenth century



Empiricism

Empiricism (em-PIR-uh-siz-uhm) is a branch of philosophy that emphasizes direct experience. Empiricists believe that humans learn about the world mainly through their physical senses—sight, sound, touch, taste, and smell. Empirical evidence is evidence that can be observed and measured. A scientific experiment is one way of obtaining empirical evidence.

Classical Liberalism

During the Enlightenment, liberalism was defined as a belief in limited government and the rule of law. Liberals supported individual liberties such as freedom of speech and religion. Though the definition of liberalism has changed over time, Locke is still considered the father of classic liberalism.

David Hume

Like Locke, the Scottish philosopher David Hume (hyoom) believed in the use of observation and experience to gain knowledge. But unlike Locke, Hume believed emotions were as important as intelligence. Human nature was a mixture of the two. Without emotion, humans would have no motivation. They would have no drive to achieve anything.

Hume did not mean that people could just give in to their passions without thinking. Rather, Hume believed that people were capable of free will. They could decide between right and wrong. Hume promoted skepticism (SKEP-tuh-siz-uhm). Skepticism is the idea that people should be critical of any theory until it is proven.



David Hume

A
TREATISE
OF
Human Nature:

BEING
An ATTEMPT to introduce the ex-
perimental Method of Reasoning
INTO

MORAL SUBJECTS.

by *David Hume Esq.*

*Rara temporum felicitas, ubi sentire, quae velis; & quae
sentias, dicere licet.* TACIT.

BOOK I.

OF THE
UNDERSTANDING.

LONDON:

Printed for JOHN NOON, at the *White-Hart*, near
Mercer's-Chapel in *Cheapside*.

MDCCLXXXIX.

title page to Hume's *A Treatise of Human Nature*

Hume wrote on a wide variety of subjects. His favorite was human nature. He wanted to know how experience shaped thoughts and emotions. Hume often used the phrase “the science of man” to describe his work. Many historians consider Hume to be one of the first psychologists (sahy-KOL-uh-jists). Psychologists study the science behind the human mind and behavior.

Skepticism

To be skeptical means to have doubts. A skeptic does not accept anything on blind faith. Skeptics need to see proof. In Hume's day, many skeptics believed that nothing could ever be proven to be completely true. There would always be room for doubt. There would always be questions without answers.

The Science of Man

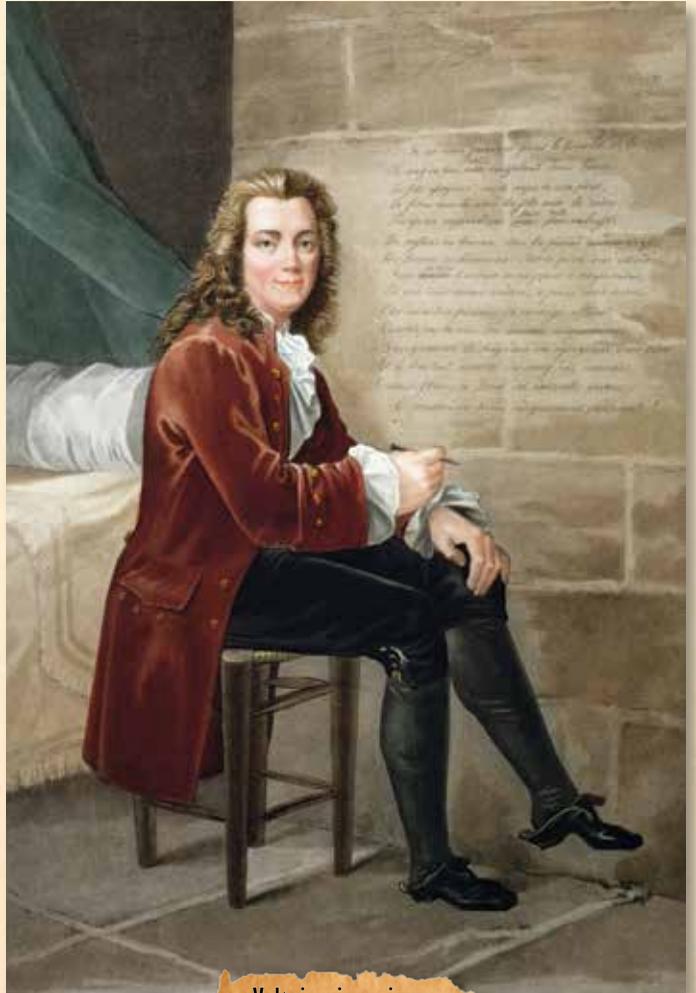
Hume applied Isaac Newton's scientific method to his study of human nature. Just as scientists only know what they can observe, people can only know what they experience. Hume said there is no knowledge outside of experience.

Voltaire

François-Marie Arouet (FRAN-swah ma-REE AH-roo-ay) was born in a French province in 1694. He wanted to be one thing when he grew up—a writer. By his late teens, he was living in Paris writing poetry. Many of Arouet's poems poked fun at the government. In 1717, a judge sentenced him to prison because of it.

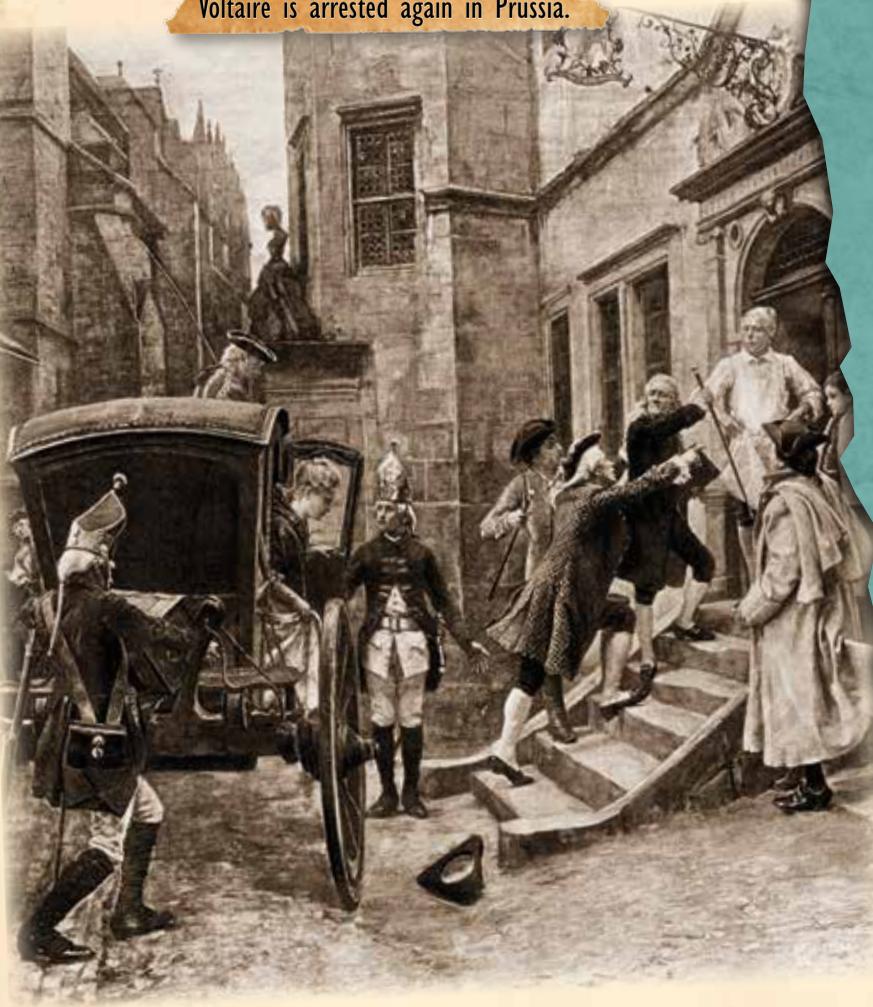
When Arouet was released a year later, he continued to criticize authority. In 1718, Arouet changed his name to Voltaire (vohl-TAIR). Voltaire is a made-up word. It suggested something swift and bright, like a bolt of lightning.

No subject was **taboo** for Voltaire. He disliked organized religion. He called himself a *deist* (DEE-ist). A deist is a person who believes in a god but does not belong to a religion. Voltaire fought against laws that could imprison people without trial. He was also against slavery and **intolerance** of any kind.



Voltaire in prison

Voltaire is arrested again in Prussia.



Voltaire had to flee France quite often to avoid arrest, but he never stopped writing. People in France loved to hear him speak and read his works. For many French citizens, Voltaire became the voice of the Enlightenment. He was a philosopher dedicated to the freedom of the individual to think and speak as he or she pleased.

Candide

In 1759, Voltaire wrote *Candide* (kahn-DEED). The main character, Candide, is a young man who believes everything happens for the best. But in the end, Candide decides that people must make their own happiness.

Satire

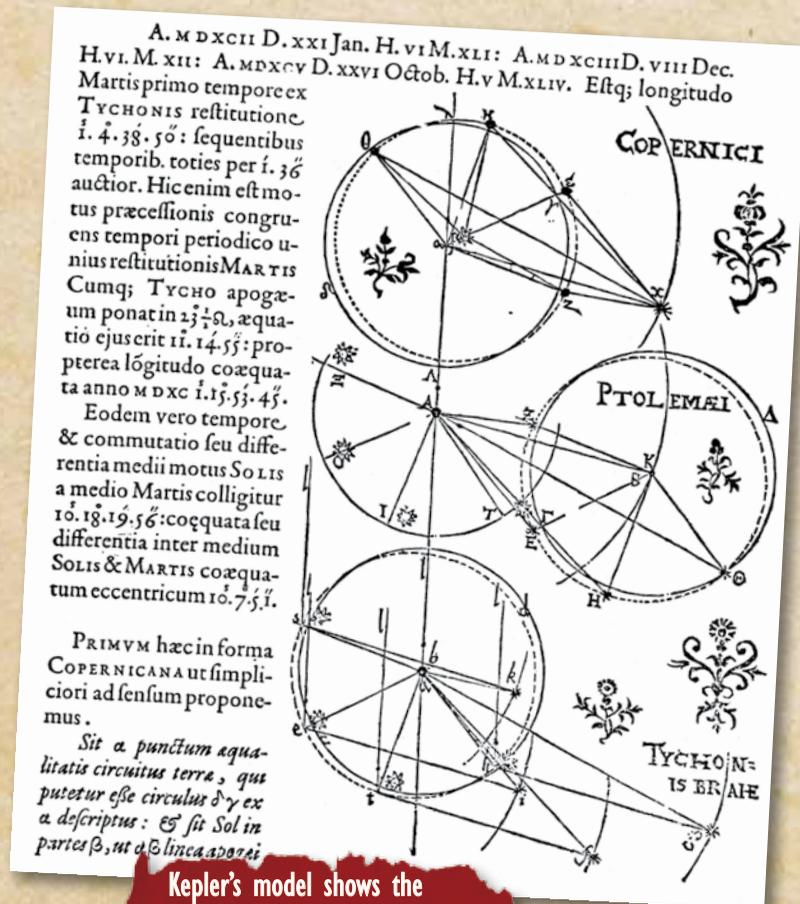
Satire (SAT-ahyir) is a form of writing that uses humor to criticize people and ideas. Irony is often used in satires. Irony is a statement that says one thing but means its opposite. Voltaire's use of irony and satire in *Candide* made it one of the most popular books written during the Enlightenment.

The Scientific Revolution

The scientific revolution began in the sixteenth century. It was then that Copernicus (koh-PUR-ni-kuhs) discovered that Earth moved around the sun. This discovery made people look at the universe with new eyes. Observations, measurements, and experiments became the traits of science. People saw that the natural world had laws that could be explained by scientific methods. Over the next century, **astronomy**, physics, mathematics, chemistry, and medicine were transformed by this new approach to learning.

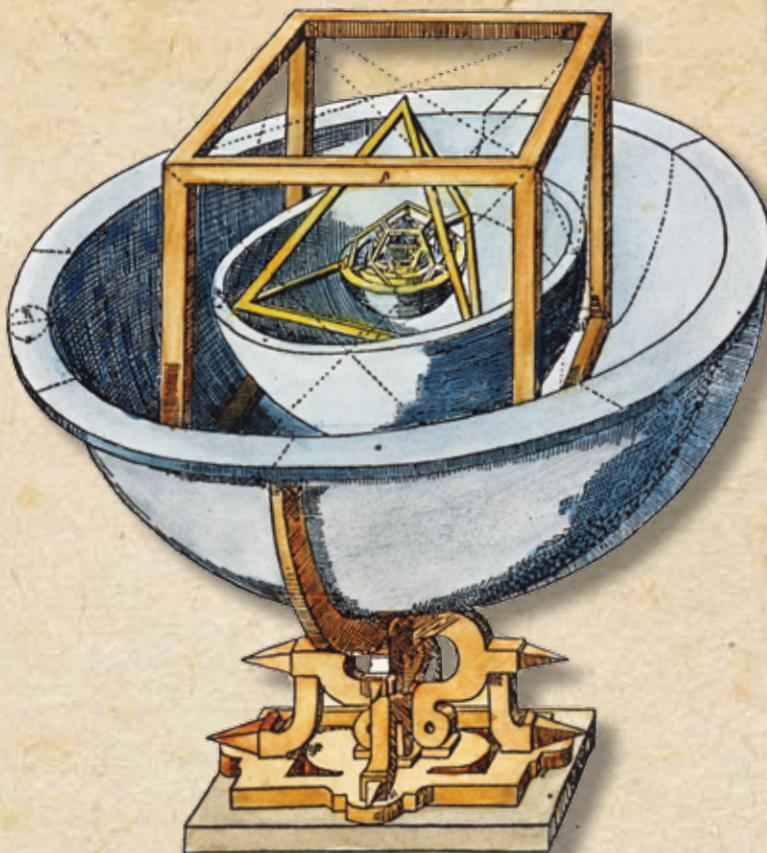
Johannes Kepler

At the age of six, Johannes (yoh-HAN-es) Kepler saw the Great Comet of 1577. It soared across the night sky. At that moment, he fell in love with astronomy. **Smallpox** had weakened Kepler's eyes, but that did not stop him. Kepler had trouble seeing the heavens, but he could still use the observations of others to make measurements.



Kepler's model shows the elliptical orbits of planets.

Kepler's model of the universe



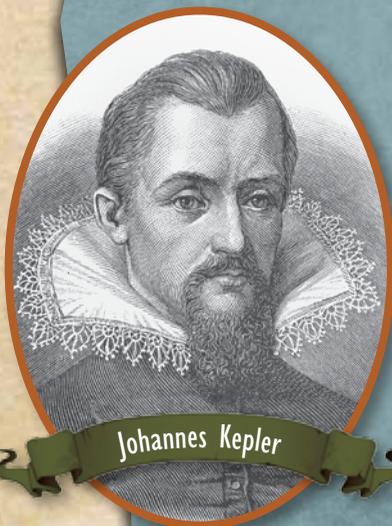
In the early 1600s, Kepler published his laws of planetary motion. These laws said that all planets moved around the sun. They moved in elliptical, or oval, orbits. Kepler stated that these orbits, or paths, all had the same mathematical properties. It did not matter how large or small their orbits were. Kepler's work later helped Isaac Newton develop his laws of motion and gravity.

Copernicus

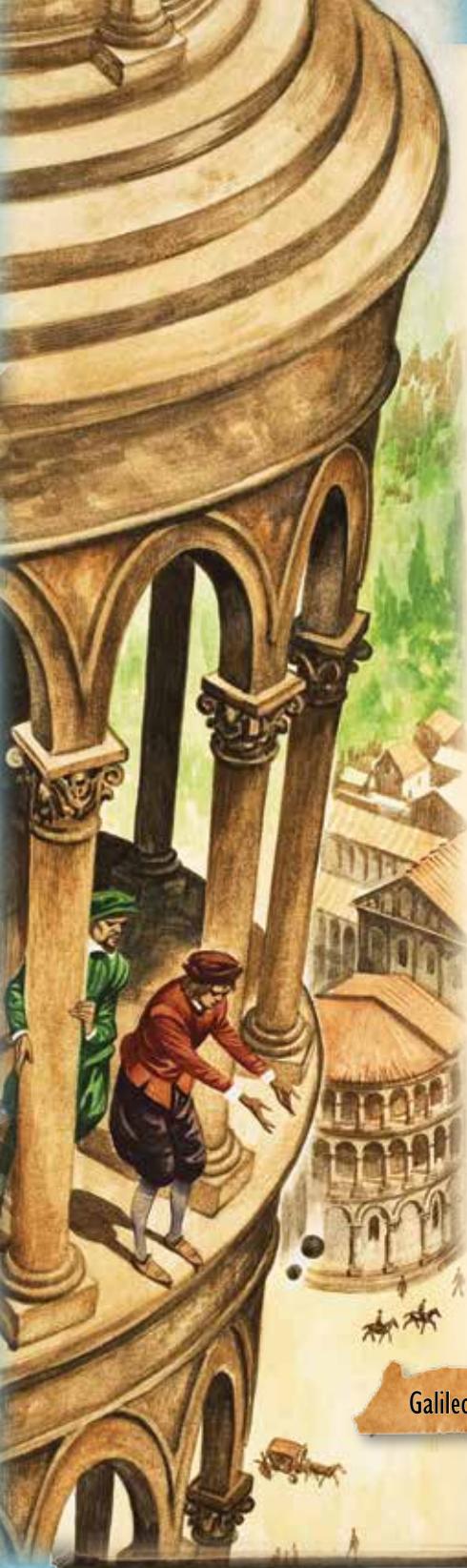
Before Copernicus, astronomers believed all heavenly bodies revolved around Earth. But if this were true, Copernicus wondered, why did planets sometimes appear to move backward? Why were their orbits different sizes? His research convinced him that Earth revolved around the sun, and modern science was born.

Supernova

On October 9, 1604, a star appeared in the sky that was so bright it could be seen during the day. In 1606, Kepler published an essay on his observations. The star became known as SN 1604, or Kepler's Supernova. In the twenty-first century, it still remains visible at night.



Johannes Kepler



Galileo

Like Copernicus and Kepler, Galileo Galilei (gal-uh-LEY-oh gal-lee-LEY) knew that the planets revolved around the sun. This meant that the solar system was heliocentric (hee-lee-oh-SEN-trik).

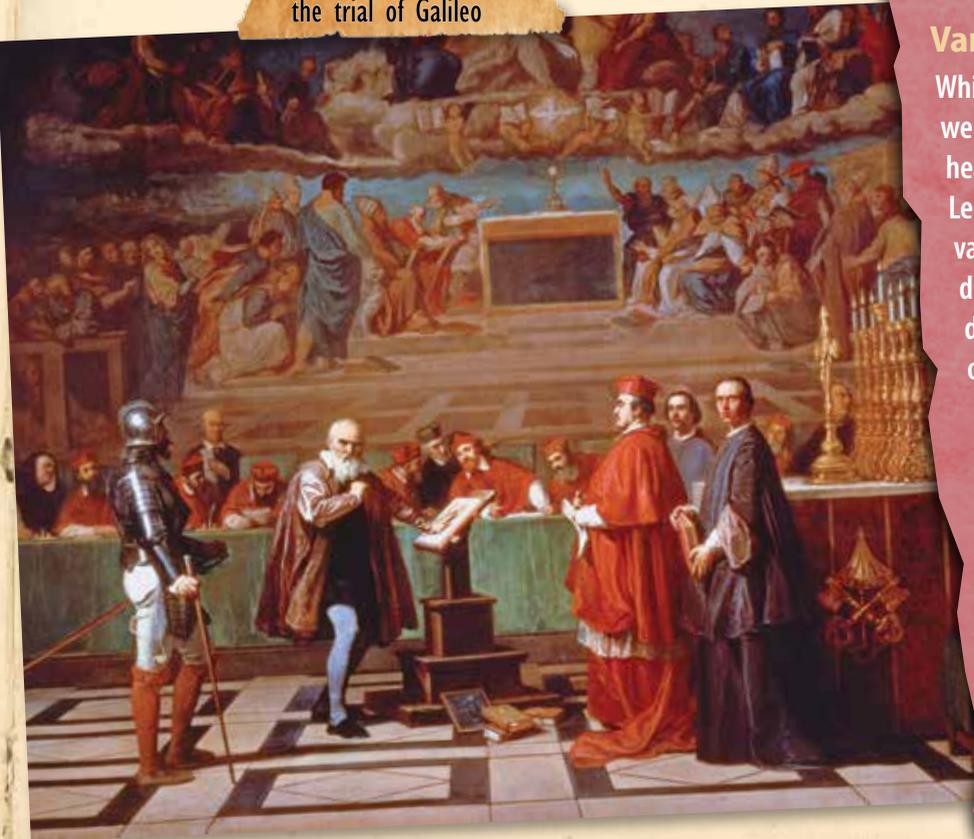
Galileo started his career as a mathematician. He taught in Italian universities. There are many stories about how he dropped cannonballs of different weights from the Tower of Pisa. He was trying to prove that all objects fall at the same rate.

In 1609, Galileo built the most powerful telescope of his time. The telescope could enlarge objects up to 20 times their actual size. A year later, he became the first person to observe the moons of Jupiter. He was the first to describe the rings of Saturn, the surface of the moon, sunspots, and the individual stars of the Milky Way.

Galileo drops objects from the Tower of Pisa.

Galileo's discoveries threatened the powerful Roman Catholic Church. The Church said that the solar system was not heliocentric. That kind of thinking went against the teachings of the Bible. The Church forced Galileo to recant, or take back, his theories. He was placed under house arrest for the rest of his life. Nothing, however, could destroy his impact on science.

the trial of Galileo



Francis Bacon

Francis Bacon helped develop the scientific method. He called for the use of **inductive reasoning** to solve problems. *Inductive* means drawing general conclusions from specific observations. When scientists measure the results of experiments to prove or disprove a theory, they are using inductive reasoning.

Van Leeuwenhoek

While other scientists were busy studying the heavens, Antonie van Leeuwenhoek (AN-toh-nee van LEY-vuhn-hook) discovered a universe in a drop of water. He built his own **microscopes**. In the 1670s, he became the first to observe tiny organisms he called *animalcules* (an-uh-MAL-kyools). His work led to the development of modern **microbiology**.

Descartes

René Descartes (dey-KAHRT) combined the study of philosophy, mathematics, and science. He helped develop modern algebra, geometry, anatomy, and optics, or the study of light. His research on the human brain focused on the pineal (PIN-ee-uhl) gland. This small gland makes a substance related to waking and sleeping.

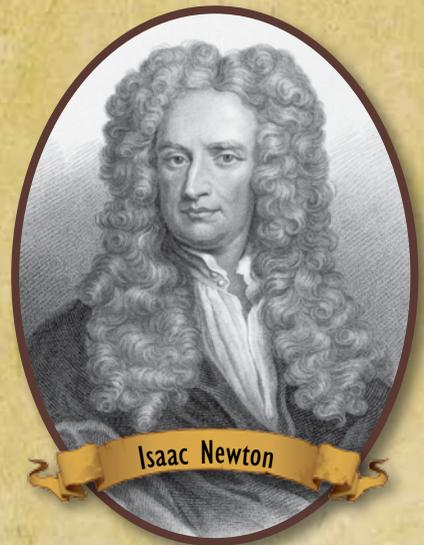
Pascal

In 1642, 19-year-old Blaise Pascal (bleyz pah-SKAHL) invented a machine to help his father calculate taxes. It was called the Pascaline. It was the world's first mechanical calculator. Pascal went on to become a philosopher, scientist, and mathematician. In 1971, one of the first computer programming languages was named after him.

Isaac Newton

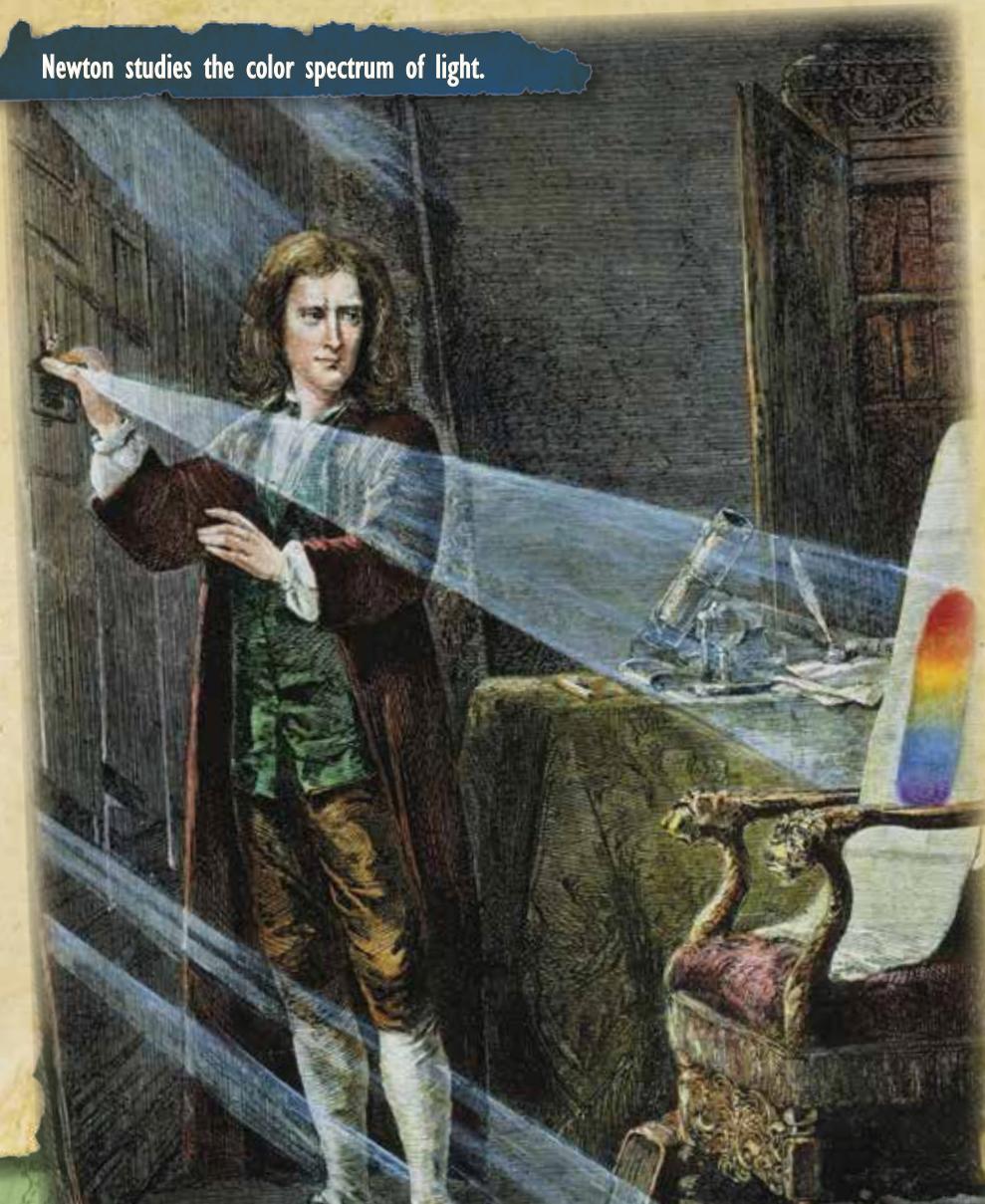
It seemed unlikely that Isaac Newton would become a scientist. When he was 17, Newton's mother put him in charge of the family farm. Newton had little interest in farming, but his father had died and he had to take charge. However, Newton still spent most of his time reading in the village bookshop. The local schoolmaster noticed Newton's love of reading. He told Newton's mother to send Newton back to school. Newton grew up to become one of the greatest scientists in history.

Newton believed the simplest explanation was often the best. He changed the study of **physics**. He defined the basic laws of motion. His universal law of gravity and three laws of motion proved that Earth did revolve around the sun.



Newton also studied the color **spectrum** of light. He developed new methods of calculus, too. His book, *Mathematical Principles of Natural Philosophy*, made Newton famous in Europe. Newton remained modest. He knew he owed much to earlier scientists. “If I have seen further,” he wrote to a friend, “it is by standing on the shoulders of giants.”

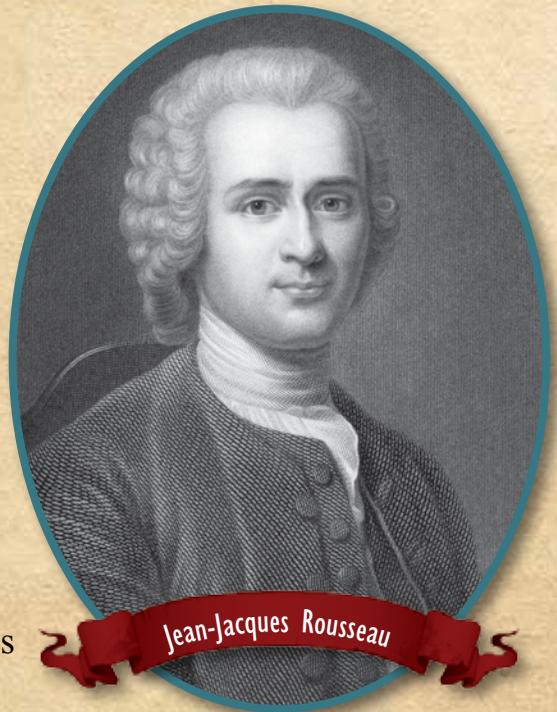
Newton studies the color spectrum of light.



Romanticism, Reason, and Rousseau

Not everybody was convinced that reason was the path to truth. Not all truth was scientific, they argued. Art, music, and literature revealed another kind of truth. This truth could only be reached through emotion. This idea became known as **Romanticism** (roh-MAN-tuh-siz-uhm). Romantics believed nature was not an object to be studied. Nature was a source of deep wonder and delight.

From his earliest days, Jean-Jacques Rousseau (zhahn zhahk roo-SOH) loved to read. Often, he would stay up all night reading adventure stories. Later, he would consider childhood to be the most important stage of life. This was a completely new idea. For most of European history, children had been treated as small adults. Rousseau believed children should be taught to use reason, but he also respected their young emotions. He thought children should learn through their own experiences.



Rousseau thought humans were naturally good. This was a radical idea. The closer they remained to nature, the better humans would be. If given the chance, Rousseau believed that people would naturally choose the best form of government. His volume, *The Social Contract*, became one of the most important books of the Enlightenment.

Robinson Crusoe



Diderot's Encyclopedia

Philosopher Denis Diderot (duh-NEE DEE-duh-roh) believed that art was as important to education as writing. He wanted everybody to have access to knowledge. Diderot edited the first major French encyclopedia of art and science. It was published between 1751 and 1772. All 28 volumes were illustrated with drawings and diagrams.

Robinson Crusoe

One of the books Rousseau suggested children should read was *Robinson Crusoe*. Written by Daniel Defoe (dih-FOH), *Robinson Crusoe* tells the story of a shipwrecked sailor who learns to survive on a tropical island with the help of a native man he calls Friday. Rousseau believed the novel encouraged self-reliance.

Benjamin Franklin

Benjamin Franklin was an American philosopher. He founded the first post office and volunteer fire department in Philadelphia. He worked as a printer, a postmaster, a politician, a scientist, an inventor, and a diplomat. His *Poor Richard's Almanack* gave advice in short, witty statements called **aphorisms** (AF-uh-riz-uhmz)—a form of philosophy everyone could enjoy!

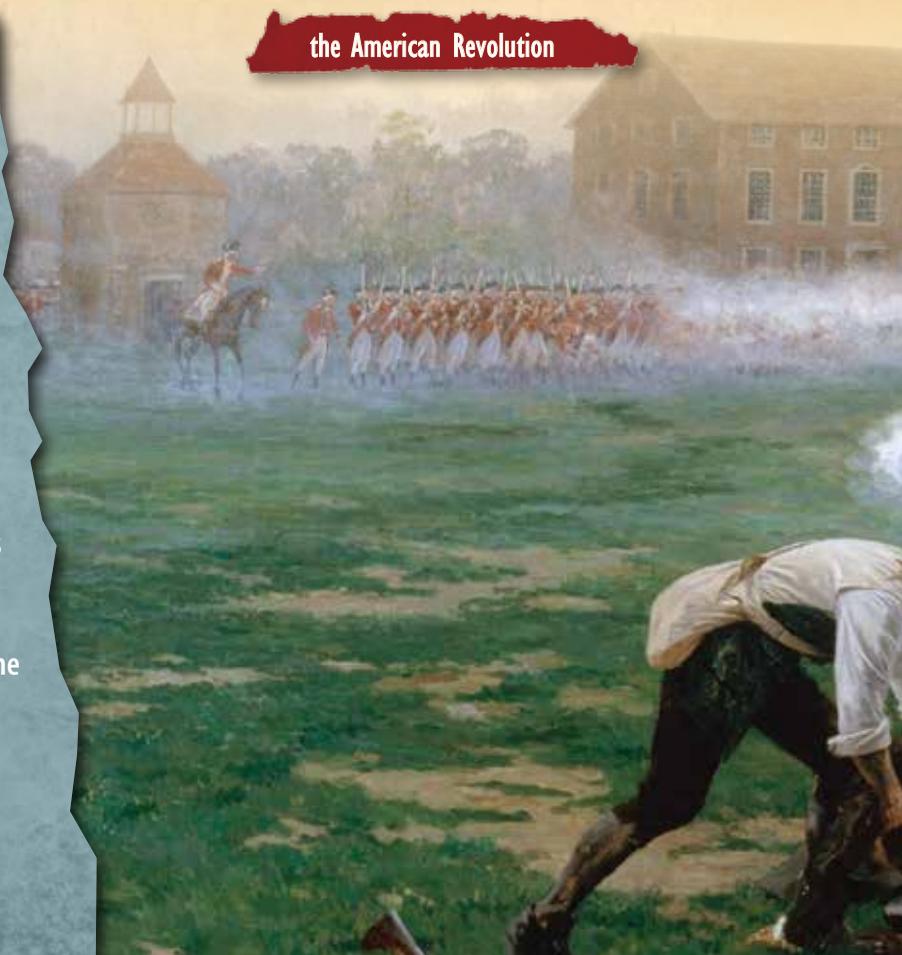
The Iroquois Confederacy

The U.S. founding fathers did not get all their ideas from Europe. Many historians believe that they were also influenced by the Iroquois (IR-uh-kwoi) **Confederacy**. This was a group of five American Indian tribes that had banded together for mutual support. The Confederacy met every year to settle disputes between tribes.

An Age of Revolutions

The Enlightenment was not just an age of ideas; it was an age of action as well. In the late eighteenth century, two revolutions rocked the Western world. The first, in America, succeeded. The second, in France, failed in many ways. Both revolutions left a legacy of change. After the Enlightenment, democracy was not just a theory, but a reality.

the American Revolution



The American Revolution

The British government ruled the American colonists without their consent. Because of this, the colonists said they had the right to create their own government. The colonists wanted a nation ruled by laws, not kings. When the Declaration of Independence was written in 1776, the colonists were guided by John Locke's theory of the social contract.

After six years of war, the British surrendered in 1781. Colonial leaders wrote the Constitution of the United States. It said that all citizens would enjoy freedom of religion and speech, among other rights. It stated that the government would be divided into three branches—executive, legislative (LEJ-is-ley-tiv), and judicial (joo-DISH-uhl). This created a balance of powers. No one branch could control the others. By 1791, the Constitution had been ratified, or approved. A new era had begun.



The French Revolution

France in the eighteenth century was a nation of extreme contrasts. It was home to some of the greatest thinkers of the Enlightenment. It was also ruled by a king with absolute power. It was a country known for art, music, and literature. Yet most people lived in ignorance and poverty.

Inspired by the American Revolution in the summer of 1789, angry French subjects stormed the Bastille (ba-STEEL), a prison in France. They then marched on to the king's palace in Versailles (ver-SAHY). They demanded justice. In August, they signed the Declaration of the Rights of Man and of the Citizen. It stated that all citizens were equal and born with natural rights. It called for the freedom of press, speech, and religion.

The French Revolution then dissolved into fighting and violence. Thousands were executed, including the king and his family. War broke out between France and its neighbors. In 1799, Napoleon Bonaparte (nuh-POH-lee-uhn BOH-nuh-pahrt) seized power and declared himself emperor in 1804.

The Revolution was over. It was not a complete failure, however. The French had changed history. They had gone from being subjects to citizens. Europe would never be the same, and the great thinkers of the Enlightenment ensured that the world would never be the same.





storming the Bastille

Montesquieu

Charles-Louis Montesquieu (MON-tuh-skyoo) was born an aristocrat, but he grew up to be a supporter of political freedom. He was the first philosopher to suggest government should be divided into three branches. Known as the “separation of powers,” this idea laid the foundation of the United States Constitution.

Mary Wollstonecraft

Women in the eighteenth century had little place in public life and few opportunities for education. Mary Wollstonecraft (WOOL-stuhn-kraft) sought to change that. She wrote that women should have the same rights and freedoms as men. It would take nearly 300 years for her ideas to be accepted.

Glossary

aphorisms—short sentences that contain general truths

aristocrats—members of an upper class that usually hold power

astronomy—the science of the heavenly bodies

Catholics—members of the Roman Catholic Church

citizens—legally recognized members of a nation or state

commoners—people with little money or power

confederacy—an alliance of states or organizations

constitution—a document giving the principles on which a state is organized

cruel and unusual punishment—discipline that is more severe than the crime that was committed

Declaration of Independence—a document stating that the colonies in America were breaking away from Great Britain

Enlightenment—the period of European and American history from roughly 1630 to 1800, which witnessed the development of the scientific revolutions and the growth of democratic ideals

inductive reasoning—a method of establishing a general principle through the observation of individual examples

intolerance—treating unfairly for no legitimate reason

microbiology—a branch of biology that focuses on microscopic life

microscopes—instruments that use lenses to make small objects appear larger

Parliament—a governing body in the United Kingdom

petition—to make a formal request

philosophers—people who study human thought

physics—a science that deals with matter and energy

Protestant Reformation—a split in Western Christianity in the sixteenth century that resulted in the creation of Protestant Churches in opposition to the Roman Catholic Church

Protestants—people who protested against the Roman Catholic Church

radical—different from the established ideas and social structures

reason—the things that make facts understandable

Romanticism—the idea that humans experience life mainly through their emotions, not their intellect

smallpox—a disease that was often deadly and left scars on the victims

social contract—an agreement between members of society, or the idea that government should be based on the consent of the governed

spectrum—the group of colors coming from white light

taboo—not socially normal

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Your Turn!

The British government ruled the American colonies without their consent. The colonists said they had the right to create their own government. They wanted a nation ruled by laws, not kings. The colonists looked to John Locke's theory of the social contract when they wrote the Declaration of Independence in 1776.

Rally the Troops

Imagine that you are the leader of the colonial militia in this painting. It is your job to rally the troops before battle. Use John Locke's theories to write a motivational speech that will get the men pumped up to win the fight.





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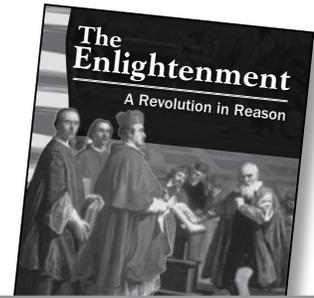
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“Thank you for helping us
create a world in which
children love to learn!”



The Enlightenment



Materials

- *The Enlightenment* books
- copies of student reproducibles (pages 149–151)
- *Galileo's Debate* primary source (galileo.jpg)
- sticky notes

Glossary Words

Remember to review all glossary words and definitions with students before beginning the lesson. These words are located on page 30 in the book.

Before Reading

1. Introductory Activity—As a class, complete the introductory activities on page 144.

- Divide students into ability-based reading groups. Students who read this book should be on or above a fifth-grade reading level.
- Tell students about the period leading up to the Enlightenment. For 30 years, the kingdoms of Europe had been at war. When the war ended, Europeans were relieved. Ask students what they might have had to do after the Thirty Years' War. Have them Think-Pair-Share to discuss their ideas with each other.
- Make a list of students' ideas. Add the fact that after the war, people began to think about what kind of society they wanted. They debated ideas about human life, ethics, government, religion, and education. This period is called the Enlightenment.

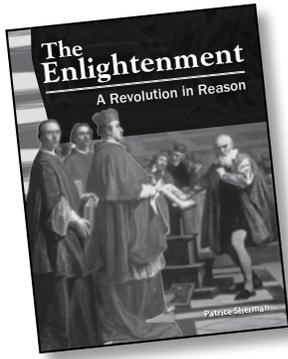
2. Vocabulary Activity—Have students choose partners for this activity.

- Assign each pair one or two important vocabulary words from the glossary (page 30).

- When students have a good understanding of their word meanings, ask them to come up with an action or gesture that represents the words. For example, students could use a shocked facial expression with a hand in front of the mouth to show the meaning of *taboo*.
- Give students time to teach the whole group their word meanings and gestures.

3. Prereading Activity—Have students preview the text independently.

- Tell students that they will be reading about many different people and their ideas. Ask them to browse the text for people's names.
- Distribute sticky notes to each student. Have them write one name from the text on each sticky note. These notes will be used later in the lesson.
- Accommodate **English language learners** and **below-level learners** by having the names already written on sticky notes. As they preview the text, have them place the correct name in the text where they find it.

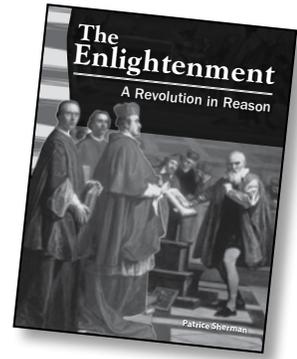


The Enlightenment (cont.)

During Reading

1. **Reading Activity**—Students should look for the names on their sticky notes as they read the text. Their purpose for reading will be to find out how those people contributed to the Enlightenment.
 - For the first reading of the text, have students read independently.
 - For the second reading of the text, read aloud as students follow along.
 - Pause after each section to write sticky-note summaries about the ideas and accomplishments of the people in the text. Model for students how to pick out key facts and write one or two summary sentences about each person.
 - Differentiate this activity for **English language learners** and **below-level learners** by allowing their sticky-note summaries to be bulleted lists rather than sentences.
 - Allow **above-level learners** to read the text and write their sticky-note summaries independently.
2. **Social Studies Activity**—The American Declaration of Independence is a strong example of Enlightenment ideas in action. Students will read a section of the document and make connections between specific phrases and Enlightenment ideas.
 - Distribute the *Enlightenment Ideas at Work* activity sheet (page 149) to students. Have them work in pairs to complete it.

The Enlightenment (cont.)



After Reading

1. **Reading Activity**—Students will use the GIST strategy to summarize sections of the text. The word *gist* means the main or essential part. Explain to students that they will focus on essential facts in the text to write 20-word GIST summaries.
 - Assign each student one of the page spreads from the book (excluding the introduction and conclusion). More than one student may summarize the same section.
 - Distribute copies of the *Get the GIST* activity sheet to students from the Digital Resource CD (gist.pdf).
 - If possible, assign all **English language learners** the same double-page spread. Use the Think-Aloud technique to work with these students in a small group.
2. **Writing Activity**—Have students complete these writing activities.
 - Have students complete the Your Turn! writing activity on page 32 of the book. In this activity, students will use John Locke's theories to write a motivational speech as if they were the leader of the colonial militia in the painting.
 - Students could also write persuasive essays from the point of view of an Enlightenment philosopher. Review the problem/solution text structure with students. Provide examples of persuasive essays that identify a problem and propose solutions.
- Next, tell students that the problem they must try to solve is the one that Europeans faced after the Thirty Years' War—how to create a government that works. Students will use the text and additional resources to propose at least one solution from the point of view of their chosen philosophers.
- Accommodate **below-level learners** by encouraging students who chose the same philosophers to share resources and research findings.
- Distribute copies of the *Problem/Solution Persuasive Organizer* to students to help plan their essays. This can be found on the Digital Resource CD (psporg.pdf).
- Require **above-level learners** to include three possible solutions.
3. **Assessment**—There is a variety of assessment options for this unit.
 - A short posttest, *The Enlightenment Quiz* (page 151), is provided to assess student learning from the reader.
 - Activities from *Dangerous Discourse* (page 150) can also be used to assess comprehension.
 - A Culminating Assessment is also provided on pages 179–191 to help you further evaluate student learning.



The Enlightenment (cont.)

Primary Source Activity

Historical Background

In 1632, Galileo Galilei published a book called *Dialogue Concerning the Two Chief World Systems*. In it, he compared the Ptolemaic belief that Earth was the center of the solar system with the Copernican belief that the sun was the center of the solar system. The book became a bestseller.

Pope Urban VIII of the Roman Catholic Church accused Galileo of heresy. *Heresy* is an opinion that goes against religious teachings. Galileo's support of the Copernican theory, or heliocentric world system, contradicted the Church's teaching that Earth was the center of the Universe.

Galileo's book was placed on the *Index of Forbidden Books*. Anything Galileo had ever written or would ever write was also banned. Galileo was ordered to appear before the Roman Inquisition in 1632.

At his trial in Rome, Galileo pleaded guilty and formally recanted his beliefs. He was sentenced to house arrest for the rest of his life.

About the Primary Source

This engraving was the frontispiece to Galileo's 1632 book *Dialogue Concerning the Two Chief World Systems*. The drawing shows Galileo (left) talking with Ptolemy (center) and Copernicus (right).

Teaching Suggestions

1. Display the electronic file *Galileo's Debate*. A copy of this primary source is provided on the Digital Resource CD (galileo.jpg).
2. Read the historical background information aloud to students. Then, describe the primary source. Ask students to examine the artwork carefully.
3. Make a three-column chart on the board or on chart paper. Label the columns: *Ptolemy*, *Copernicus*, and *Galileo*. Use the text and other resources to list as many ideas as possible about each man's beliefs.
4. Place students in groups of three. Allow each student to choose one of the men in the engraving. Have them assume that role and use the ideas from the chart to debate the world system with the other two group members.
5. Distribute copies of the *Dangerous Discourse* activity sheet (page 150) to students. Depending on your students' ability levels, assign all the activities or just a few. Your above-grade-level students will benefit from the last three activities on the sheet. Students who struggle with comprehension will benefit from the first three activities on the sheet.

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Name _____ Date _____

Enlightenment Ideas at Work

On July 4, 1776, the 13 American colonies signed the Declaration of Independence. The colonists wrote this document to explain why they were fighting for freedom from Great Britain. It explains their beliefs about the way governments should work. These ideas reflect Enlightenment ideas.

Directions: Read this section of the Declaration of Independence. Complete the chart by making connections between specific phrases and the Enlightenment philosopher who inspired them.

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.—That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed, —That whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness. Prudence, indeed, will dictate that Governments long established should not be changed for light and transient causes; and accordingly all experience hath shewn, that mankind are more disposed to suffer, while evils are sufferable, than to right themselves by abolishing the forms to which they are accustomed. But when a long train of abuses and usurpations, pursuing invariably the same Object evinces a design to reduce them under absolute Despotism, it is their right, it is their duty, to throw off such Government, and to provide new Guards for their future security.—Such has been the patient sufferance of these Colonies; and such is now the necessity which constrains them to alter their former Systems of Government. The history of the present King of Great Britain is a history of repeated injuries and usurpations, all having in direct object the establishment of an absolute Tyranny over these States. To prove this, let Facts be submitted to a candid world.

Words from the Declaration	Enlightenment Idea	Philosopher
all men are created equal	every person's mind is a <i>tabula rasa</i> , or blank slate, at birth	John Locke

Name _____ Date _____

Dangerous Discourse

Directions: Complete the following activities about the *Galileo's Debate* primary source (galileo.jpg). Write your answers on a separate sheet of paper. (Your teacher will tell you which activities you should complete.)

Remembering

Write a caption for the illustration.

Understanding

Why did Galileo's book include illustrations of Ptolemy and Copernicus?

Applying

Write the conversation that Galileo, Ptolemy, and Copernicus might have been having in this picture.

Analyzing

Use a three-way Venn diagram to compare and contrast the ideas of Galileo, Ptolemy, and Copernicus.

Evaluating

Why do you think the Catholic Church reacted so strongly to the astronomy theories in Galileo's book?

Creating

Write a *Now and Then* poem about Galileo. In each stanza, complete the sentence "*I used to be..., but now I am...*" Include details about Galileo's life and his reputation today.

Name _____ Date _____

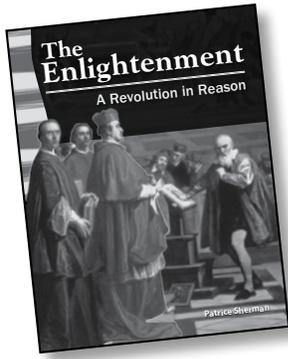
The Enlightenment Quiz

Directions: Circle one answer for each multiple-choice question. Write your response to the short-answer question on the back of this page or on another sheet of paper.

- The Peace of Westphalia ended the _____.
 - Civil War
 - Thirty Years' War
 - Revolutionary War
 - French Revolution
- King William and Queen Mary of England agreed to a written _____, which limited the power of the nation's rulers.
 - constitution
 - address
 - statement
 - agreement
- John Locke promoted the separation of _____ and _____.
 - Protestants and Catholics
 - men and women
 - church and state
 - French and Indians
- Johannes Kepler discovered that planets move in _____ orbits around the sun.
 - elliptical
 - round
 - square
 - fast
- Philosopher Jean-Jacques Rousseau shocked people with his belief that human beings are naturally _____.
 - evil
 - unhappy
 - good
 - nervous

Short-Answer Question

- The book said that, "The Enlightenment was not just an age of ideas; it was an age of action as well." Explain how the American colonists put Enlightenment ideas into practice.



The Enlightenment (cont.)

Answer Key

Page 149—Enlightenment Ideas at Work

Responses may vary, but could include the following: *they are endowed by their Creator with certain unalienable Rights/individuals should be able to think and speak as they choose and have a certain amount of personal freedom/Voltaire; Governments are instituted among Men, deriving their just powers from the consent of the governed/rulers can only rule with the consent of citizens/Thomas Hobbes; to provide new Guards for their future security/people naturally choose the best form of government when given the chance/Jean-Jacques Rousseau.*

Page 150—Dangerous Discourse

Remembering—Answers will vary; for example, *Galileo moderates a debate between Ptolemy and Copernicus. Ptolemy insists that the Earth is the center of the universe. Copernicus says that the Earth revolves around the sun. Galileo agrees with Copernicus.*

Understanding—Galileo’s book featured a fictional dialogue between two characters modeled after Ptolemy and Copernicus.

Applying—Answers will vary, but should include each man’s theories about the universe. Ptolemy believed Earth was at the center of the universe. Copernicus believed the sun was at the center of the universe. Galileo agreed with Copernicus.

Analyzing—Diagrams will vary, but should include each man’s theories about the universe. Ptolemy believed Earth was at the center of the universe. Copernicus believed the sun was at the center of the universe. Galileo agreed with Copernicus.

Evaluating—Answers will vary, but could include the fact that Galileo’s theories were different from the church’s teachings. If the church’s teachings were wrong about astronomy, church leaders might have feared that people would begin to question all of their teachings.

Creating—Answers will vary.

Page 151—The Enlightenment Quiz

1. b 2. a 3. c 4. a 5. c
6. The American colonists rebelled against British rule because they believed in the Enlightenment idea of the social contract. The colonists no longer consented to British rule, so the social contract was broken. They fought for their independence and won. The new country they established was built on individual rights (for some) and a system of checks and balances to keep government from getting too powerful.