Age of Reason - Period of history from the mid 1600s to around 1800. This was a time of a growing belief in the supreme goodness and power of reason as a means of realizing human potential, as well as a period of rapid growth in science.

analytic geometry - A branch of mathematics devised by René Descartes. Geometric figures are studied using algebraic techniques. It makes use of a coordinate system (graphing).

Bacon, Francis - A philosopher born in England in 1561 who advocated the use of reason and who came up with the fundamental ideas behind the scientific method: namely the steps of observation, experimentation, and generalization.

biology - The science of living things or life.

Bubonic Plague - A deadly disease spread by rats and fleas.

calculus - A branch of mathematics devised by Isaac Newton.

cells - The "basic units of life" named by early microscopist Robert Hooke.

checks and balances - The idea behind the separation of the powers of government into legislative, executive, and judicial branches so that the power of any one branch is not exceeded or abused.

chemistry - The study of the changes that occur in matter.

Civil War (English) (1642-1649) - The overthrow of the English monarchy by a force of mostly Parliamentarians led by Oliver Cromwell.

classification - The act of naming things and placing them into groups.

colony - A territory distant from the state that has political control over it.

commonwealth - After the abolition of the English monarchy in 1649, a commonwealth was established. It only lasted 10 years until the monarchy was restored in 1660.

Copernicus, Nicolas (1473-1543) - Polish astronomer who concluded that the Earth and planets revolve around the sun.

Cromwell, Oliver (1599-1658) - A Puritan who ruled England under the title of "Lord Protector" from 1649-58.

Diderot, Denis (1713-84) - An important French writer who published the first encyclopedias starting in the mid-1700s.

deism - A popular 18th century philosophy that rejected traditional religions in favor of a view in which God is thought of as a sort of "cosmic clockmaker" who builds a complex mechanical universe, sets it in motion, and then does not interfere with its actions. Ben Franklin, Thomas Jefferson, and Thomas Paine were all strong supporters of deism.

Descartes, René - Brilliant French philosopher and mathematician. Along with Francis Bacon, Descartes is considered to be a "Father of the Enlightenment."

embryos - Developing organisms.

experimentation - The careful testing of a scientific theory.

French Revolution (1789-1799) - A period in which the French monarchy was replaced by a series of revolutionary governments.

Galilei, Galileo (1564-1642) - Late Renaissance Italian mathematician, scientist, and astronomer. His work in astronomy helped prove the Copernican system; Galileo also invented the first thermometer.

Glorious Revolution (1688) - A revolt in England that resulted in the Parliament having more power than that of the monarch.

Goethe, Johann (1749-1832) - Great German poet, scientist, and public official during the Age of Reason.

gravity - The physical attraction between objects (gravitational pull).

Harvey, William - English scientist who analyzed the circulation of blood and who studied embryos.

Hooke, Robert - English scientist who discovered and named cells.

hypothesis - An idea to be tested; a supposition made as a basis for reasoning.

Jefferson, Thomas (1743-1826) - A major figure of the Enlightenment who championed the cause of the perfectibility of mankind through education and science. Jefferson was a deist and the principle author of the Declaration of Independence. He became the third President of the U.S.
Johnson, Dr. Samuel (1709-84) - Compiled the first comprehensive English dictionary in 1775.

kingdom (biological) - The most generalized level of biological classification (such as Animal Kingdom or Plant Kingdom). Currently five kingdoms are recognized.

Linnaeus, Carolus (Karl Von Linne) (1707-78) - Swedish botanist who developed the first successful system for classifying living things into similar groups, a system that is still used today.

Leeuwenhoek, Anton Van - Enlightenment era biologist who discovered micro-organisms.

Locke, John (1632-1704) - Great English political philosopher of the Enlightenment era.

logic - The science of reasoning, drawing conclusions from basic premises.

microscope - Scientific tool used for looking at very small things.

monastery - A building in which monks live.

Montesquieu (1689-1755) - Great French Enlightenment-era political philosopher who proposed a government based on a separation of powers between the executive, judicial, and legislative branches.

natural philosopher - An Enlightenment-era scientist.

Nature's God - The deist concept of an all-powerful spiritual force that created the universe and everything in it, but then left it alone.

Newton, Sir Isaac (1642-1727) - English scientist and mathematician often considered to be the greatest figure in the history of science.

observation - The examination of an event or and object very closely and with impartiality.

orrery - A popular 18th century scientific toy made of pulleys and spheres that could be cranked to mimic the way the heavenly bodies move around the sun.

optics - The study of light.

Pilgrims - A band of English religious "Separatists" from the Church of England who founded the Plymouth colony in 1620.

philosopher - A seeker of knowledge and wisdom.

physics - The study of the physical laws that govern the universe.

Philosophiae Naturalis Principia Mathematica - Isaac Newton's most famous scientific book of 1686-87; the mathematical principles of natural philosophy.

Puritans - A religious group that wanted to purify the Church of England of certain Catholic practices which they considered to be irreverent.

rational thought - Thought based on reason or logic.

reason - To think coherently, rationally, and logically; to draw conclusion from the facts.

Restoration - The return of the institution of the Monarchy in England in 1660. The period of the reign of King Charles II (1660-85).

scientific method - A rational, stepwise approach to scientific research developed by Francis Bacon and René Descartes and improved upon by Isaac Newton. It is based on three essential points: observation, generalization, and experiment. This method replaced the more mystical approach to science that had existed during the Middle Ages and the Renaissance and resulted in a spectacular growth in scientific research.

Scientific Revolution - The rapid growth of science that began in the Renaissance with Copernicus.

Stuart, Charles - King Charles I of England, executed in 1649 by the Parliamentarians at the end of the English Civil War.

Voltaire (1694-1778) - A foremost French writer and philosopher of the Age of Reason. He was a deist, champion of rationality and free speech, and was very much opposed to absolute monarchy.

Vocabulary Activity:
Directions: By consulting the vocabulary list find the correct word (or words) to fill in the blank.

1. The rapid growth in science that began in the Renaissance is called the ___________________.
2. ____________ is the science of reasoning.
3. A supposition made as a basis for reasoning is called an _______________.
4. The first _____________ were invented by Denis Diderot.
5. _________________ are people who seek to discover knowledge and wisdom.