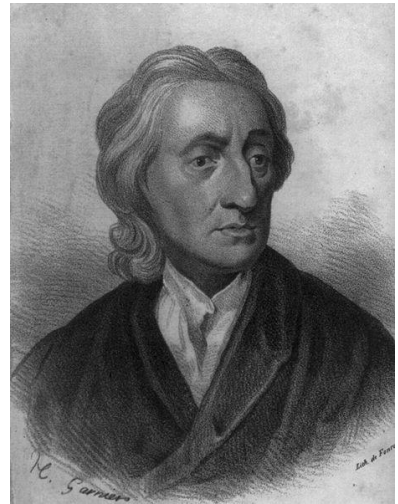
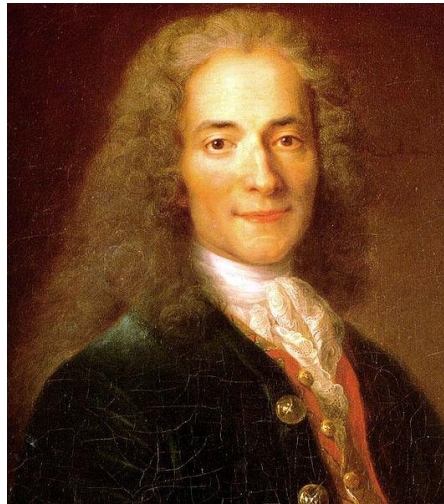
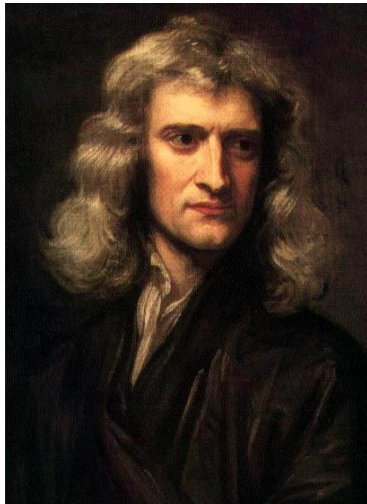


AP European History

UNIT 4 Materials



*The Age of
Reason*



Unit Plan

and Pacing Guide

Unit 4

The Age of Enlightenment

ASSIGNMENTS	
DAY ONE <i>The Scientific Revolution</i>	Kagan, 417-424 AND/OR Wood, 148-150 Document 4.1 (Descartes) Document 4.2 (Descartes) Document 4.3 (Copernicus)
DAY TWO <i>Sci. Rev. (Continued)</i>	Kagan, 428-438 AND/OR Wood, 150-157, 137-138 Document 4.4 (Voltaire on Bacon)
E-Lesson <i>The [British] Agricultural Revolution</i>	Kagan, 455-457 AND/OR Wood, 207-209 The British Agricultural Revolution (YouTube E-Lecture)
DAY THREE <i>What is Enlightenment?</i>	Document 4.5 (Kant, "What Is Enlightenment?") Kagan, 508-514 AND/OR Wood, 248-256 Gay, The Enlightenment [Excerpt]
DAY FOUR <i>The Rise of Modern Paganism</i>	Kagan, 514-520 AND/OR Wood, 264-266 Peter Gay, " The Modern Pagan " (<i>Makers of the Western Tradition</i>) Document 4.6 (Diderot, <i>Les Eleutheromanes</i>)
DAY FIVE <i>Candide: Theodicy</i>	<i>Candide</i> , Chapters I-X Theodicy (Wikipedia) Leibniz: Theodicy and Optimism (Wikipedia)
DAY SIX <i>Candide: Farewell to Nonage</i>	<i>Candide</i> , Chapters XI-XX Kagan, 520 AND/OR Wood, 256-258 (<i>The Encyclopedia</i>) Diderot's Encyclopedia (Briefly summarize ANY three articles on notebook paper.)
DAY SEVEN <i>Candide: Starting Over</i>	<i>Candide</i> , Chapters XXI-XXX Kagan, 523-525 AND/OR Wood, 258-261 (Montesquieu and Rousseau) Document 4.7 (Montesquieu, <i>The Spirit of the Laws</i>) Document 4.8 (Rousseau, <i>The Social Contract</i>)
DAY EIGHT <i>Enlightened Absolutism</i>	Kagan, 533-543 AND/OR Wood, 270-275, 278-279 Document 4.9 (Rousseau, <i>Emile</i>) Document 4.10 (Frederick the Great) Document 4.11 (Joseph II)
ASSESSMENT	MULTIPLE CHOICE TEST DBQ FRQ <div> STUDY GUIDE <i>Last Pages of Unit Guide</i> </div>

Document 4.1

Descartes, Letter to the Sacred Faculty of Theology of Paris

Letter of Dedication to his *Meditations on First Philosophy*

Source: <http://oregonstate.edu/instruct/phl302/texts/descartes/meditations/meditations.html>

GENTLEMEN,

1. The motive which impels me to present this Treatise to you is so reasonable, and, when you shall learn its design, I am confident that you also will consider that there is ground so valid for your taking it under your protection, that I can in no way better recommend it to you than by briefly stating the end which I proposed to myself in it.
2. I have always been of the opinion that the two questions respecting God and the Soul were the chief of those that ought to be determined by help of Philosophy rather than of Theology; for although to us, the faithful, it be sufficient to hold as matters of faith, that the human soul does not perish with the body, and that God exists, it yet assuredly seems impossible ever to persuade infidels of the reality of any religion, or almost even any moral virtue, unless, first of all, those two things be proved to them by natural reason. And since in this life there are frequently greater rewards held out to vice than to virtue, few would prefer the right to the useful, if they were restrained neither by the fear of God nor the expectation of another life; and although it is quite true that the existence of God is to be believed since it is taught in the sacred Scriptures, and that, on the other hand, the sacred Scriptures are to be believed because they come from God (for since faith is a gift of God, the same Being who bestows grace to enable us to believe other things, can likewise impart of it to enable us to believe his own existence), nevertheless, this cannot be submitted to infidels, who would consider that the reasoning proceeded in a circle. And, indeed, I have observed that you, with all the other theologians, not only affirmed the sufficiency of natural reason for the proof of the existence of God, but also, that it may be inferred from sacred Scripture, that the knowledge of God is much clearer than of many created things, and that it is really so easy of acquisition as to leave those who do not possess it blameworthy. This is manifest from these words of the Book of Wisdom, chap. xiii., where it is said, Howbeit they are not to be excused; for if their understanding was so great that they could discern the world and the creatures, why did they not rather find out the Lord thereof? And in Romans, chap. i., it is said that they are without excuse; and again, in the same place, by these words,--That which may be known of God is manifest in them-- we seem to be admonished that all which can be known of God may be made manifest by reasons obtained from no other source than the inspection of our own minds. I have, therefore, thought that it would not be unbecoming in me to inquire how and by what way, without going out of ourselves, God may be more easily and certainly known than the things of the world.
3. And as regards the Soul, although many have judged that its nature could not be easily discovered, and some have even ventured to say that human reason led to the conclusion that it perished with the body, and that the contrary opinion could be held through faith alone; nevertheless, since the Lateran Council, held under Leo X. (in session viii.), condemns these, and expressly enjoins Christian philosophers to refute their arguments, and establish the truth according to their ability, I have ventured to attempt it in this work.
4. Moreover, I am aware that most of the irreligious deny the existence of God, and the distinctness of the human soul from the body, for no other reason than because these points, as they allege, have never as yet been demonstrated. Now, although I am by no means of their opinion, but, on the contrary, hold that almost all the proofs which have been adduced on these questions by great men, possess, when rightly understood, the force of demonstrations, and that it is next to impossible to discover new, yet there is, I apprehend, no more useful service to be performed in Philosophy, than if someone were, once for all, carefully to seek out the best of these reasons, and expound them so accurately and clearly that, for the future, it might be manifest to all that they are real demonstrations. And finally, since many persons were greatly desirous of this, who knew that I had cultivated a certain Method of resolving all kinds of difficulties in the sciences, which is not indeed new (there being nothing older than truth), but of which they were aware I had made successful use in other instances, I judged it to be my duty to make trial of it also on the present matter.

Document 4.2

Descartes, On the Principles of Human Knowledge

From *The Principles of Philosophy*

Project Gutenberg: <http://www.gutenberg.org/ebooks/4391>

I. THAT in order to seek truth, it is necessary once in the course of our life, to doubt, as far as possible, of all things.

As we were at one time children, and as we formed various judgments regarding the objects presented to our senses, when as yet we had not the entire use of our reason, numerous prejudices stand in the way of our arriving at the knowledge of truth; and of these it seems impossible for us to rid ourselves, unless we undertake, once in our lifetime, to doubt of all those things in which we may discover even the smallest suspicion of uncertainty.

II. That we ought also to consider as false all that is doubtful.

Moreover, it will be useful likewise to esteem as false the things of which we shall be able to doubt, that we may with greater clearness discover what possesses most certainty and is the easiest to know.

III. That we ought not meanwhile to make use of doubt in the conduct of life.

In the meantime, it is to be observed that we are to avail ourselves of this general doubt only while engaged in the contemplation of truth. For, as far as concerns the conduct of life, we are very frequently obliged to follow opinions merely probable, or even sometimes, though of two courses of action we may not perceive more probability in the one than in the other, to choose one or other, seeing the opportunity of acting would not unfrequently pass away before we could free ourselves from our doubts.

IV. Why we may doubt of sensible things.

Accordingly, since we now only design to apply ourselves to the investigation of truth, we will doubt, first, whether of all the things that have ever fallen under our senses, or which we have ever imagined, any one really exist; in the first place, because we know by experience that the senses sometimes err, and it would be imprudent to trust too much to what has even once deceived us; secondly, because in dreams we perpetually seem to perceive or imagine innumerable objects which have no existence. And to one who has thus resolved upon a general doubt, there appear no marks by which he can with certainty distinguish sleep from the waking state.

V. Why we may also doubt of mathematical demonstrations.

We will also doubt of the other things we have before held as most certain, even of the demonstrations of mathematics, and of their principles which we have hitherto deemed self-evident; in the first place, because we have sometimes seen men fall into error in such matters, and admit as absolutely certain and self-evident what to us appeared false, but chiefly because we have learnt that God who created us is all-powerful; for we do not yet know whether perhaps it was his will to create us so that we are always deceived, even in the things we think we know best: since this does not appear more impossible than our being occasionally deceived, which, however, as observation teaches us, is the case. And if we suppose that an all-powerful God is not the author of our being, and that we exist of ourselves or by some other means, still, the less powerful we suppose our author to be, the greater reason will we have for believing that we are not so perfect as that we may not be continually deceived.

VI. That we possess a free-will, by which we can withhold our assent from what is doubtful, and thus avoid error.

But meanwhile, whoever in the end may be the author of our being, and however powerful and deceitful he may be, we are nevertheless conscious of a freedom, by which we can refrain from admitting to a place in our belief aught that is not manifestly certain and undoubted, and thus guard against ever being deceived.

VII. That we cannot doubt of our existence while we doubt, and that this is the first knowledge we acquire when we philosophize in order.

While we thus reject all of which we can entertain the smallest doubt, and even imagine that it is false, we easily indeed suppose that there is neither God, nor sky, nor bodies, and that we ourselves even have neither hands nor feet, nor, finally, a body; but we cannot in the same way suppose that we are not while we doubt of the truth of these things; for there is a repugnance in conceiving that what thinks does not exist at the very time when it thinks. **Accordingly, the knowledge, /I THINK, THEREFORE I AM, is the first and most certain that occurs to one who philosophizes orderly.**

Document 4.3

From Nicholas Copernicus, "On the Revolution of the Heavenly Bodies (1543)

The History Guide: <http://www.historyguide.org/earlymod/dedication.html>

*To His Holiness, Pope Paul III,
Nicholas Copernicus' Preface
to His Books on the Revolutions*

I can readily imagine, Holy Father, that as soon as some people hear that in this volume, which I have written about the revolutions of the spheres of the universe, I ascribe certain motions to the terrestrial globe, they will shout that I must be immediately repudiated together with this belief. For I am not so enamored of my own opinions that I disregard what others may think of them. I am aware that a philosopher's ideas are not subject to the judgment of ordinary person's, because it is his endeavor to seek the truth in all things, to the extent permitted to human reason by God. Yet I hold that completely erroneous views should be shunned. Those who know that the consensus of many centuries has sanctioned the conception that the earth remains at rest in the middle of the heaven as its center would, I reflected, regard it as an insane pronouncement if I made the opposite assertion that the earth moves. Therefore I debated with myself for a long time whether to publish the volume which I wrote to prove the earth's motion or rather to follow the example of the Pythagoreans and certain others, who used to transmit philosophy's secrets only to kinsmen and friends, not in writing but by word of mouth.... And they did so, it seems to me, not, as some suppose, because they were in some way jealous about their teachings, which would be spread around; on the contrary, they wanted the very beautiful thoughts attained by great men of deep devotion not to be ridiculed by those who are reluctant to assert themselves vigorously in any literary pursuit unless it is lucrative; or if they are stimulated to the nonacquisitive study of philosophy by the exhortation and example of others, yet because of their dullness of mind they play the same part among philosophers as drones among bees. When I weighed these considerations, the scorn which I had reason to fear on account of the novelty and unconventionality of my opinion almost induced me to abandon completely the work which I had undertaken.

But while I hesitated for a long time and even resisted, my friends [encouraged me]. . . . Foremost among them was the cardinal of Capua, Nicholas Schönberg, renowned in every field of learning. Next to him was a man who loves me dearly, Tiedemann Giese, bishop of Chelmino, a close student of sacred letters as well as of all good literature. For he repeatedly encouraged me and, sometimes adding reproaches, urgently requested me to publish this volume and finally permit it to appear after being buried among my papers and lying concealed not merely until the ninth year but by now the fourth period of nine years. The same conduct was recommended to me by not a few other very eminent scholars. They exhorted me to no longer refuse, on account of the fear which I felt, to make my work available for the general use of students of astronomy. The crazier my doctrine of the earth's motion now appeared to most people, the argument ran, so much the more admiration and thanks would it gain after they saw the publication of my writings dispel the fog of absurdity by most luminous proofs. Influenced therefore by these persuasive men and by this hope, in the end I allowed my friends to bring out an edition of the volume, as they had long besought me to do. . . .

But you are rather waiting to hear from me how it occurred to me to venture to conceive any motion of the earth, against the traditional opinion of astronomers and almost against common sense. . . .

For a long time, then, I reflected on this confusion in the astronomical traditions concerning the derivations of the motions of the universe's spheres. I began to be annoyed that the movements of the world machine, created for our sake by the best and most systematic Artisan of all, were not understood with greater certainty by the philosophers, who otherwise examined so precisely the most insignificant trifles of this world. For this reason I undertook the task of rereading the works

of all the philosophers which I could obtain to learn whether anyone had ever proposed other motions of the universe's spheres than those expounded by the teachers of astronomy in the schools. And in fact first I found in Cicero that Hicetas supposed the earth to move. Later I also discovered in Plutarch that certain others were of this opinion. . . .

Therefore, having obtained the opportunity from these sources, I too began to consider the mobility of the earth. . . . I thought that I too would be readily permitted to ascertain whether explanations sounder than those of my predecessors could be found for the revolution of the celestial spheres on the assumption of some motion of the earth.

Having thus assumed the motions which I ascribe to the earth later on in the volume, by long and intense study I finally found that if the motions of the other planets are correlated with the orbiting of the earth, and are computed for the revolution of each planet, not only do their phenomena follow therefrom but also the order and size of all the planets and spheres, and heaven itself is so linked together that in no portion of it can anything be shifted without disrupting the remaining parts and the universe as a whole. Accordingly in the arrangement of the volume too I have adopted the following order. In the first book I set forth the entire distribution of the spheres together with the motions which I attribute to the earth, so that this book contains, as it were, the general structure of the universe. Then in the remaining books I correlate the motions of the other planets and of all the spheres with the movement of the earth so that I may thereby determine to what extent the motions and appearances of the other planets and spheres can be saved if they are correlated with the earth's motions. I have no doubt that acute and learned astronomers will agree with me if, as this discipline especially requires, they are willing to examine and consider, not superficially but thoroughly, what I adduce in this volume in proof of these matters. However, in order that the educated and uneducated alike may see that I do not run away from the judgment of anybody at all, I have preferred dedicating my studies to Your Holiness rather than to anyone else. For even in this very remote corner of the earth where I live you are considered the highest authority by virtue of the loftiness of your office and your love for all literature and astronomy too. Hence by your prestige and judgment you can easily suppress calumnious attacks although, as the proverb has it, there is no remedy for a backbite.

Perhaps there will be babblers who claim to be judges of astronomy although completely ignorant of the subject and, badly distorting some passages of Scripture to their purpose, will dare to find fault with my undertaking and censure it. I disregard them even to the extent of despising their criticism as unfounded. For it is not unknown that Lactantius, otherwise an illustrious writer but hardly an astronomer, speaks quite childishly about the earth's shape, when he mocks those who declared that the earth has the form of a globe. Hence scholars need not be surprised if any such person will likewise ridicule me. Astronomy is written for astronomers. To them my work too will seem, unless I am mistaken, to make some contribution.

[Source: Nicholas Copernicus, *On the Revolutions of the Heavenly Bodies*, translated by Edward Rosen, (London: Macmillan, 1972), pp. 3-5.]

Document 4.4

Voltaire, “Chancellor Bacon”

From Voltaire’s *Letters on England*

Accessed through the [Online Library of Liberty](#)

It is not long since the ridiculous and threadbare question was agitated in a celebrated assembly; who was the greatest man, Cæsar or Alexander, Tamerlane or Cromwell? Somebody said that it must undoubtedly be Sir Isaac Newton. This man was certainly in the right; for if true greatness consists in having received from heaven the advantage of a superior genius, with the talent of applying it for the interest of the possessor and of mankind, a man like Newton—and such a one is hardly to be met with in ten centuries—is surely by much the greatest; and those statesmen and conquerors which no age has ever been without, are commonly but so many illustrious villains. It is the man who sways our minds by the prevalence of reason and the native force of truth, not they who reduce mankind to a state of slavery by brutish force and downright violence; the man who by the vigor of his mind, is able to penetrate into the hidden secrets of nature, and whose capacious soul can contain the vast frame of the universe, not those who lay nature waste, and desolate the face of the earth, that claims our reverence and admiration.

Therefore, as you are desirous to be informed of the great men that England has produced, I shall begin with the Bacons, the Lockes, and the Newtons. The generals and ministers will come after them in their turn.

I must begin with the celebrated baron Verulam, known to the rest of Europe by the name of Bacon, who was the son of a certain keeper of the seals, and was for a considerable time chancellor under James I. Notwithstanding the intrigues and bustle of a court, and the occupations incident to his office, which would have required his whole attention, he found means to become a great philosopher, a good historian, and an elegant writer; and what is yet more wonderful is that he lived in an age where the art of writing was totally unknown, and where sound philosophy was still less so. This personage, as is the way among mankind, was more valued after his death than while he lived. His enemies were courtiers residing at London, while his admirers consisted wholly of foreigners....

The most singular, as well as the most excellent, of all his works, is that which is now the least read, and which is at the same time the most useful; I mean his “*Novum Scientiarum Organum*.” This is the scaffold by means of which the edifice of the new philosophy has been reared; so that when the building was completed, the scaffold was no longer of any use. Chancellor Bacon was still unacquainted with nature, but he perfectly knew, and pointed out extraordinarily well, all the paths which lead to her recesses. He had very early despised what those square-capped fools teach in those dungeons called *Colleges*, under the name of philosophy, and did everything in his power that those bodies, instituted for the cultivation and perfection of the human understanding, might cease any longer to mar it, by their “quiddities,” their “horrors of a vacuum,” their “substantial forms,” with the rest of that jargon which ignorance and a nonsensical jumble of religion had consecrated.

This great man is the father of experimental philosophy. It is true, wonderful discoveries had been made even before his time; the mariner’s compass, the art of printing, that of engraving, the art of painting in oil, that of making glass, with the remarkably advantageous invention of restoring in some measure sight to the blind; that is, to old men, by means of spectacles; the secret of making gunpowder had, also, been discovered. They had gone in search of, discovered, and conquered a new world in another hemisphere. Who would not have thought that these sublime discoveries had been made by the greatest philosophers, and in times much more enlightened than ours? By no means; for all these astonishing revolutions happened in the ages of scholastic barbarity. Chance alone has brought forth almost all these inventions; it is even pretended that chance has had a great share in the discovery of America; at least, it has been believed that Christopher Columbus undertook this voyage on the faith of a captain of a ship who had been cast by a storm on one of the

Caribbee islands. **Be this as it will, men had learned to penetrate to the utmost limits of the habitable globe, and to destroy the most impregnable cities with an artificial thunder, much more terrible than the real; but they were still ignorant of the circulation of the blood, the weight and pressure of the air, the laws of motion, the doctrine of light and color, the number of the planets in our system, etc...**

The most wonderful and useful inventions are by no means those which do most honor to the human mind. And it is to a certain mechanical instinct, which exists in almost every man, that we owe far the greater part of the arts, and in no manner whatever to philosophy. The discovery of fire, the arts of making bread, of melting and working metals, of building houses, the invention of the shuttle, are infinitely more useful than printing and the compass; notwithstanding, all these were invented by men who were still in a state of barbarity. What astonishing things have the Greeks and Romans... done in mechanics? Yet men believed, in their time, that the heavens were of crystal, and the stars were so many small lamps, that sometimes fell into the sea; and one of their greatest philosophers, after many researches, had at length discovered that the stars were so many pebbles, that had flown off like sparks from the earth.

In a word, there was not a man who had any idea of experimental philosophy before Chancellor Bacon; and of an infinity of experiments which have been made since his time, there is hardly a single one which has not been pointed out in his book. He had even made a good number of them himself. He constructed several pneumatic machines, by which he discovered the elasticity of the air; he had long brooded over the discovery of its weight, and was even at times very near to catching it, when it was laid hold of by Torricelli. A short time after, experimental physics began to be cultivated in almost all parts of Europe. This was a hidden treasure, of which Bacon had some glimmerings, and which all the philosophers whom his promises had encouraged made their utmost efforts to lay open. We see in his book mention made in express terms of that new attraction of which Newton passes for the inventor. "We must inquire," said Bacon, "whether there be not a certain magnetic force, which operates reciprocally between the earth and other heavy bodies, between the moon and the ocean, between the planets, etc." In another place he says: "Either heavy bodies are impelled toward the centre of the earth, or they are mutually attracted by it; in this latter case it is evident that the nearer falling bodies approach the earth, the more forcibly are they attracted by it. We must try," continues he, "whether the same pendulum clock goes faster on the top of a mountain, or at the bottom of a mine. If the force of the weight diminishes on the mountain, and increases in the mine, it is probable the earth has a real attracting quality."

This precursor in philosophy was also an elegant writer, a historian, and a wit. His moral essays are in high estimation, though they seem rather calculated to instruct than to please; and as they are neither a satire on human nature... nor a school of skepticism... His life of Henry VII passed for a masterpiece....

Document 4.5

Immanuel Kant, "What is Enlightenment?"

Source: <http://www.columbia.edu/acis/ets/CCREAD/etscc/kant.html>

Enlightenment is man's emergence from his self-imposed nonage. Nonage is the inability to use one's own understanding without another's guidance. This nonage is self-imposed if its cause lies not in lack of understanding but in indecision and lack of courage to use one's own mind without another's guidance. *Dare to know! (Sapere aude.)* "Have the courage to use your own understanding," is therefore the motto of the enlightenment.¹

Laziness and cowardice are the reasons why such a large part of mankind gladly remain minors all their lives, long after nature has freed them from external guidance. They are the reasons why it is so easy for others to set themselves up as guardians. It is so comfortable to be a minor. If I have a book that thinks for me, a pastor who acts as my conscience, a physician who prescribes my diet, and so on--then I have no need to exert myself. I have no need to think, if only I can pay; others will take care of that disagreeable business for me. Those guardians who have kindly taken supervision upon themselves see to it that the overwhelming majority of mankind--among them the entire fair sex--should consider the step to maturity, not only as hard, but as extremely dangerous. First, these guardians make their domestic cattle stupid and carefully prevent the docile creatures from taking a single step without the leading-strings to which they have fastened them. Then they show them the danger that would threaten them if they should try to walk by themselves. Now this danger is really not very great; after stumbling a few times they would, at last, learn to walk. However, examples of such failures intimidate and generally discourage all further attempts.

Thus it is very difficult for the individual to work himself out of the nonage which has become almost second nature to him. He has even grown to like it, and is at first really incapable of using his own understanding because he has never been permitted to try it. Dogmas and formulas, these mechanical tools designed for reasonable use--or rather abuse--of his natural gifts, are the fetters of an everlasting nonage. The man who casts them off would make an uncertain leap over the narrowest ditch, because he is not used to such free movement. That is why there are only a few men who walk firmly, and who have emerged from nonage by cultivating their own minds.

It is more nearly possible, however, for the public to enlighten itself; indeed, if it is only given freedom, enlightenment is almost inevitable. There will always be a few independent thinkers, even among the self-appointed guardians of the multitude. Once such men have thrown off the yoke of nonage, they will spread about them the spirit of a reasonable appreciation of man's value and of his duty to think for himself....

This enlightenment requires nothing but *freedom*--and the most innocent of all that may be called "freedom": freedom to make public use of one's reason in all matters. Now I hear the cry from all sides: "Do not argue!" The officer says: "Do not argue--drill!" The tax collector: "Do not argue--pay!" The pastor: "Do not argue--believe!" Only one ruler in the world says: "Argue as much as you please, but obey!"

We find restrictions on freedom everywhere. But which restriction is harmful to enlightenment? Which restriction is innocent, and which advances enlightenment? I reply: the public use of one's reason must be free at all times, and this alone can bring enlightenment to mankind....

A man may postpone his own enlightenment, but only for a limited period of time. And to give up enlightenment altogether, either for oneself or one's descendants, is to violate and to trample upon the sacred rights of man....

¹ Compare to Proverbs 3:5, which reads, "Trust in the Lord with all your heart and lean not on your own understanding."

When we ask, "Are we now living in an enlightened age?" The answer is, "No, but we live in an age of enlightenment." As matters now stand it is still far from true that men are already capable of using their own reason in religious matters confidently and correctly without external guidance. Still, we have some obvious indications that the field of working toward the goal [of religious truth] is now opened. What is more, the hindrances against general enlightenment or the emergence from self-imposed nonage are gradually diminishing. In this respect this is the age of the enlightenment and the century of Frederick [the Great].

A prince ought not to deem it beneath his dignity to state that he considers it his duty not to dictate anything to his subjects in religious matters, but to leave them complete freedom... [Frederick's Prussia] is a shining example that freedom need not cause the least worry concerning public order or the unity of the community. When one does not deliberately attempt to keep men in barbarism, they will gradually work out of that condition by themselves.

I have emphasized the main point of the enlightenment--man's emergence from his self-imposed nonage--primarily in religious matters, because our rulers have no interest in playing the guardian to their subjects in the arts and sciences. Above all, nonage in religion is not only the most harmful but the most dishonorable....

Nature... has carefully cultivated the seed within the hard core [of the human mind]--namely the urge for and the vocation of free thought. And this free thought gradually reacts back on the modes of thought of the people, and men become more and more capable of acting in freedom. At last free thought acts even on the fundamentals of government and the state finds it agreeable to treat man, who is now more than a machine, in accord with his dignity.

Document 4.6

From Denis Diderot, *Les Eleutheromanes*²

Published Posthumously in 1795

Translated, in part, by the expert hand of Leirin Smith (SHS 2010)

At this point in time a throne wavers;
The frightened, trembling desperation
Of a furious people - the idiotic **despot**
Knows the vanity of the alleged pact.

Answer, **sovereign**: who dictated this pact?
Who signed it? Who has subscribed?
In which wood, in which cave, did one draw up the act?
By which hands was it written?
Does one have it engraved on the stone or the bark?
Who maintains it? Justice or force?
From right, fair, it is proscribed.

I attest the times; I appeal to all ages;
Never publically advantaged
The man did not sacrifice his rights;
If he dared of his heart to listen to only his voice,
Changing language suddenly,
He would say to us, like the host of the wood:
"Nature made neither servant nor master;
I do not want to give nor receive laws!"

**And his hand would plait the priest's entrails,
For want of a rope, to strangle kings.**

You're [a] pale, cheap slave! Mud,
What you blindly devoted
To the common interests of two leagued tigers?
Are we meant to be brutalized, enslaved?
What a moment! How sweet to muse proud!

The free man, your enemy.
You showed his proud soul;
O cruel artisans of the long misery
'Don't,' every century groaned,
He sees you, he laughs a vain anger:
He is content, if you have shuddered

Enough and too long a foolish race
Forfeiting its innumerable [rights] has
 blackened my thought.
Objects of hatred and contempt,
Tyrants, stay away. Come, play and laugh;
Let sheet or pamper the ivy
Interlaced with my gray hair.
Most agreeable delirium
I feel warm my spirits.
Quickly, bring me a lyre.
[Anacréon](#) Muse, sitting on his tripod,
The scepter of the kings underfoot,
I want to sing another empire:

It is the empire of Beauty.
All recognize its sovereignty.
It is she that orders everything that breathes.

QUESTIONS TO CONSIDER:

1. What appears to be Diderot's opinion of monarchs, or authority in general?
2. How do Diderot's sentiments epitomize the spirit of the Enlightenment?

² Literally, a maniac or fanatic for liberty

Document 4.7

From Montesquieu, *The Spirit of the Laws*

Modern History Sourcebook: <http://www.fordham.edu/halsall/mod/montesquieu-spirit.asp>

BACKGROUND: *Charles de Secondat, Baron de Montesquieu (1689-1755), was a nobleman, a judge in a French court, and one of the most influential political thinkers. Based on his research he developed a number of political theories presented in The Spirit of the Laws (1748).*

This treatise presented numerous theories - among the most important was respect for the role of history and climate in shaping a nation's political structure.

In every government there are three sorts of power; the **legislative**; the **executive**, in respect to things dependent on the law of nations; and the **[judicial]**, in regard to things that depend on the civil law.

By virtue of the first, the prince or magistrate enacts temporary or perpetual laws, and amends or abrogates those that have been already enacted. By the second, he makes peace or war, sends or receives embassies; establishes the public security, and provides against invasions. By the third, he punishes criminals, or determines the disputes that arise between individuals. The latter we shall call the judiciary power, and the other simply the executive power of the state.

The political liberty of the subject is a tranquility of mind, arising from the opinion each person has of his safety. In order to have this liberty, it is requisite the government be so constituted as one man need not be afraid of another.

When the legislative and executive powers are united in the same person, or in the same body of magistrates, there can be no liberty; because apprehensions may arise, lest the same monarch or senate should enact tyrannical laws, to execute them in a tyrannical manner.

Again, there is no liberty, if the power of judging be not separated from the legislative and executive powers. Were it joined with the legislative, the life and liberty of the subject would be exposed to arbitrary control, for the judge would then be the legislator. Were it joined to the executive power, the judge might behave with all the violence of an oppressor.

There would be an end of everything were the same man, or the same body, whether of the nobles or of the people to exercise those three powers that of enacting laws, that of executing the public resolutions, and that of judging the crimes or differences of individuals.

Most kingdoms in Europe enjoy a **moderate government**, because the prince, who is invested with the two first powers, leaves the third to his subjects. In Turkey [Ottoman Empire], where these three powers are united in the sultan's person the subjects groan under the weight of a most frightful oppression.

In the republics of Italy, where these three powers are united, there is less liberty than in our monarchies. Hence their government is obliged to have recourse to as violent methods for its support, as even that of the Turks witness the state inquisitors, and the lion's mouth into which every informer may at all hours throw his written accusations.

What a situation must the poor subject be in, under those republics! The same body of magistrates are possessed, as executors of the laws, of the whole power they have given themselves in quality of legislators. They may plunder the state by their general determinations; and as they have likewise the judiciary power in their hands, every private citizen may be ruined by their particular decisions.

The whole power is here united in one body; and though there is no external pomp that indicates a despotic sway, yet the people feel the effects of it every moment.

Hence it is that many of the princes of Europe, whose aim has been leveled at arbitrary power, have constantly set out with uniting in their own persons, all the branches of magistracy, and all the great offices of state.

The executive power ought to be in the hands of a monarch; because this branch of government, which has always need of expedition, is better administered by one than by many: Whereas, whatever depends on the legislative power, is oftentimes better regulated by many than by a single person.

But if there was no monarch, and the executive power was committed to a certain number of persons selected from the legislative body, there would be an end then of liberty; by reason the two powers would be united, as the same persons would actually sometimes have, and would moreover be always able to have, a share in both.

Were the legislative body to be a considerable time without meeting, this would likewise put an end to liberty. For one of these two things would naturally follow; either that there would be no longer any legislative resolutions, and then the state would fall into anarchy; or that these resolutions would be taken by the executive power, which would render it absolute.

It would be needless for the legislative body to continue always assembled. This would be troublesome to the representatives, and moreover would cut out too much work for the executive power, so as to take off its attention from executing, and oblige it to think only of defending its own prerogatives, and the right it has to execute....

Were the executive power not to have a right of putting a stop to the encroachments of the legislative body, the latter would become despotic; for as it might arrogate to itself what authority it pleased, it would soon destroy all the other powers.

But it is not proper, on the other hand, that the legislative power should have a right to stop the executive. For as the execution has its natural limits, it is useless to confine it; besides, the executive power is generally employed in momentary operations. The power therefore of the Roman tribunes was faulty, as it put a stop not only to the legislation, but likewise to the execution itself; which was attended with infinite mischiefs.

But if the legislative power in a free government ought to have no right to stop the executive, it has a right, and ought to have the means of examining in what manner its laws have been executed; an advantage which this government has over that of... Sparta, where the... Ephors gave no account of their administration.

But whatever may be the issue of that examination, the legislative body ought not to have a power of judging the person, nor of course the conduct of him who is entrusted with the executive power. His person should be sacred, because as it is necessary for the good of the state to prevent the legislative body from rendering themselves arbitrary, the moment he is accused or tried, there is an end of liberty....

Whoever shall read the admirable treatise of [Tacitus](#) on the manners of the Germans, will find that it is from them the English have borrowed the idea of their political government. This beautiful system was invented first in the woods.

As all human things have an end, the state we are speaking of will lose its liberty, it will perish. Have not Rome, Sparta, and Carthage perished? It will perish when the legislative power shall be more corrupted than the executive...

From Montesquieu, *The Spirit of the Laws*, vol. 1, trans. Thomas Nugent (London: J. Nourse, 1777), pp. 221-237, passim.

Document 4.8

From Rousseau, *The Social Contract*

Modern History Sourcebook: <http://www.fordham.edu/halsall/mod/rousseau-soccon.asp>

BACKGROUND: Jean-Jacques Rousseau stresses, like John Locke, the idea of a social contract as the basis of society. Locke's version emphasised a contract between the governors and the governed: Rousseau's was in a way much more profound - the social contract was between all members of society, and essentially replaced "natural" rights as the basis for human claims.

ORIGIN AND TERMS OF THE SOCIAL CONTRACT

Man was born free, but everywhere he is in chains. This man believes that he is the master of others, and still he is more of a slave than they are. How did that transformation take place? I don't know.

How may the restraints on man become legitimate? I do believe I can answer that question....

At a point in the state of nature when the obstacles to human preservation have become greater than each individual with his own strength can cope with . . . , an adequate combination of forces must be the result of men coming together. Still, each man's power and freedom are his main means of self-preservation. How is he to put them under the control of others without damaging himself . . . ?

This question might be rephrased: "How is a method of associating to be found which will defend and protect-using the power of all-the person and property of each member and still enable each member of the group to obey only himself and to remain as free as before?" This is the fundamental problem; the social contract offers a solution to it.

The very scope of the action dictates the terms of this contract and renders the least modification of them inadmissible, something making them null and void. Thus, although perhaps they have never been stated in so many words, they are the same everywhere and tacitly conceded and recognized everywhere. And so it follows that each individual immediately recovers his primitive rights and natural liberties whenever any violation of the social contract occurs and thereby loses the contractual freedom for which he renounced them.

The social contract's terms, when they are well understood, can be reduced to a single stipulation: the individual member alienates himself totally to the whole community together with all his rights. This is first because conditions will be the same for everyone when each individual gives himself totally, and secondly, because no one will be tempted to make that condition of shared equality worse for other men....

Once this multitude is united this way into a body, an offense against one of its members is an offense against the body politic. It would be even less possible to injure the body without its members feeling it. Duty and interest thus equally require the two contracting parties to aid each other mutually. The individual people should be motivated from their double roles as individuals and members of the body, to combine all the advantages which mutual aid offers them....

INDIVIDUAL WILLS AND THE GENERAL WILL

In reality, each individual may have one particular will as a man that is different from-or contrary to-the general will which he has as a citizen. His own particular interest may suggest other things to him than the common interest does. His separate, naturally independent existence may make him imagine that what he owes to the common cause is an incidental contribution - a contribution which will cost him more to give than their failure to receive it would harm the others. He may also regard the moral person of the State as an imaginary being since it is not a man, and wish to enjoy the rights of a citizen without performing the duties of a subject. This unjust attitude could cause the ruin of the body politic if it became widespread enough.

So that the social pact will not become meaningless words, it tacitly includes this commitment, which alone gives power to the others: **Whoever refuses to obey the general will shall be forced to obey it by the whole body politic, which means nothing else but that he will be forced to be free.** This condition is indeed the one which by dedicating each citizen to the fatherland gives him a guarantee against being personally dependent on other individuals. It is the condition which all political machinery depends on and which alone makes political undertakings legitimate. Without it, political actions become absurd, tyrannical, and subject to the most outrageous abuses.

Whatever benefits he had in the state of nature but lost in the civil state, a man gains more than enough new ones to make up for them. His capabilities are put to good use and developed; his ideas are enriched, his sentiments made more noble, and his soul elevated to the extent that-if the abuses in this new condition did not often degrade him to a condition lower than the one he left behind-he would have to keep blessing this happy moment which snatched him away from his previous state and which made an intelligent being and a man out of a stupid and very limited animal....

INDIVISIBLE, INALIENABLE SOVEREIGNTY

The first and most important conclusion from the principles we have established thus far is that the general will alone may direct the forces of the State to achieve the goal for which it was founded, the common good.... Sovereignty is indivisible ... and is inalienable.... A will is general or it is not: it is that of the whole body of the people or only of one faction...

Our political theorists, however, unable to divide the source of sovereignty, divide sovereignty into the ways it is applied. They divide it into force and will; into legislative power and executive power; into the power to tax, the judicial power, and the power to wage war; into internal administration and the power to negotiate with foreign countries. Now we see them running these powers together. Now they will proceed to separate them. They make the sovereign a being of fantasy, composed of separate pieces, which would be like putting a man together from several bodies, one having eyes, another arms, another feet-nothing more...

If we follow up in the same way on the other divisions mentioned, we find that we are deceived every time we believe we see sovereignty divided....

NEED FOR CITIZEN PARTICIPATION, NOT REPRESENTATION

It follows from the above that the general will is always in the right and inclines toward the public good, but it does not follow that the deliberations of the people always have the same rectitude. **People always desire what is good, but they do not always see what is good. You can never corrupt the people, but you can often fool them, and that is the only time that the people appear to will something bad....**

If, assuming that the people were sufficiently informed as they made decisions... the general will would always be resolved from a great number of small differences, and the deliberation would always be good. But when blocs are formed, associations of parts at the expense of the whole, the will of each of these associations will be general as far as its members are concerned but particular as far as the State is concerned. Then we may say that there are no longer so many voters as there are men present but as many as there are associations. The differences will become less numerous and will yield less general results. Finally, when one of these associations becomes so strong that it dominates the others, you no longer have the sum of minor differences as a result but rather one single [unresolved] difference, with the result that there no longer is a general will, and the view that prevails is nothing but one particular view....

It is agreed that everything which each individual gives up of his power, his goods, and his liberty under the social contract is only that part of all those things which is of use to the community, but it is also necessary to agree that the sovereign alone is the judge of what that useful part is....

Government... is wrongly confused with the sovereign, whose agent it is. What then is government? It is an intermediary body established between the subjects and the sovereign to keep them in touch with each other. It is charged with executing the laws and maintaining both civil and political liberty.... The only will dominating government ... should be the general will or the law. The government's power is only the public power vested in it. As soon as [government] attempts to let any act come from itself completely independently, it starts to lose its intermediary role. If the time should ever come when the [government] has a particular will of its own stronger than that of the sovereign and makes use of the public power which is in its hands to carry out its own particular will-when there are thus two sovereigns, one in law and one in fact-at that moment the social union will disappear and the body politic will be dissolved.

Once the public interest has ceased to be the principal concern of citizens, once they prefer to serve State with money rather than with their persons, the State will be approaching ruin....

Sovereignty cannot be represented.... Essentially, it consists of the general will, and a will is not represented: either we have it itself, or it is something else; there is no other possibility. The deputies of the people thus are not and cannot be its representatives. They are only the people's agents and are not able to come to final decisions at all. Any law that the people have not ratified in person is void, it is not a law at all.

SOVEREIGNTY AND CIVIL RELIGION

Now then, it is of importance to the State that each citizen should have a religion requiring his devotion to duty; however, the dogmas of that religion are of no interest to the State except as they relate to morality and to the duties which each believer is required to perform for others. For the rest of it, each person may have whatever opinions he pleases....

It follows that it is up to the sovereign to establish the articles of a purely [civil faith](#), not exactly as dogmas of religion but as sentiments of social commitment without which it would be impossible to be either a good citizen or a faithful subject.... While the State has no power to oblige anyone to believe these articles, it may banish anyone who does not believe them. This banishment is not for impiety but for lack of social commitment, that is, for being incapable of sincerely loving the laws and justice or of sacrificing his life to duty in time of need. As for the person who conducts himself as if he does not believe them after having publicly stated his belief in these same dogmas, he deserves the death penalty. He has lied in the presence of the laws.

The dogmas of civil religion should be simple, few in number, and stated in precise words without interpretations or commentaries. These are the required dogmas: the existence of a powerful, intelligent Divinity, who does good, has foreknowledge of all, and provides for all; the life to come; the happy rewards of the just; the punishment of the wicked; and the sanctity of the social contract and the laws. As for prohibited articles of faith, I limit myself to one: intolerance. Intolerance characterizes the religious persuasions we have excluded.

From Jean Jacques Rousseau, *Contrat social ou Principes du droit politique* (Paris: Garnier Frères 1800), pp. 240-332, passim. Translated by Henry A. Myers.

Document 4.9

From Rousseau, *Emile* or *On Education*

Hanover Historical Texts Project: <http://history.hanover.edu/courses/excerpts/165rouss-em.html>

From BOOK FIVE

Man should not be alone. Emile is now a man. We have promised him a companion; we must give her to him. That companion is Sophie.

Sophie should be a woman as Emile is a man. That is to say, she should have everything that suits the constitution of her species and of her sex so as to take her place in the physical and moral order. Let us begin, therefore, by examining the similarities and differences between her sex and ours.

In all that does not relate to sex, woman is man. She has the same organs, the same needs, the same faculties. The machine is constructed in the same manner, the parts are the same, the workings of the one are the same as the other, and the appearance of the two is similar. From whatever aspect one considers them, they differ only by degree.

In the union of the sexes, each alike contributes to the common end but not in the same way. From this diversity springs the first difference which may be observed in the moral relations between the one and the other. The one should be active and strong, the other passive and weak. It is necessary that the one have the power and the will; it is enough that the other should offer little resistance.

Once this principle is established it follows that woman is specially made to please man. If man ought to please her in turn, the necessity is less urgent. His merit is in his power; he pleases because he is strong. This is not the law of love, I admit, but it is the law of nature, which is older than love itself....

If woman is made to please and to be subjected, she ought to make herself pleasing to man instead of provoking him. Her strength is in her charms; by their means she should compel him to discover his strength and to use it....

There is no parity between the two sexes when it comes to the consequence of sex. The male is only a male in certain instances; the female is female all her life or at least all her youth. Everything reminds her of her sex, and to fulfill well her functions she needs a constitution that relates to them. She needs care during pregnancy and rest when her child is born; she must have a quiet, sedentary life while she nurses her children; their education calls for patience and gentleness, for a zeal and affection which nothing can dismay. She serves as a liaison between them and their father; she alone can make him love them and give him the confidence to call them his own. What tenderness and care is required to maintain a whole family as a unit! **And finally all this must not come from virtues but from feelings without which the human species would soon be extinct.**

Once it is demonstrated that men and women neither are nor ought to be constituted the same, either in character or in temperament, it follows that they ought not to have the same education. . . . After having tried to form the natural man, in order not to leave our work incomplete let us see how to also to form the woman who suits this man.

Prevent young girls from getting bored with their tasks and infatuated with their amusements.... A little girl who is fond of her mother or her friend will work by her side all day without getting tired; the chatter alone will make up for any loss of liberty. But.... children who take no delight in their mother's company are not likely to turn out well.... They are flatterers and deceitful and soon learn to conceal their thoughts. Neither should they be told that they ought to love their mother. Affection is not the result of duty, and in this respect constraint is out of place. Continual attachment, constant care, habit itself, all these will lead a child to love her mother as long as the mother does nothing to deserve the child's hate. The very control she exercises over the child, if well directed, will increase rather than diminish the affection, for women being made for dependence, girls feel themselves made to obey.

For the same reason that they have, or ought to have, little freedom, they are apt to indulge themselves too fully with regard to such freedom as they do have. They carry everything to extremes, and they devote themselves to their games with an enthusiasm even greater than that of boys.... This enthusiasm must be kept in check, for it is the source of several vices commonly found among women -- caprice and that extravagant admiration which leads a woman to regard a thing with rapture to-day and to be quite indifferent to it to-morrow.... Do not leave them for a moment without restraint...

This habitual restraint produces a docility which woman requires all her life, for she will always be in subjection to a man, or to man's judgment, and she will never be free to set her own opinion above his. What is most wanted in a woman is gentleness. Formed to obey a creature so imperfect as man, a creature often vicious and always faulty, she should early learn to submit to injustice and to suffer the wrongs inflicted on her by her husband without complaint. She must be gentle for her own sake, not his. Bitterness and obstinacy only multiply the sufferings of the wife and the misdeeds of the husband; the man feels that these are not the weapons to be used against him. Heaven did not make women attractive and persuasive that they might degenerate into bitterness, or meek that they should desire the mastery; their soft voice was not meant for hard words, nor their delicate features for the frowns of anger. When they lose their temper they forget themselves. Often enough they have just cause of complaint; but when they scold they always put themselves in the wrong. Each should adopt the tone that befits his or her sex. A too gentle husband may make his wife impertinent, but unless a man is a monster, the gentleness of a woman will bring him around and sooner or later will win him over....

I would not altogether blame those who would restrict a woman to the labours of her sex and would leave her in profound ignorance of everything else. But that would require either a very simple, very healthy public morality or a very isolated life style. In large cities, among immoral men, such a woman would be too easily seduced. Her virtue would too often be at the mercy of circumstances. In this philosophic century, virtue must be able to be put to the test. She must know in advance what people might say to her and what she should think of it.

The search for abstract and speculative truths, for principles and axioms in science, for all that tends to wide generalization, is beyond a woman's grasp; their studies should be thoroughly practical. It is their business to apply the principles discovered by men, it is their place to make the observations which lead men to discover those principles... For the works of genius are beyond her reach, and she has neither the accuracy nor the attention for success in the exact sciences.... Woman has more wit, man more genius; woman observes, man reasons. Together they provide the clearest light and the profoundest knowledge which is possible to the unaided human mind -- in a word, the surest knowledge of self and of others of which the human race is capable. In this way art may constantly tend to the perfection of the instrument which nature has given us.

Document 4.10

From Frederick the Great, *Essay on the Forms of Government*

Modern History Sourcebook: <http://www.fordham.edu/Halsall/mod/hre-prussia.asp>

A sovereign must possess an exact and detailed knowledge of the strong and of the weak points of his country. He must be thoroughly acquainted with its resources, the character of the people, and the national commerce....

Rulers should always remind themselves that they are men like the least of their subjects. The sovereign is the foremost judge, general, financier, and minister of his country, not merely for the sake of his prestige. Therefore, he should perform with care the duties connected with these offices. **He is merely the [first] servant of the State.** Hence, he must act with honesty, wisdom, and complete disinterestedness in such a way that he can render an account of his stewardship to the citizens at any moment. Consequently, he is guilty if he wastes the money of the people, the taxes which they have paid, in luxury, pomp, and debauchery. He who should improve the morals of the people, be the guardian of the law, and improve their education should not pervert them by his bad example.

Princes, sovereigns, and king have not been given supreme authority in order to live in luxurious self-indulgence and debauchery. They have not been elevated by their fellow-men to enable them to strut about and to insult with their pride the simple-mannered, the poor, and the suffering. They have not been placed at the head of the State to keep around themselves a crowd of idle loafers whose uselessness drives them towards vice. The bad administration which may be found in monarchies springs from many different causes, but their principal cause lies in the character of the sovereign. A ruler addicted to women will become a tool of his mistresses and favourites, and these will abuse their power and commit wrongs of every kind, will protect vice, sell offices, and perpetrate every infamy....

The sovereign is the representative of his State. He and his people form a single body. Ruler and ruled can be happy only if they are firmly united. The sovereign stands to his people in the same relation in which the head stands to the body. He must use his eyes and his brain for the whole community, and act on its behalf to the common advantage. If we wish to elevate monarchical above republican government, the duty of sovereigns is clear. They must be active, hard-working, upright and honest, and concentrate all their strength upon filling their office worthily. That is my idea of the duties of sovereigns.

From The Foundations of Germany, J. Ellis Barker, trans. (New York: E. P. Dutton, 1916), pp. 22-23

Document 4.11

Proclamation of Religious Toleration by Joseph II of Austria

Source: http://college.cengage.com/history/primary_sources/west/joseph_ii_religious_tolerantion.htm

In order to make the Jews more useful, the discrimination hitherto observed in relation to their clothing is abolished in its entirety. Consequently the obligation for the men to wear yellow armbands and the women to wear yellow ribbons is abolished. If they behave quietly and decently, then no one has the right to dictate to them on matters of dress.

Within two years the Jews must abandon [their own language](#).... Consequently the Jews may use their own language only during religious services.

Those Jews who do not have the opportunity to send their children to Jewish schools are to be compelled to send them to Christian schools, to learn reading, writing, arithmetic and other subjects.

Jewish youth will also be allowed to attend the imperial universities.

To prevent the Jewish children and the Jews in general suffering as a result of the concessions granted to them, the authorities and the leaders of the local communities must instruct the subjects in a rational manner that the Jews are to be regarded like any other fellow human-beings and that there must be an end to the prejudice and contempt which some subjects, particularly the unintelligent, have shown towards the Jewish nation and which several times in the past have led to deplorable behaviour and even criminal excesses. On the other hand the Jews must be warned to behave like decent citizens and it must be emphasised in particular that they must not allow the beneficence of His Majesty to go to their heads and indulge in wanton and licentious excesses and swindling.

Credits: T. C. W. Blanning, *Joseph II and Enlightened Despotism* (London: Longman, 1970), 142-144.

UNIT 4 STUDY GUIDE:

Scientific Revolution & Enlightenment

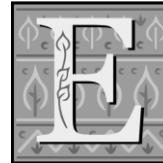


THE HELIOCENTRISM DEBATE:

Ptolemy (Ancient Roman)	Copernicus (Polish)	Kepler (German)	Galileo (Italian)
Geocentric Theory	Heliocentric Theory		
<u>TRADITION</u>	<u>HYPOTHESIS</u>	<u>MATHEMATICAL PROOFS</u>	<u>EMPIRICISM</u>
Astrology (Superstition)	Astronomy (Science)		

E _____

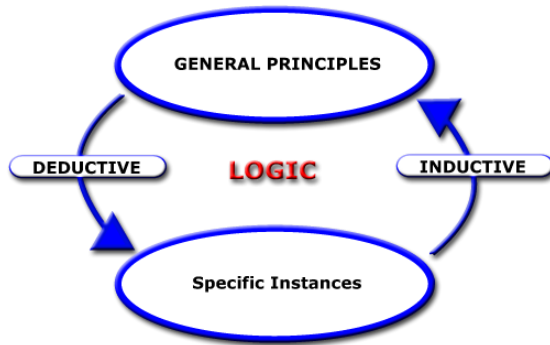
The “natural philosophers” of the early modern period believed that true knowledge comes from experience. The *scientific method* was designed as a system for collecting empirical evidence.



**Experience
Experimentation
Evidence**

“Natural Philosophers” of the Scientific Revolution		
Philosopher	Country of Origin	Contribution(s)
Descartes		REVIEW ON YOUTUBE
Bacon		
Newton		
Vesalius		
Pascal		

The Scientific Method and Inductive Reasoning



Deductive Reasoning (Aristotle & Descartes)	Inductive Reasoning (Bacon)

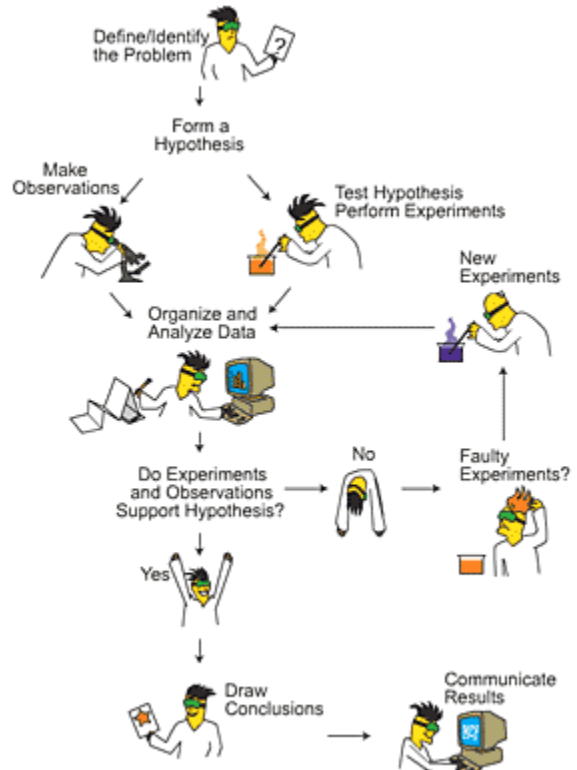


Image Credit: <http://scifiles.larc.nasa.gov>

Sir Francis _____ and Rene _____ were instrumental in formulating the *scientific method*, which created a fixed system of scientific inquiry that was accepted by natural philosophers throughout Europe.

_____ Academies

Absolute monarchs established Royal _____ in order to promote scientific inquiry. These monarchs were not interested in scientific advancement for its own sake, but in the possibilities scientific inquiry had to produce wealth (alchemy) and new military technologies.



**Wealth
Warmaking
Weaponry**

The [British] Agricultural Revolution

[REVIEW ON YOUTUBE](#)

The application of _____ principles and _____ capitalism to agriculture

E _____	I _____	S _____ Breeding
Replaced the _____, where the whole community would plant crops and graze their livestock.	Jethro _____ The _____, which mechanized sowing, was Tull's most famous invention.	The process of breeding animals with desirable characteristics together to produce genetically superior livestock

The Enlightenment

[ENLIGHTENMENT RAP ON YOUTUBE](#)

VALUES OF THE ENLIGHTENMENT				
REASON	SCIENCE	PROGRESS	LIBERTY	TOLERATION

What is Enlightenment? Immanuel Kant, a German *philosophe*, defined “enlightenment” as an individual’s escape from _____ - a sort of self-imposed intellectual childhood. Enlightened individuals are capable of thinking for themselves.

According to Kant, the only thing necessary to escape from *nonage* is _____.
Two institutions dominant in France at the time limited freedom of inquiry:

Freedom-limiting Institutions

in the eyes of the philosophes:



Most *philosophes* were **anticlerical** (against the influence of a hierarchical, institutional Church organization – not necessarily against the general concept of religion) in their thinking.

“And his hand would plait the priest’s entrails, For want of a rope, to strangle kings.” -- Diderot



Natural Religion (e.g., _____)	Revealed Religion (e.g., _____)
Knowledge of God comes from: REVIEW ON YOUTUBE	Knowledge of God comes from:

The religion of *Deism*, which boasted such illustrious adherents as Voltaire, Thomas Paine, and Thomas Jefferson, was a natural religion. The metaphysics of Deism are fairly easily explained:

 <p>God exists. He created an orderly universe and made it possible for human beings to understand him through the use of observation and reason.</p>	<ul style="list-style-type: none"> • Sacred texts claiming to contain the revealed word of God • Religious dogmas derived from said texts • Miracles, prophecies and religious "mysteries" 
---	--



Although enlightened ideals spread throughout Europe,
_____ was the epicenter of the Enlightenment.

The French “ <i>Philosophes</i> ”		
<i>Philosophe</i>	Notable Published Work(s)	Contribution(s) to Enlightened Thinking
Voltaire		
Diderot		
Montesquieu		
Rousseau		

Enlightened Absolutism

Absolute monarchs in Central and Eastern Europe took an interest in the ideals of the Enlightenment, seeing in them an opportunity to modernize and consolidate their states.



The Enlightened Despots

[REVIEW ON YOUTUBE](#)

(Prussia)	(Austria)	(Russia)
A ruler is the _____ of the state.	The _____ ambitious, but the _____ successful of the enlightened despots. Lifted restrictions on _____ S. (Religious Group)	Raised to the throne after participating in a conspiracy to assassinate her husband Purchased _____’s library and paid him to be the librarian _____’s Rebellion

“Only one ruler in the world says: ‘Argue as much as you please, but obey!’” – Kant

Although the enlightened absolutists promoted religious toleration, education, and other benevolent reforms, they tended to promote these ideals only to the point to which the ideals furthered their goals. Ultimately, the enlightenment ideal of freedom would prove incompatible with absolute rule.

The Program of the Enlightened Absolutists:

- Religious Toleration
- Free Speech and Press
- Private Property Rights
- Patronage of the Arts and Sciences
- ~~Rebellion~~