

"EUROHIST!"

Aesop

Archimedes

Aristotle

Arthur (King)

Beethoven, Ludwig van

Bonaparte, Napoleon

Cervantes, Miguel de

Charlemagne

Columbus, Christopher

Copernicus, Nicolaus

Curie, Marie

Dante Alighieri

da Vinci, Leonardo

Doyle, Sir Arthur Conan

Einstein, Albert

El Cid

Eratosthenes

Ericson, Leif

Euclid

Freud, Sigmund

Galilei, Galileo

Grimm, The Brothers

Gutenberg, Johannes

Henry VIII

Henry the Navigator

Herodotus

Hippocrates

Joan of Arc

John of England

Kidd, Captain

Kipling, Rudyard

Lister, Joseph

Louis XVI

Luther, Martin

Magellan, Ferdinand

Marconi, Guglielmo

Medici, Lorenzo de'

Newton, Sir Isaac

Nightingale, Florence

Nostradamus

Pasteur, Louis

Pericles

Plato

Polo, Marco

Pythagorus

Robin Hood

Rommel, Erwin

Shakespeare, William

Socrates

van Leeuwenhoek, Antoni

van Rijn, Rembrandt

Vespucci, Amerigo

Victoria

Watt, James

Aesop, 6th century B.C., Greece

One of the greatest storytellers of all time, Aesop was believed to have spent part of his life as a slave in ancient Greece. He told many simple stories, with animals acting like people, with a moral lesson to be learned from each. Some believe that Aesop was only a legend, and that others wrote the parables.

Some of the well known fables include "The Hare and the Tortoise", "The Wolf in Sheep's Clothing", "The Boy Who Cried Wolf", and "The Lion and the Mouse". These fables were handed down from generation to generation by word of mouth, until they were finally written down.

In "The Hare and the Tortoise", the speedy hare challenges the slow-poke tortoise to a running race, and then pokes fun at the inevitable conclusion. To the surprise of all of the animals in the forest, the tortoise accepts the challenge, and the race begins. The hare jumps out to an early lead, and in fact is so far ahead that he stops and takes a nap knowing that he can still easily win. The hare oversleeps, the tortoise plods past where the hare is dozing and wins the race, much to the embarrassment of the hare. The moral of the story is that "slow and steady wins the race".

Archimedes, approx. 287 B.C. to 212 B.C., Greece

Archimedes figured out that floating objects are buoyed upward by a force equal to the weight of the displaced fluid. This explains why a huge modern ship such as a fully loaded oil tanker, weighing tens of thousands of tons, does not sink in the ocean. It is said Archimedes figured this out while sitting in the bathtub, and then ran naked through the streets shouting, "Eureka!"

Archimedes invented a device used to raise water from a stream to an irrigation ditch, known as Archimedes' Screw. The screw works by cupping and lifting water from the stream to the upper end of the screw, where it flows into the ditch. Archimedes' Screw makes it very easy to lift water, it has been used by many people in many places.

Archimedes made use of, and may have invented the compound pulley, a device which significantly reduced the strength required to lift objects. For example, a horse would have a hard time lifting a motorcycle using a single pulley, but a ten year old person could do it easily with a compound pulley.

Archimedes approximated the very useful number pi (approx. 3.14159), used in determining areas and volumes of geometric shapes.

Aristotle, 384 BC to 322 B.C., Greece

Aristotle is one of the most influential philosophers of western history. His efforts were wide ranging and included studies of logic, natural sciences, metaphysics, ethics, rhetoric and poetics.

Aristotle joined Plato's academy in Athens, where he studied and taught medicine, biology, mathematics and astronomy. Aristotle worked hard to comprehensively organize human knowledge, and to systematically expand it in all directions.

Aristotle was considered by Charles Darwin to be the father of biology. Aristotle appears to have believed that animal forms were shaped by their purpose and environment.

Although Aristotle apparently thought the human spirit and body were not separate entities, evidence suggests he believed the spirit could exist independently of the body. Aristotle believed that knowing something is true, should be accompanied by a knowledge of why it is true.

Aristotle advised that men should lead good, flourishing lives, and that happiness could be attained by virtuous actions. He believed virtuous actions such as generosity should be done in moderation, giving neither too much nor too little.

Aristotle believed the goal of government is to ensure the good life for the people, and that only a select few were really capable of holding office to this aim.

King Arthur, 5th or 6th century A.D.?, Britain

Considered by some to be myth, and by others to be at least partly based in reality, the story of King Arthur is that of the chivalry and romance of knighthood.

According to legend, Arthur came into the care of Merlin the Magician shortly after his birth. After his father's death, Arthur claimed the throne by pulling a sword out of a great stone, where it had been deeply embedded, and unmoveable by any other man. Later in life, Arthur came into possession of another magic sword, this time given to him by the Lady of the Lake. This Lady dwelled within the depths of the lake, and reached her arm above the surface of the water to bestow the sword on the King.

King Arthur married Guinevere, and held court at Camelot around a great round table with the bravest and most noble of knights. Arthur's conquests took him to far places, and in his absence his evil nephew Mordred created rebellion. The two met in battle, and both were mortally wounded. Arthur was carried away to an island to be healed, but was expected to return sometime in the future to continue his rule as King.

Aside from the many stories told of King Arthur, some historians believe that there was a real Arthur, who led the Christian Celts against the Saxon invaders. After being killed in battle, the stories of his greatness increased in glory and splendor with each telling. Eventually he came to be told of as a wise and powerful king.

Ludwig van Beethoven, 1770 to 1827, Germany

Beethoven composed powerful symphonies and beautiful concertos. He wrote some of the most brilliant, well known and influential musical pieces ever composed.

Beethoven's father and grandfather were both professional musicians. Ludwig himself worked as a court musician before he was twelve years old. During his life Beethoven studied with Wolfgang Amadeus Mozart, Joseph Haydn and Antonio Salieri.

In later life, despite hearing loss, Beethoven continued to produce great masterworks of musical composition.

Napoleon Bonaparte, 1769 to 1821, Corsica

After gaining command of the French military and taking political control, Napoleon declared himself the emperor of France. He was both a brilliant military leader and a capable director of internal affairs. He was also an effective negotiator, negotiating both wartime and peace time treaties with various political powers. Bonaparte constantly fought and won wars with neighboring European countries, increasing the wealth and power of France.

As the leader of France, Napoleon established order and control in government, where before there were constant civil disputes and rebellions. He codified civil law, reestablished the Roman Catholic church in France, consolidated the national debt and balanced the government budget. He restored the value of French bonds, established the Bank of France, and reformed tax collection. He initiated large scale public works projects, created the University of France, and enlarged the Louvre museum of art.

As emperor, Napoleon placed family members in positions of power, and married his relatives into powerful European families. His purpose was to establish and stabilize alliances with other political powers.

At one point, after losing a long series of battles to various countries, Napoleon was forced to abdicate power, and was exiled to the island of Elba. He later returned to France and again took power by popularity, and by public dissatisfaction with the government that had replaced his rule. Neighboring European countries immediately prepared for war and attacked, forcing Napoleon's second abdication, and his final exile to the island of Saint Helena.

Miguel de Cervantes, 1547 to 1616, Spain

Miguel de Cervantes wrote the world renowned allegorical epic "Don Quixote". Although this work was immensely successful even in his own time, Cervantes received little for his efforts.

The story of Don Quixote is the story of an idealistic Spanish nobleman who reads too many fairy tales, and decides to become a knight in shining armor. He roams about the countryside on a ragged horse and tattered clothing with his sidekick Sancho Panza, seeking to protect the downtrodden in the name of truth and justice. His imagination running wild, Don Quixote jousts with giants that are actually windmills, encounters enemy armies that are actually flocks of sheep, and visits great castles which are actually country inns. His noble idealism sharply contrasts with the reality of his surroundings.

Charlemagne, 742 to 814, King of the Franks

Charlemagne created a great empire by force, spreading throughout western and central Europe. A fearsome warrior, Charlemagne fought and crushed both barbarian and civilized foes. Charlemagne conquered and ruled by the sword and by the cross.

Charlemagne also strongly supported education, religion and the arts, at a time during the Middle Ages when cultural decay was rampant.

Christopher Columbus, approx. 1451 to 1506, Italy

Christopher Columbus is often called the discoverer of America, although the crossing from Europe to North America had been made about 500 years earlier by the Vikings, and was probably also made by other Europeans in the 1300's.

Columbus became interested in finding a short and easy sea route to the rich far east, the land of silk and spices, by sailing west. Before the time of Columbus, European trade with the east was accomplished by hardship laden land routes, or by the long sea route around the African continent. According to Marco Polo, Japan was about 1500 miles east of China. Combining this information with Ptolemy's significant underestimation of the circumference of the earth, Columbus came to the conclusion that Japan was about 3000 miles west of Portugal.

Columbus failed to gain sponsorship for his western voyage from the Portuguese crown, and only after years of persistence was he able to secure support from Spain. He sailed west in 1492 with three ships, the Nina, the Pinta and the Santa Maria. The voyagers reached the Bahamas a little over two months later, in what some believe to be modern day San Salvador.

Believing he had reached islands just off the coast of Asia, Columbus attempted in vain to locate the Mongol emperor. He found only indigenous peoples, whom he called Indians, perhaps because he thought they were from "nearby" India. He returned to Spain with Indians and some gold, as his best proof that he had reached Asia.

Subsequent voyages were troublesome, and failed to locate the Asian mainland. Columbus died never knowing that he had not reached Asia, and without knowing the size of the North American continent and the great western ocean that still lay between. And although he did not actually discover America, and his navigational calculations were grossly in error, his persistence and dedication helped blaze the trail to the New World, and make him one of the great explorers of history.

Nicolaus Copernicus, 1473 to 1543, Poland

Before Copernicus, most people thought that the earth was the center of the universe. They thought that the sun, planets, and all the stars rotated around the earth. Copernicus clearly demonstrated that this is not true. He showed that the earth rotates on its own axis, and that the earth and other planets rotate around the sun. He figured this out by careful scientific observation of the movements of the planets, the moon, the sun and the stars.

This was not a popular idea in that time, because "authorities" would suppress the truth for their own purposes. Speaking the truth was sometimes punished by imprisonment or death.

The next time you see the moon out, place an upright pencil or a pen on it's end on a firm surface, and look at the moon past the pencil. Hold your head steady. You can see that the moon is moving.

Marie Curie, 1867 to 1934, Poland

Also known as Madame Curie, Marie Curie worked with her husband in the study of radioactivity, and together they discovered the elements radium and polonium. She made significant progress in the development of the use of X rays for medical uses.

Dante Alighieri, 1265 to 1321, Italy

Dante is considered one of the great masters of world literature. His writings include "La vita nuova" (The New Life), "La divina commedia" (The Divine Comedy), and the unfinished "Convivio" (Banquet).

The Divine Comedy is an epic allegorical masterpiece, describing a poet's imaginary voyage through hell, purgatory and paradise. In each place, he meets with various contemporary, historical, and legendary characters, each symbolic of a particular fault or virtue. The work was widely read and studied, which continues to be so to this day. It inspired great painters and musicians, who re-told various parts of the story by image or by sound.

In a time of political turbulence, Dante fell into disfavor with one of the primary political groups, and when they seized power, he was exiled from his native Florence, never to return.

Leonardo da Vinci, 1452 to 1519, Italy

Leonardo was a master artist, known by some as the first "Renaissance Man". A few of his works include The Adoration of the Magi, The Last Supper, and the famous Mona Lisa.

Da Vinci also served from time to time as a civil and military engineer and an architect. He had involvement in the construction of canals and military fortifications.

During other parts of his life, he made investigations into the fields of anatomy, biology, mathematics, geology, hydraulics, botany and physics. He studied the flow of liquids, the growth of plants, and the properties of light and energy. He also spent time as a mapmaker. His technical illustrations provide both precision and artistic qualities.

At one point Leonardo made a systematic study of the flight of birds, and developed drawings of flying machines from this study. He also developed technology for the grinding of lenses.

Da Vinci left behind a vast set of pictures and manuscripts. His manuscripts were written from right to left, and they can be read with a mirror.

Sir Arthur Conan Doyle, 1859 to 1930, England

Creator of the fictional master detective Sherlock Holmes, Doyle was originally a doctor by profession. Portrayed as colorful and perhaps somewhat eccentric, Holmes was capable of arriving at conclusions by amazingly perceptive observation, ingenious deductive reasoning, and his immense knowledge of worldly detail. These character traits were based on one of Doyle's college professors.

In one story, upon meeting a new client (a typical British gentleman) for the first time, Holmes told him on the spot that he had spent time at manual labor, that he took snuff, that he was a Freemason (an international secret fraternity), that he had been in China and that he had recently been doing a considerable amount of writing.

Other characters in the Sherlock Holmes series include the affable and well mannered Doctor Watson, who acted as the story narrator, as well as Holmes' evil arch-enemy Professor Moriarty.

Writings such as "The Sign of Four", "The Red-Headed League", "The Adventures of Sherlock Holmes", and "The Hound of the Baskervilles" made Doyle internationally famous. Doyle's detective stories were so successful that he eventually discontinued his practice as a doctor to become a full time writer.

Doyle was later knighted for his literary works regarding British involvement in Africa and France.

Albert Einstein, 1879 to 1955, Germany

Albert Einstein greatly advanced the understanding of the properties of matter, energy, space and time. He is perhaps best known for his equation $E=mc^2$, which for one thing tells us that there is a tremendous amount of energy contained in matter.

Einstein became very interested in trying to explain the cause of gravity. What is it that holds things to the earth? The rotation of the earth would tend to throw things off like a merry go round... He theorized that there is an interaction between space and time, where time passes at different rates depending on position and motion. His accurate prediction of a previously unexplained anomaly in the motion of the planet mercury helped to prove his theory.

The knowledge derived from Einstein's work was fundamental to the development of nuclear fission, which makes possible the construction of both nuclear power plants and the appalling weapons of nuclear war.

Einstein did not support Germany's intent to wage war with the world in the early 1900's. He was labeled a traitor by some of his countrymen because he believed that disputes between different countries could be resolved without violence. Later he reluctantly agreed that the threat of German aggression had to be dealt with by force. He encouraged the United States to develop an atomic bomb before Germany could. He later supported efforts towards nuclear disarmament.

El Cid, approx. 1040 to 1099, Spain

Both a champion warrior and brilliant military and political tactician, El Cid became a national hero in various literary works and ballads. He is portrayed as a noble and valiant hero, fighting against social corruption with honor and integrity. In contrast to other medieval leaders, El Cid is said to have heralded the golden age of chivalry with his brave and generous actions, and his loyalty to family, king and religion.

Eratosthenes, approx. 276 to 196 B.C., Greece

Eratosthenes was a Greek mathematician, astronomer, geographer and poet. Although he lived in ancient Greece, he understood that the earth was round. By using the stars, he determined the difference in latitude between the Egyptian cities of Aswan and Alexandria, and from this provided an amazingly accurate calculation of the circumference of the earth (only about 15% too large). He also made a very accurate determination of the angle of the tilt of the earth.

(Picture probably bears little if any resemblance to the actual person.)

Leif Ericson, approx. 980, Iceland

Son of the Viking Eric the Red, Leif was taken to Greenland as a young boy when his father was banished from Iceland for three years for killing a neighbor in a quarrel.

It is said that Leif was the first European to reach the shores of North America. Some said he was blown off course and so accidentally landed there. Others said he heard of North America from another sailor who saw the continent but did not land there. Leif landed on a barren area, then sailed south to a forested area, then sailed south again to an area fertile with wild wheat, wild grapes and trees. He named it Vinland, meaning Wineland.

Historical evidence including carbon dated remains of a Viking settlement suggest that Leif landed somewhere on the northern tip of Newfoundland.

The Vikings lived briefly in North America, but abandoned their settlements because of hostilities with the Eskimos.

Some of the days of our week are named after Viking gods: Tyr, Woden, Thor and Frigg.

Euclid, approx. 300 B.C., Greece

Euclid was a mathematician and mathematics teacher from ancient Greece. He compiled a 13 volume work called "Elements", which covered subjects such as plane geometry, geometric proportions, characteristics of numbers, and solid geometry. This text was translated and used throughout the western world. It was used for 2000 years as a standard textbook, and continues to be used today in modified form.

Several other works were often credited to the pen of Euclid, but many believe that others wrote them. They include a compilation of geometrical theorems called 'Data'; a depiction of the heavens called "Phenomena"; a work titled "Optics"; a mathematical consideration of music called "Division of the Scale"; and several others.

Sigmund Freud, 1856 to 1939, Austria

Sigmund Freud was the founder of psychoanalysis.

Freud originally based psychoanalysis on investigation into psychological rather than physiological explanations for mental illness. Mental aberrations were attributed to undischarged emotional energy resulting from forgotten mental and physical pain and trauma. Freud developed therapy where the painful incidents were recalled and relived, thus discharging the trapped energy and improving the well-being of the patient. He believed that pain and trauma were repressed into forgetfulness by the conscious mind.

Freud originally used hypnosis to assist in patient recall. He later developed a method called free association, where spontaneous flow of the patient's thoughts was used to uncover the past.

Freud also realized that when admitting to some wrongdoing, or when bringing something to light that has been intentionally hidden, a patient will show signs of improvement.

Galileo Galilei, 1564 to 1642, Italy

Galileo was a scientist and astronomer, who made significant contributions to the sciences of astronomy and physics.

By using his pulse as a timer, Galileo observed that it took the same amount of time for a cathedral chandelier to swing back and forth, regardless of whether the chandelier made a large swing or a small swing. This provided the first reliable method of time keeping.

Galileo experimented with gravitation, and demonstrated that objects of different weights will fall at the same speed. It has been said that he dropped two different sized weights from the leaning tower of Pisa to prove this point. Although it was easy to prove, his viewpoint was very unpopular, as it contradicted the currently held "facts" of his day.

Galileo heard about a telescope, and constructed his own, making improvements in magnification power. He saw four moons of Jupiter, mountains and craters on the moon, and he observed the Milky Way as a dense collection of stars.

Galileo supported Copernicus' conclusions about planetary motion, for one thing, that the earth is not the center of the universe, which was also in contradiction to current beliefs of his day. For this he was held under house arrest for the last years of his life.

The Brothers Grimm; Jacob, 1785 to 1863; Wilhelm, 1786 to 1859, Germany

Professors and scholars, the brothers Grimm studied and documented language as a science. They collaborated to compile and publish a standard dictionary of the German language, considered a classic today.

Travelling around the countryside listening to folktales, legends and myths, the brothers compiled approximately 200 stories into what are now called "Grimm's Fairy Tales". The stories include "Snow White and the Seven Dwarfs", "Rumpelstiltskin", and "Rapunzel". The tales have been translated into dozens of languages, and are known by children all over the world.

Note: Picture probably bears little if any resemblance to the actual historical figures.

Johann Gutenberg, approx. 1398 to 1468, Germany

Before Gutenberg's time, books were made by slow and laborious hand copying. Only a few rich people could afford to own them. Wood block printing was used to print playing cards, but this required each block to be hand carved; impractical for book production.

Gutenberg invented a method of printing which used re-usable metal letters. A letter would be carved in relief, then pressed into brass to form a mold. Hot liquid metal was then poured into the mold to form the re-usable metal letter. Then the letters could be arranged and re-arranged to form the plates for pages, which were then inked and pressed onto paper. This method took a great deal of the work out of printing, and made possible the large scale production of books.

Knowledge and education would soon be within reach of nearly everyone.

It was necessary for Gutenberg to develop a new ink that could be used with metal. He also converted a winepress into a printing press.

Henry VIII, 1491 to 1547, England

Henry VIII was King of England from the age of 18 to his death. When he was young, he was skilled in athletic games, but later became overweight. Although intelligent and well educated, he became coarse and oppressive as a ruler.

Henry married six times: to Catherine of Aragon, whom he divorced in open defiance of the pope; to Anne Boleyn, whom he put to death, to Jane Seymour, who died after giving birth; to Anne of Cleves, whom he married without first meeting her on promise of her beauty, and whom he immediately divorced when he met her; to Catherine Howard, whom he executed for misconduct; and to Catherine Parr, who outlived Henry.

When Henry divorced his first wife, he broke all ties between the English church and Rome. All payments to Rome were ended, and the pope's authority in England was abolished. Henry then declared himself to be the Supreme Head of the Church of England, and those who disputed this claim were treated as traitors.

Henry the Navigator, 1394 to 1460, Portugal

Henry was the Prince of Portugal. One of the earliest geographers, he sponsored numerous sea voyages of exploration to the west coast of Africa. He also established a facility dedicated to navigation, ship design, astronomy and map making, from where his expeditions were based. Dedicating his life and his entire wealth to this undertaking, Henry became known as Henry the Navigator.

The picture probably bears little if any similarity to the historical figure.

Herodotus, approx. 484 to 425 B.C., Greece

Herodotus is known as the father of history. He travelled widely in the ancient world, observing many places and conferring with many people, including many of the important Greek men of his time.

Herodotus' greatest work was titled "History", the Greek word for "inquiry" or "learned man". This work described the legends, history and traditions of the people and the places he visited. Herodotus often told history as interesting and sometimes humorous stories, holding the attention and fascination of the reader. He attempted to draw moral lessons from the study of past events, founding the tradition of the study of history.

Hippocrates, approx. 460 to 377 B.C., Greece

Before the time of Hippocrates, the Greeks believed that illness was cured by the god Asclepius, who used the help of serpents. Hippocrates was the first to separate the science of medicine from mysticism. He treated afflictions scientifically by analyzing causes, evaluating treatments based on results, and recording observations. For his work in advancing and teaching the technology of medicine, Hippocrates is known as the "Father of Medicine".

Hippocrates is associated with the Hippocratic Oath, which defines an ethical code of conduct for medical practice; a modified form of the oath is still taken by medical students today.

The original Oath required that the oath taker teach "the Art" to others also bound by the oath, it also required the oath taker to act to the best of his ability for the benefit of the patient, to abstain from mischief, to not give deadly medicine or abortion, and to refrain from seduction of patients. It also required that the oath taker not divulge personal information about a patient.

Joan of Arc, 1412 to 1431, France

Joan of Arc was born in rural France. As a young teenager, Joan believed she heard the voices of long past saints and martyrs, who told her to assist the French in the 100 years war against England. Joan convinced Charles VII and his ministry to allow her to do battle against the enemy, in which she was successful. She was honored by Charles for her actions.

Joan later continued military campaigns against England without consent from the French crown. She was captured by allies of the English, then tried, convicted and burned at the stake for heresy by ecclesiasts. Twenty five years later, the church retried her case and found her innocent. She was declared a saint by the Pope early in the 20th century.

King John of England, 1167 to 1216

Known as John Lackland, because he originally had no lands, John rebelled against his father King Henry II, with his brother Richard the Lion Hearted. When Richard became king, John unsuccessfully tried to usurp the throne while Richard was away on crusade. John became king when Richard died.

John has been called the worst king ever to rule England. He continuously lost lands in wars with the French, and to finance these wars he extorted and confiscated properties, and exorbitantly taxed the barons and peoples of England. Because of his cruelty, the barons joined to force John to sign the Magna Carta, which made the King subject to the laws as other men.

The Magna Carta became the safeguard of English liberty. It proclaims rights that are part of English law, and are the foundation of the constitution of all English speaking nations.

Captain Kidd, approx. 1645 to 1701, Scotland

Although there is doubt as to whether William Kidd was ever really a pirate, Captain Kidd has become a legendary figure as a high seas buccaneer and freebooter. Son of a minister, Kidd became a captain of a ship in the West Indies. He was later hired by the King of England to stop the piracy which beleaguered British commerce, and to hinder French shipping trade as well. After finding no pirates, Captain Kidd apparently turned to piracy himself. He was later hanged as a pirate, although there is some evidence that he did not receive a fair trial. Some of Kidd's treasure was recovered near Long Island, and people to this day still search the area for more hidden pirate's treasure.

Another famous pirate was named Blackbeard, an English pirate who lived from approximately 1680 to 1718. His brutal robberies in the West Indies and off the coast of the American colonies prompted the Americans to hunt him down and kill him.

Piracy predates written history. The Phoenicians used the high seas for legal commerce, but often also committed acts of piracy. The Vikings plundered western Europe for hundreds of years. Muslim pirates for a time were a constant threat on the Mediterranean Sea, and Algerian pirates were active well into the 19th century. Although piracy still exists in remote locations, the development of modern navies caused such activity to decline significantly.

<<Blackbeard pictured>>

Rudyard Kipling, 1865 to 1936, England

Rudyard Kipling was a great story writer; he wrote such stories as "The Jungle Books" and "Just So Stories".

Kipling lived in many parts of the world, including British India, which provided inspiration for some of his stories.

Joseph Lister, 1827 to 1912, Britain

Joseph Lister pioneered the use of antiseptics in hospital operating rooms. His research was motivated by the high mortality rate due to gangrene and other infections protracted during surgery.

Theorizing that infections were caused by bad air, Lister sprayed carbolic acid in the air around the operating room. The mortality rate remained very high. Lister then heard and read about Louis Pasteur's germ theory, and then began applying carbolic acid directly to surgical instruments, wounds and dressings. This significantly reduced surgical mortality rate.

The use of antiseptics for operations remains a critical component of modern surgery.

Louis XVI, 1754 to 1793, France

Louis XVI became the King of France during a time of great economic difficulty, brought about by previous French wars and poor fiscal management. Despite heavy government debts and a depressed economy, Louis reduced some of the oppressive taxes that greatly burdened the French people. He also initiated judicial reforms.

Efforts at reform were opposed by the nobility and powerful reactionaries, who were supported by Marie Antoinette, Louis' queen and wife. Also, Louis granted financial aid to the American colonies in revolt against Great Britain. This required heavy and very unpopular taxation. The combination of problems resulted in French government bankruptcy, followed by the French Revolution.

Martin Luther, 1483 to 1546, Germany

Martin Luther had religious beliefs that were very different from the well established Roman Catholic church. The Catholics emphasized that man had a role in his own rehabilitation, and that man could make amends for his wrong-doing by good works. Luther felt that recompense from wrongful acts could only be accomplished by faith in the supreme being. The Catholics believed that spiritual improvement could be made by confession of wrong acts, that is, the process of telling another what he or she had done to harm themselves or others. Luther did not believe in the use of confession. Luther also felt that priests should be able to marry and to have a family.

Martin Luther objected to the practice by the Catholic church in that time of "selling indulgences". A person could confess their wrongful act, and would then be forgiven in exchange for payment.

Luther wrote down 95 of his beliefs, and posted them on the door of a church. This started a significant religious controversy, and contributed significantly to a great number of changes in religious practice and belief across Europe.

A primary branch of the Protestant faith called Lutheranism was named after Martin Luther.

Ferdinand Magellan, approx. 1480 to 1521, Portugal

Ferdinand Magellan led the first expedition to sail around the world. Magellan served Portugal as an explorer and a mercenary. He later went into the service of Spain.

Under the Treaty of Tordesillas of 1494, Spain and Portugal agreed that all non-Christian territories west of an arbitrary line in the Atlantic ocean would be Spanish, and all of those to the east would be Portuguese. With new geographic information provided by the explorations of Christopher Columbus and Vasco de Balboa, Magellan believed that he could sail west to the rich Spice Islands and so prove that they were on the Spanish side of the line.

Financed by Spain, Magellan sailed from Spain in 1519, with about 270 men, and headed west. They passed through the Canary Islands, and then sailed to the east coast of South America, then around the southern tip. They had now reached the great western ocean, which Magellan named the Pacific. They sailed along the west coast of South America, then headed west into the Pacific. They reached Guam in the Marianas in 1521. Continuing to the Philipines, Magellan was killed in a fight with natives.

Juan del Cano took command of the voyage, and sailed to the Spice Islands. They then crossed the Indian Ocean, sailed around the southern tip of Africa, then north to Spain, completing the first circumnavigation of the globe. They arrived in 1522, with only 21 men left.

Guglielmo Marconi, 1874 to 1937, Italy

Guglielmo Marconi is known as the father of wireless communications. Before his time, communication by telegraph required a hard-wire connection between cities or other communication points. With his invention, it became possible to transmit information without this connection, similar to a radio broadcast.

Marconi became strongly interested in wireless transmission of information when he read of Heinrich Hertz's experiments with electromagnetic waves. He furthered Hertz's research, and subsequently invented and patented the wireless telegraph. After making improvements to his system, it went into widespread use. The success of the wireless telegraph was further assured by Marconi's experiment where a radio communication signal sent from England was received in Newfoundland.

When Marconi died, radio stations worldwide observed a two minute silence in his honor.

Lorenzo de' Medici, 1449 to 1492, Italy

Called Lorenzo the Magnificent, Lorenzo de' Medici stepped into his father's shoes as a major Italian banker, statesman and patron of the arts and education. He greatly expanded the already large family fortune. Although he was officially a private citizen, his financial strength and political ties made possible his de facto rule of the Florentine republic.

The Medici family started as merchants and money lenders, and expanded into large scale European commerce and banking. They were one of the richest families of their time. While some of the other powerful Italian families gained power by force, deception and assassination, the Medicis came into power by effective capital management and diplomacy.

An attempt was made to assassinate Lorenzo by the Pazzi family, in league with some of the Pope's supporters. The consequences included the threat of war, but Lorenzo averted the conflict by personal diplomacy.

Lorenzo was a great patron of the arts, and helped to make possible some of the master works of Michelangelo, as well as of Botticelli.

Later Medici family members became official rulers of Florence by title of Duke; others attained the tenure of Pope. The Medicis continued their rule of Florence until family "extinction" in the 18th century.

Sir Isaac Newton, 1642 to 1727, England

Isaac Newton made significant progress in the studies of light, gravity and mathematics.

Newton showed that when white light is passed through a prism, it separates into a rainbow called a spectrum. He demonstrated that when the rainbow then passed through another prism, it became white light again.

Newton wondered why the moon stayed in orbit around the earth. He believed that the answer to the question is a strong gravitational pull between the two large masses. It has been said that one day when Newton was sitting under a tree, that an apple fell on his head, causing him to suddenly gain insight into the nature of gravity.

Newton also developed the basic methods for modern calculus, which is even today widely used in engineering and other applied sciences.

The reflector style of telescope was invented by Newton. He was also knighted, and so he gained the title of 'Sir' Isaac Newton.

Florence Nightingale, 1820 to 1910, Britain

Before Florence Nightingale's time, many considered nursing a menial chore. Nurses were often poorly trained in basic health care. She made great strides in establishing nursing as a respected medical profession.

Nightingale volunteered her nursing services for the British war in the Crimea. When she arrived, more men were dying from fever and infection than from battle wounds. She enforced sanitary procedures and introduced special diets. Nightingale worked tirelessly to establish efficient nursing operations, and even spent her own money to procure linen, food and beds for the hospitals. Her efforts reduced the mortality rate from 45 to 2 percent.

Nostradamus, 1503 to 1566, France

Nostradamus was a doctor and a famous future teller.

During the time of Nostradamus, the practice of medicine was still relatively primitive. "Cures" were often ineffective, or even more harmful than the disease itself.

Nostradamus used scientific procedure to improve healing techniques, by trying different methods and testing them for effectiveness. He would then adopt methods that appeared to improve patient health, and abandon those that proved unworkable.

Although he may not have had a full understanding of why a method was helpful, such as simple sanitation, he became well known for his effectiveness in curing extremely ill patients.

Nostradamus wrote the famous collection of predictions called "Centuries". In rhyming verses and vague language, the predictions forecast events from his time through the end of the world, predicted to occur in the year 3797. Although he inferred that it is not beyond the average person to be able to glimpse the future by a simple study of the past and of present conditions, he also believed that the positions of celestial objects could be used to make predictions, and he claimed his predictions were divinely inspired. Many people have interpreted the predictions of Nostradamus, and have connected some of them with events that have occurred since his time, for example, the reign of Napoleon.

Nostradamus made predictions for French royalty, and also worked as the royal court physician.

Louis Pasteur, 1822 to 1895, France

Louis Pasteur's work showed that germs can cause people and animals to become sick. This was not a new idea, but before Pasteur's time it was not commonly understood by scientists, doctors or food suppliers.

Pasteur also showed that tiny living organisms are the cause of fermentation. He developed ideas that lead to the science of pasteurization: a process which destroys germs in liquids such as milk.

Pasteur developed the science of immunization, where a weak strain of disease causing germs is given to people or animals (often by injection), so that a resistance or immunity to the disease can be developed.

Pericles, circa 495 to 429 B.C., Greece

During the "Age of Pericles", Athens reached its greatest prosperity. The Athenian empire became large and powerful.

Pericles allowed all citizens to participate in government, and he built great temples and statues on the Acropolis, including the Parthenon. Athens became a center for literature and the arts.

Plato, approx. 428 to 347 B.C., Greece

Plato was a philosopher and teacher, whose writings have greatly influenced philosophers and religious leaders from his own time up to the present. Learning from Socrates, Plato studied and attempted to codify the concepts of knowledge, ethics, virtue and justice.

Plato taught that it is the wise one who knows that he does not know, the point from where the search for knowledge and wisdom can begin. He also taught that it is important to see through appearances to the actual truth of the matter. He believed that defining an ideal can help to provide something to work towards and to attain.

Unlike Socrates, Plato's writings have substantially survived to present time, although some of the writings originally attributed to him have been shown to be authored by others.

Marco Polo, approx. 1254 to 1324, Italy

Marco Polo's father was a merchant, who travelled to far away lands to trade. Kublai Khan, the emperor of China, asked him to return with teachers and missionaries for his people. When he went back, he brought Marco with him. On the way to the court of Kublai Khan, the Polos crossed many eastern lands, many of which had never been seen by Europeans before, including the Pamirs and the Gobi Desert.

Marco went into the service of the Khan, acting as his agent on various missions, and for a time served as the governor of Yangchow.

When Marco Polo returned to Europe, he wrote a book about his travels to the Far East called "The Travels of Marco Polo". Accurate in its geographic descriptions, his book provided knowledge of the cultures of China, Thailand, Japan, Java, Vietnam, Sri Lanka, Tibet, India, and Myanmar (some of which had different names in his time) to the European community. His accounts of Oriental riches and hints of possible sea routes to the Far East were considered by some to be wild exaggerations, but inspired others including Christopher Columbus. The book was translated into several languages, and gained widespread circulation.

Pythagorus, approx. 582 to 500 B.C., Greece

Pythagorus founded a spiritual movement called Pythagoreanism, which sought to better the human condition through religious discipline and the search for wisdom.

The Pythagoreans believed in immortality, and that a being or soul can move on to another body after death. Pythagorus himself claimed to have been the Trojan warrior Euphorbus in a previous life, and that fortune smiled on him because he could remember all of his previous existences.

Pythagorus and his followers carefully studied the properties of numbers, looking for proportions and harmonies, which they would then seek to apply to life and their surroundings. Although they lived in ancient times, they knew that the earth was round, and that it rotated around the sun with the other planets; they also believed that there was a harmony with heavenly bodies that correlated to natural musical harmonics.

Pythagorus is well known for the Hypotenuse Theorem, often called the Pythagorean Theorem, which indicates the generic relation between the lengths of the sides of any right triangle: the square of the length of the hypotenuse is equal to the sum of the squares of the lengths of the other two sides.

Robin Hood, approx. 1375 to 1425, England

Robin Hood was originally a hero of medieval English ballads. Historians argue as to whether he was an actual person, or just a legendary figure.

Robin Hood was said to have robbed from the rich and given to the poor. He fought for the needy and downtrodden, by stealing from and harassing oppressive government and religious leaders. He was said to have been unbelievably accurate with a bow and arrow, and he ran with a band of men including Little John and Friar Tuck.

Erwin Rommel, 1891 to 1944, Germany

Known as the Desert Fox for his effectiveness in desert warfare, Erwin Rommel won victory after victory for the Germans in World War II as commander of the Afrika Korps. He was finally defeated by a much larger force commanded by the British general Montgomery.

As the tide of the war shifted against Germany, Rommel became involved in a plot to depose Hitler. He was accused of complicity in the attempt on Hitler's life.

William Shakespeare, 1564 to 1616, England

William Shakespeare was one of the greatest playwrights and storytellers of all time. He also appeared as an actor in his own plays. His plays have been immensely popular since his time, and have been performed by many groups in many places, including modern productions for movies and television. These plays and productions typically use the dress, accouterments and flavor of the Elizabethan era.

One of Shakespeare's comedies, "A Comedy of Errors", uses the idea of identical twins to cause confusion and humor on stage. Some of his tragedies, including "King Lear", "Macbeth" and "Julius Caesar" dramatize human failure, treachery and political intrigue. The romantic play "Romeo and Juliet" dramatizes the longing and heartbreak of a love that can never be.

Famous quote: "Above all else, be true to thine own self."

Socrates, approx. 469 to 399 B.C., Greece

Socrates was a stonecarver and a teacher of wisdom. He was interested in an understanding and knowledge of the human being, not the knowledge of the physical universe. Socrates taught not by instruction but by asking questions. This very effective method of teaching is called the Socratic method. He believed that anyone has the ability to answer questions, and so anyone is capable of learning. He believed that questions can re-awaken what a person already knows.

Socrates did provide instruction on the subject of ethics. Socrates believed that to do wrong is harmful to oneself. He also felt that one must never return wrong for wrong. Socrates believed when a person has full knowledge, they will not do wrong. He believed that no one makes mistakes voluntarily.

Socrates always asked for definitions. He believed that someone who claimed to know something would be able to define it precisely. For example, an expert on education will be able to define education precisely. Socrates insisted on being given definitions that universally covered its subject.

Socrates was sentenced to death by poison for questioning tradition. Although he could have escaped, he would not renounce his beliefs to save his own life.

Much of what is known about Socrates is found in the writings of Plato.

Antoni van Leeuwenhoek, 1632 to 1723, Holland

Although a haberdasher and chamberlain by profession, Antoni van Leeuwenhoek made a hobby of grinding lenses for use as microscopes. With little or no formal scientific training, he is credited with inventing an early version of the modern microscope. He was able to view objects at 300 magnification, a major improvement over the current technology of his time.

With his microscopes, Leeuwenhoek made significant advances in the observation and documentation of bacteria and protozoa, which he called animalcules. He also made important discoveries about the function of red blood cells and the circulatory system.

Rembrandt van Rijn, 1606 to 1669, Netherlands

Rembrandt is considered one of the greatest artists of all time. He possessed remarkable skills with the paintbrush, especially the use of light and shadow, and the use of heavy layers of paint on canvas.

Beginning his artistic training at a young age, Rembrandt rapidly mastered the skills passed to him by his teachers. He quickly became popular, and produced and sold portraits, paintings, etchings and drawings, even in an area where the church and royalty did not generally patronize the arts. Rembrandt was also successful as an art teacher and art dealer.

Despite his substantial income, Rembrandt tended to live beyond his means.

Some of Rembrandt's works include the so-called "Night Watch", "Return of the Prodigal Son", "Christ Healing the Sick", "Supper at Emmaus", and many self portraits.

Amerigo Vespucci, 1454 to 1512, Italy

Vespucci recorded his travels, and claimed to have explored the coast of South America in 1497. Although the truth of this story is still in doubt, he would have been the first European to land on the South American continent; Columbus at that time had only been as close as the outlying islands.

However, in deference to "Amerigo the discoverer" a map maker made a large map in 1507, on which the title "America" appeared for the first time, as a label for the South American continent. Later the term was applied to the North American continent as well, even though Leif Ericson had landed on the east coast of Newfoundland centuries earlier.

Picture bears little if any resemblance to the actual person.

Queen Victoria, 1819 to 1901, England

When Victoria was born, her grandfather George III was the king of England. George was king when the American's declared and fought for independence from England.

Victoria was brought up in the manner and tradition of a british princess. She later became queen at the age of eighteen, and later married Prince Albert of Germany. In addition to a happy marriage, the couple had nine children. She was queen for sixty four years.

Victoria was queen during the Industrial Revolution in Britain. Great advances were made in science and industry. Britain also strengthened it's overseas empire, both by purchase and by colonization, in parts of Africa and Asia.

Queen Victoria was sympathetic to the sufferings that accompanied industrialization and war, and worked to help those that were in need.

James Watt, 1736 to 1819, Scotland

It has been said that James Watt was inspired to invent the steam engine by watching steam lift the lid on a boiling tea kettle. Actually, he did not invent the steam engine, but he did make significant improvements to the the highly inefficient steam engines that existed before his time.

Watt's steam engine worked very well for pumping. The design was based on a back and forth piston motion created by steam boiler pressure.

Watt devised a method to use the steam engine so that it could turn factory wheels. He connected one end of a rod to the engine piston, and the other end of the rod to a wheel (not at the center of the wheel), so that as the piston went back and forth, it turned the wheel.

For the most part, steam engines have been replaced in modern times by steam turbines, gasoline engines and diesel-electric locomotives.

Although steam engines have become obsolete, the Watt steam engine provided a great leap forward for the industry of the time, advancing industrial technology beyond animal power.

