



New Ideas

That Changed The World

The End of the Dark Ages

- During the 16th and 17th centuries (1500s-1600s) Europe experienced sweeping changes that altered, not only how people used technology and understood science, but also how they saw themselves in the world.
- Leading up to this intellectual shift was the **Renaissance**, a time when music, art, science and all forms of discovery bridged the intellectual gap from the middle ages to Age of Enlightenment




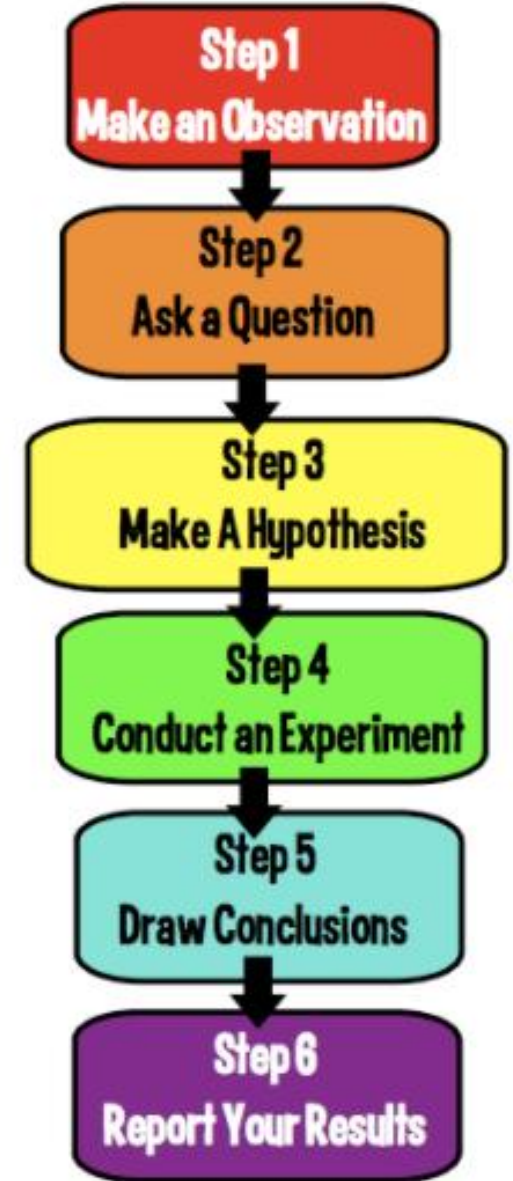
How Revolutions Begin

What conditions must exist in a country for a revolution to occur?

- Critical Mass of unhappy people who are oppressed
- Some people must be educated and secure enough to realize that:
 - Things are not good
 - Things could be better
 - They have the power to change things
- There must be people willing to lead and others willing to follow.

The Scientific Revolution

- With the resurgence of scientific inquiry required to solve practical everyday problems came the need for “natural philosophers” to abandon old views and develop new ideas and thoughts.
- The Scientific Method 



Inventions and Innovations

- New devices to view the universe were invented and improved that helped scientists serve the rest of society.
 - Microscope
 - Telescope
 - chronometer
 - Thermometer
 - barometer
 - the decimal & letters(math)
- In addition to inventions and innovations groups of intellectuals challenged traditions and revolutionized our understanding of how the solar system worked.
 - Earth-centered vs Sun-centered universe
 - Orbs of light vs material substances (planets)
 - Supreme being vs gravity (motion of planets)



Some Notable Thinkers of the Scientific Revolution

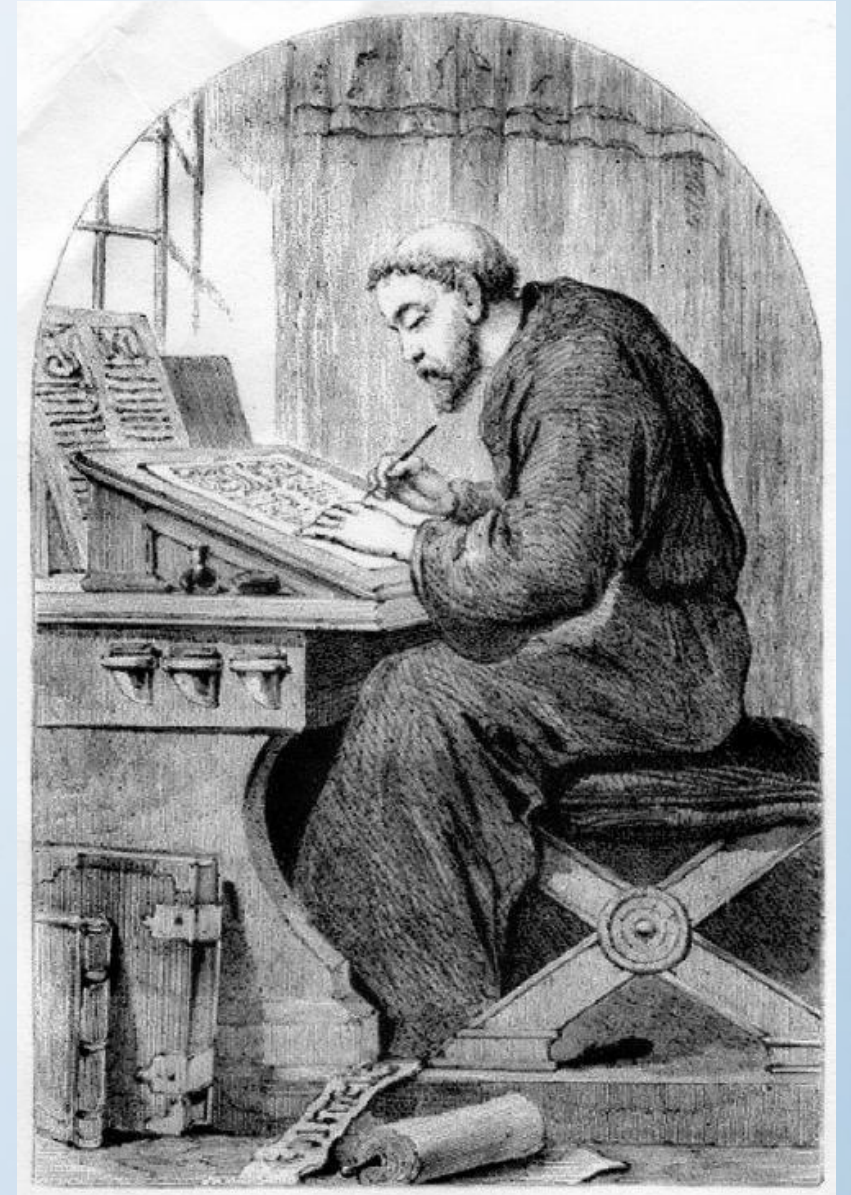
- Nicolaus Copernicus
- Johannes Kepler
- Galileo
- Isaac Newton
- Tycho Brahe
- Giovanni Alfonso Borelli
- Margaret Cavendish
- Maria Winkelmann
- Francis Bacon
- Rene Descartes
- Robert Boyle
- Robert Hooke

Main Ideas of the Scientific Revolution

1. Earth not the centre of the Universe
2. Divine Right of Kings was foolish
3. Scientific Revolution (gravity, etc.)
4. Industrial Revolution (Farm equipment...)
5. People began to question the existence of God
6. The Universe was understandable and governed by natural forces – not the supernatural
7. The Scientific Method could be used to answer all questions in all areas of life
8. Human beings can be educated so that they never stop learning. There is no limit to how much knowledge a person could have.

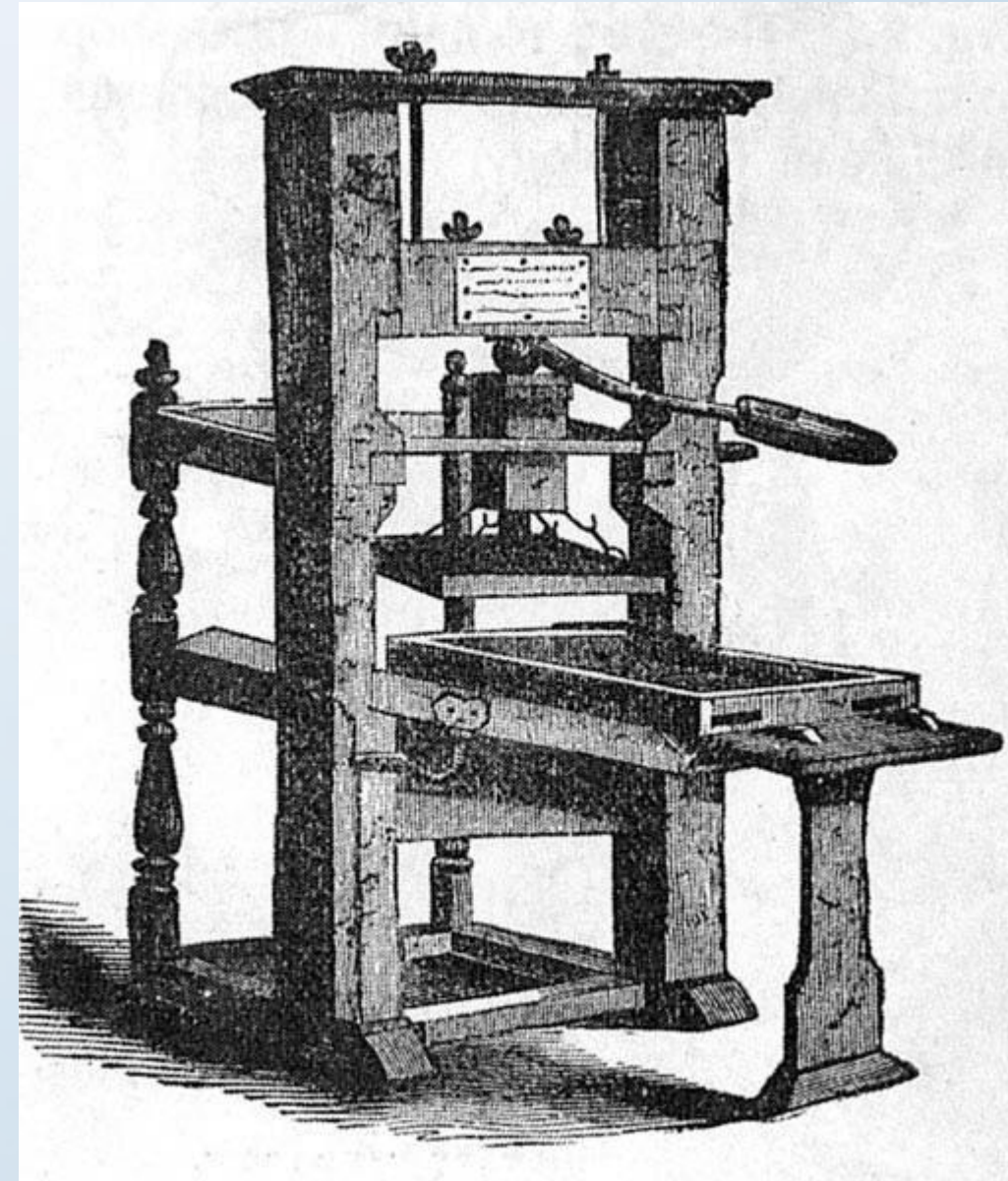
Reflect on...

- ... Imagine having to share your text book with everyone in class, or even the school. How would that impact your literacy and your education?



The Printing Press

- While all the discoveries/inventions were important to the advancement of mankind the one that had perhaps the largest impact was the printing press.
- Discuss why the printing press was such an important invention.
- This invention allowed new ideas and thoughts to be distributed on a much larger scale.



Quotes

- *He who first shortened the labor of copyists by device of movable types was disbanding hired armies, and cashiering most kings and senates, and creating a whole new democratic world: he had invented the art of printing.*

- Thomas Carlyle, 1795 -1881

- “What gunpowder did for war the printing press has done for the mind.”

– Wendell Phillips, 1811-1884

The Glorious Revolution of 1688

Main points

- England (Catholic vs Protestant)
- Executed King Charles I for treason
- Deposed King James II – fled to France
- William and Mary (d. of James II) became King and Queen.
- Secured Parliamentary government, Bill of Rights & freedoms

video



Key Terms

- Philosophy – the study of ideas
- “liberal” – role of government is to protect the rights of the individual, wants to change things
- “conservative” – wants to keep things as they are, job of government to maintain the status quo

Group Activity

- There are many important key philosophers during the Enlightenment that contributed to a new way of thinking. The philosophers we will look are:
 - John Locke,
 - Baron de Montesquieu,
 - Jean-Jacques Rousseau,
 - Voltaire (Francois-Marie Arouet)
 - Thomas Hobbes.
- In groups of 5 I want you to research and prepare a brief description of a philosopher's main contributions to the enlightenment.