Enlightenment and Revolution
1550-1789
Section 1
Scientific Revolution

Main Idea
In the mid 1500s, scientists began to question accepted beliefs and make new theories based on experimentation.

Why it matters now
Such questioning led to the development of the scientific method still in use today.
Setting the Stage

• Before 1500 few questioned the scientific ideas of:
  – Greek and Roman thinkers
  – Church/Bible

• Changing in thinking occurred
  – Renaissance-rebirth of learning
  – Reformation- changed thoughts on God and authority

• Leads to the Scientific Revolution
  – Changes the way people think about the natural world
Roots of Science

• Aristotle and Christian Church support the Geocentric Theory
  – Earth is the center of the universe
• Scientific Revolution in mid-1500s
  – Based on careful observation and willingness to question accepted beliefs
  – European exploration and printing press fuel research in Astronomy and Mathematics
Challenges

• Nicolaus Copernicus challenged traditional thinking
  – Creates the Heliocentric Theory
    • Sun is the center of the universe

• Johannes Kepler
  – Used mathematics to conclude planets move in elliptical orbits
  – Used to be thought everything is perfect like a circle
Galileo Galilei

- Discovered laws of pendulum
- Objects fall at the same speed
- Created an advanced telescope
- Went against the Church and supported Copernicus
- Church tried for Heresy and he revoked his support
- Continues to publish materials in favor of Heliocentric Theory
- Put on trial at the Inquisition and forced to recant
- Lives remainder of his life under house arrest
Development of the Scientific Method

• Scientific Method
  – A new approach to science that involves logical procedures for gathering and testing ideas
  – Led to better understandings of the natural world

• Sir Francis Bacon
  – Urges scientists to experiment before drawing conclusions

• Rene Descartes
  – Use logic and math to reason out basic truths
Isaac Newton

• Single Theory of Motion
  – Every object in the universe attracts every other subject and the degree depends on the mass of the object
  – Universe is a perfect mechanical clock
  – Mathematical principles of natural philosophy
New Inventions

• Scientific Instruments
  – Microscope, barometer, thermometer
  – These allow for new discoveries

• Medical Advances
  – Andreas Vesalius improves anatomy
  – Edward Jenner makes first vaccine for small pox
Questions

1. Before the 1500’s, who and what were the final authorities with regard to most knowledge?
2. How did the heliocentric theory of the universe differ from the geocentric theory?
3. What are the main steps of the scientific method?
4. “I have seen farther than others,” said Newton, “it is because I have stood on the shoulders of giants.” Could this be said of most scientific accomplishments? Explain.
5. Why might institutions of authority tend to reject new ideas?
6. Do you agree with Galileo’s actions during his inquisition? Explain.
Section 2
Enlightenment in Europe
The Age of Reason

Main Idea
A revolution in intellectual activity changed Europeans’ view of government and society

Why it matters now
The various freedoms enjoyed in many countries today are a result of Enlightenment thinking.
The Enlightenment

• Philosophers applied reason to all aspects of society
• Also known as the Age of Reason
• The S.R. spurs re-examination of society during the 1600s and 1700s
Enlightenment Philosophers

• Thomas Hobbes
  – Social Contract
    • People are selfish and ambitious
    • Submit to authoritarian ruler to prevent disorder

• John Locke
  – Natural Rights
    • Life, liberty, and property
  – Government exists to protect your unalienable rights
  – If government doesn’t protect these rights the people can change government (rebel)
Philosophes

• French philosophers
• Center of the Enlightenment
• Value reason, nature, happiness, progress, liberty
• Discourage terror and intolerance
Philosophes

• Voltaire
  – Used satire to fight for tolerance
  – Freedom of religious beliefs and speech

• Montesquieu
  – Separation of powers (branches of government)
  – Checks and balances

• Rousseau
  – Legitimate government come from the consent of the governed
  – People must adhere to laws they set forth
  – Believed in direct democracy
Other Philosophers

• Cesare Beccaria
  – Wants to reform the justice system
  – Calls for speedy trials and criminal rights

• Women and the Enlightenment
  – Many thinkers take the traditional view of women’s role

• Mary Wollstonecraft
  – Women’s rights
  – Women need education to be virtuous
  – Women should enter male professions
  – Some wealthy women use status to spread Enlightenment values
Legacy of the Enlightenment

• Philosophers not activists, but inspire revolutions
• Scientific breakthroughs show human capacity to improve society
• Increased secular outlook
  – New knowledge leads people to question religious beliefs
• Importance of individual
  – Emphasis on individual rights and accomplishments
Enlightenment Writers/Thinkers

• Challenge ideas
  – Divine right of monarchs
  – Union of church and state
  – Unequal social class

• Promoted long-term beliefs which shaped Western Civilization

• Reason takes center stage
Questions

1. What are the natural rights with which people are born, according to John Locke?
2. Who were the philosophes and what did they advocate?
3. What was the legacy of enlightenment?
4. Synthesizing: Explain how the following statement reflects Enlightenment ideas: “Power should be a check to power.”
5. Analyzing issues: Why might some women have been critical of the enlightenment?
7. Which Enlightenment thinker do you feel had the biggest impact on the U.S. Government and why?
Résumé

• You are assuming the role of an Enlightenment writer applying for a journalist position for the Union Tribune. In order to help you obtain a job with them you would want to create and submit a resume.
• Choose an Enlightenment writer.
• Gather your information.
  – Notes are a good start
  – Find what skills they had that would be marketable or desirable
• Use the template in pages
• Find qualifications and technical skills that the person might have had to complete the job
• Find any education they might have received
• Avoid mistakes
  – Errors in spelling and punctuation
  – Change in formatting, font type and size
  – A superabundance of polysyllabic terminology, use too many big words
• Proofread
Section 3
Enlightenment Spreads

Main Idea
Enlightenment ideas spread through the Western world and profoundly influenced the arts and government.

Why it matters now
An “enlightened” problem-solving approach to government and society prevails in modern civilization today.
France
Center of Enlightenment

• Jail or exile for criticizing the government
• Ideas still spread all over Europe
  – Aided by the printing press
• Paris becomes the center of the Enlightenment in the 1700s
• Salons become places where thinkers discuss ideas
Diderot

- Encyclopedia
  - Set of 28 books from Enlightenment thinkers’ essays
  - Angers French government and Church
  - Easily spreads across Europe
New Artistic Styles

• Pre-Enlightenment style is Baroque
  – Grand and ornate
• Enlightenment style is Neoclassical
  – Based on Greek/Roman themes
New Music and Literature Styles

• Hadyn, Mozart, Beethoven

• New style of literature
  – Development of the novel
  – Appealed to the middle class because it was entertaining
Enlightenment and Monarchy

• Monarchs who embrace Enlightenment values strengthen their rule.

• Rulers are known as Enlightened Despots (rulers).
Enlightened Despots

• Frederick the Great
  – Prussian
  – Goal to serve and strengthen his country
  – “First Servant of the State”
  – Reforms education and justice system
  – Grants religious freedom and abolishes torture
  – Uses rationalism and increases militarism

• Joseph II
  – Austria
  – Legal reforms, freedom of press and worship, and abolishes serfdom

• Catherine the Great
  – Limited reforms due to dominant nobles, expands Russian Empire, and gains port to Black Sea
Enlightenment Causes Troubles

- England faces challenges in the American colonies with disconnected ties
- Haitian Revolution and slavery
- French Revolution internal strife with old views
Questions

1. What were the defining aspects of neoclassical arts?
2. What new form of literature emerged during the 18th century and what were its main characteristics?
3. Why were several rulers in the 18th century Europe known as enlightened despots?
4. What advantages did salons have over earlier ways of spreading ideas?
5. In what way were the enlightened despots less than true reformers? (did they truly change their governments)
6. How did the encyclopedia reflect the Age of Enlightenment?
7. Yellow book
   1. Number and Letter works but I take a lot of questions from this.
   2. Pages 22-26
   3. Use previous page to answer the following pages questions
Main Idea
Enlightenment ideas helped spur the American colonies to shed British rule and create a new nation.

Why it matters now
The revolution created a republic, the United States of America, that became a model for many nations of the world.
Colonies Growing

• First permanent settlement Jamestown, Virginia 1607 and then people start to populate the colonies
• Colonies will thrive economically
• Britain tries to limit trade with the Navigation Act of 1651
• Colonies start to identify less as British subjects
A European View

Gold and Silver

Mother Country’s Treasury

More Exports

Balance of Trade

Fewer Imports

Gold, Silver, Fur, Lumber, Food stuffs

Mother Country

Colonies

Manufactured goods
The Mercantilist Argument for Colonial Expansion

Source: Philip Dorf, Our Early Heritage: Ancient and Medieval History, Oxford Book Company (adapted)
French and Indian War

• It is not French vs. Indians (Amerindians or Native Americans)
• American Colonists (who are British) want to expand west
• British aid the American Colonists in their fight against the allied French and Indians
• Britain expects colonists to help pay for the war
Aftermath

- Passed Stamp Act
  - Help pay for cost of F & I War
  - “Taxation without representation”
- Boston Tea Party
  - To protest Tea Tax
  - King George III closes Boston Harbor and occupies the city
- 1st Continental Congress
  - Meets in 1774 to compile complaints
- 2nd Continental Congress
  - Shots fired at Lexington and Concord
  - Votes to raise an army
  - George Washington is selected to lead the army
Declaration of Independence

• Justified colonial rebellion
• Written by Jefferson
• Based heavily on Enlightenment ideas
• Locke asserted people could overthrow an unjust government
• America wins independence with surrender at Yorktown in 1781
• Able to overcome despite many disadvantages
  – British had superior army and experience
  – Colonists had home field advantage, motivation, assistance from the French, and was expensive for the British
Articles Of Confederation

- New American government
- Gave more power to states than the national government
- Nothing could be passed
- Embarrassment
- Went back to the drawing board
Constitution

• Constitutional Convention of 1787
  – Need for strong central government
  – Separation of powers and checks and balances
  – Federalist system-power between national and state

• Bill of Rights
  – 1st ten amendments
  – Anti-Federalists pushed for fearing individual rights would be abused

• Demonstrates that Enlightenment rights could be put into practice so that reason and reform could succeed in government
Tea, Taxes, and the American Revolution
1. Why did the colonist consider the stamp act as “taxation without representation”?

2. How did John Locke’s notion of the social contract influence the American colonists?

3. Why were the colonists able to achieve victory in the American revolution?

4. Why might it be important to have a bill of rights that guarantees basic rights?

5. Do you think the American revolution would have happened if there had not been an age of enlightenment?

6. Why do you think the colonist at first created such a weak central government?
Spreading Ideas

- The ideas of philosophes during the Enlightenment took place in Parisian salons. These discussions helped spur revolutions throughout the world. Whether this has been for the betterment of the world could be argued. Has technology led to better communications between peoples? Has this technology led to better quality of lives? Are we better off as a society when we can quickly exchange ideas? Do ideas spread so rapidly that people do not think for themselves? Do people think of the repercussions and impact they might have since they do not interact face to face? Using Keynote on the Ipad do the following:

- **Slide 1**
  - Title Page, include name and period
- **Slide 2**
  - How ideas were conveyed during the Enlightenment
- **Slide 3**
  - How ideas are conveyed now
- **Slide 4**
  - The pros and cons of communication of ideas today, perhaps using a chart or table
- **Slide 5**
  - Your thoughts on whether or not communication and us as a society has been improved with technology