

The Enlightenment: Revolutions in Thought and Science



The Enlightenment Why Did it Happen?



in the 1500s, people believed the earth was flat

by the 1600s, the seeking of knowledge led to the questioning of old assumptions and then to a breakthrough in Western thought

transformations of religious thought:

deism: religious philosophy based on reason and the idea of natural law

methodism: religious movement that stressed the value of personal religious experience through community work
(these people and their ideas later spread to America)



which all contributed to the movement that became known as
the Age of Enlightenment

this cultural movement of intellectuals that emphasized using reason rather than tradition

thinkers of the Enlightenment who spread exciting new ideas were known as **philosophes**

The Enlightenment: Revolution of Thought

natural law

a universal moral law that could be understood by applying reason



Thomas Hobbes

(1588-1679)

English political theorist

said people form a **social contract** to live obediently under a ruler, because without a leader people naturally are violent and disorderly
Leviathan (1651), showed a world without government in which life was “nasty, brutish, and short”

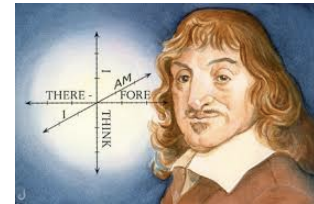
Rene Descartes

(1596-1650)

French philosopher and mathematician
believed truth must be reached through reason
invented analytical geometry

Discourse on Method (1637):

“I think, therefore I am.”



Baron de Montesquieu

(Charles-Louis de Secondat; 1689-1755)

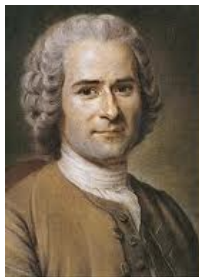
French political theorist who admired English government

believed in the separation of powers

legislative, executive, and judicial branches

contributed to the *Encyclopedie* and wrote *The Spirit of Laws* (1748)

The Enlightenment: Revolution of Thought



Jean-Jacques Rousseau

(1712-1778)

French philosopher born in Geneva to French Huguenot parents

The Social Contract (1762):

government should be made by the people

Voltaire

(Francois-Marie Arouet; 1694-1778)

French satirist who was jailed twice

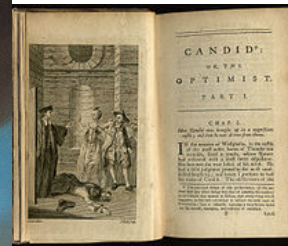
for writing about the Church and insulting a nobleman

Candide (1759):

challenged the idea that everything works out for the best

“I disapprove of what you say,

but I will defend to the death your right to say it.”

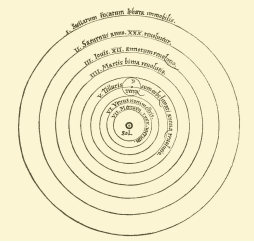


Immanuel Kant

(1724-1804)

German philosopher who claimed that there were two worlds
the physical world, which is known through the senses
the spiritual world, which is known through faith
religion is real even though it can't be scientifically explained

The Enlightenment: The Scientific Revolution



Nicholas Copernicus
(1473-1543)

started his scientific career in Poland in 1492
said earth was round and that it rotated on its axis as
it revolved around the sun
kept his ideas secret = couldn't be persecuted for
them

Galileo Galilei
(1564-1642)

mathematician; telescope; discovered moons orbiting Jupiter
= not all heavenly bodies revolved around earth;
Catholic Church put him on trial; forced to recant



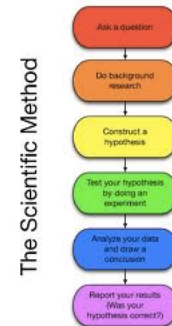
Johannes Kepler
(1571-1630):

astronomer and mathematician;
elliptical orbits

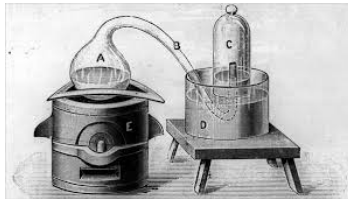


Francis Bacon
(1561-1626)

philosopher; scientific method



The Enlightenment: The Scientific Revolution



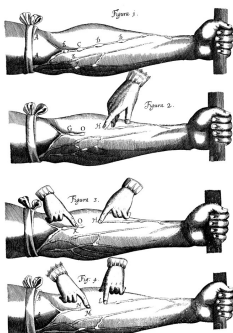
Joseph Priestly
(1733-1803)

English chemist and clergyman
discovered oxygen and studied the existence of carbon dioxide

Antoine Lavoisier
(1743-1794)

French scientist who discovered the nature of combustion

*Marie Lavoisier, his wife, learned English and Latin so she could translate
scientific essays and books for him
she also drew the illustrations for his books*



William Harvey
(1578-1657)

English doctor who proved
that blood circulates through
the body via the heart and
veins

*Andreas Vesalius (1514-1564):
medical student; dissections*

Robert Hooke
(1635-1703)

English scientist who
used the newly invented
microscope to find cells
in vegetable tissue



Enlightened Despots

absolutist rulers who governed by Enlightenment principles while keeping their royal powers



Frederick II of Prussia
(ruled from 1740–1786)
abolished the use of torture
established elementary schools
promoted industry and agriculture



Maria Theresa of Austria
(ruled from 1740–1780)
most far-reaching measures of enlightened despotism occurred under her reign
set up elementary schools
freed all serfs who worked on her estates

Joseph II of Austria

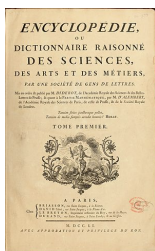
(Maria Theresa's son, ruled with her from 1740–1780, then alone until 1790)
abolished serfdom
made land taxes equal for nobles and peasants
instituted freedom of the press
took property from Catholic Church;
used the money to fund hospitals
granted religious freedom to Protestants and Jews



The Enlightenment Spreads

Encyclopedie (1751)

28 volumes containing all the new theories
banned by Catholic Church for its criticisms of the Church



salons

gatherings held in the homes of wealthy patrons held partly as a social gathering and partly to increase the knowledge of the participants through conversation



Madam de Pompadour (Jeanne Antoinette Poisson)
Louis XV's mistress from 1745 until her death in 1764)
hosted salons and noted for her intelligence and wit

