Daniel Bernoulli

- Daniel Bernoulli was born on 8th February in the year 1700 in Groningen, Dutch Republic.
- When he was born, his father, Johann Bernoulli, was the chairperson of mathematics in Groningen.
- His elder brother and his uncle were also known mathematicians which pointed towards Daniel Bernoulli to be raised in a strong mathematics environment.
- It was shocking for Daniel Bernoulli that his father forced him into a business career.
- At the age of 13, Daniel Bernoulli was sent to the Basel University to study philosophy and logic.
- Daniel Bernoulli graduated from the Basel University in the year 1716.
- Daniel Bernoulli also grew up to be a great mathematician being in such a surrounding and found various sub-subjects to mathematics on his research and studies.
- Daniel Bernoulli soon discovered the vividly practiced formulas of statistics and probability.
- Daniel Bernoulli further enhanced his studies and tried connecting mathematics with mechanics.
- He was soon able to develop the theory of fluid mechanics and the conservation of energy which is sufficient to describe mathematics and mechanics effectively.

- His work in the research of energy conservation is used n the modern world with the formula;
- $1/2 \ [\![pu]\!]^2+P=Constant$
- Daniel Bernoulli was a Polymath, a person with interest in various subjects, yet his main focus was to connect each with mathematics.
- In the world of science, Daniel Bernoulli was the person to develop the relationship between blood flow and its pressure speed, which was measured through fluid mechanics.
- The main findings of Daniel Bernoulli which have helped the humans of 20th century include the development of carburetor and airplane wing.
- Daniel Bernoulli trained his children (sons) to work for the educational field accordingly.
- Daniel Bernoulli wrote his first book in the year 1738, which was named Specimen theoriae novae de mensura sortis
- In the year 1738, Daniel Bernoulli also developed the Kinetic Theory of gases and made collaborative efforts with Boyle's law in order to make things easier to understand.
- Daniel Bernoulli was inspired by Newton and gave his findings relevant importance and further leaded with his findings with the studies of Newton.
- Daniel Bernoulli was well recognized within his life and won multiple respect and recognition awards.
- Daniel Bernoulli died aged 81, on 17th March in the year 1782 in Basel, Republic of Swiss.

Benjamin Franklin

- Benjamin Franklin was an American Polymath who is referred as being amongst the fathers of Nation.
- Benjamin Franklin was born on 17th January in the year 1706 in America.
- Before any of his works, Benjamin Franklin was the founder of American and made efforts for independence.
- He was the leading writer, author, printer, politician, scientist, diplomat of America
- The work of Benjamin's writing and printing started in 1729 when he bought a Newspaper, The Pennsylvania Gazette.
- He printed the political concepts within the newspaper where his interest laid the most.
- Ten years, 1720-1730, Benjamin Franklin worked greatly for public benefits and social causes.
- Benjamin Franklin was amongst the initial founders of prevention from fire in the period 1730-1740.
- In order to make America a better place to live, Benjamin Franklin initiated the environmental clean-up program within the streets of America.
- Benjamin Franklin was appointed to be the first president of Academy and College of Philadelphia which he further headed in order to form a university.
- Seeing his political influences, Benjamin Franklin was selected as the deputy post general for the British colonies in 1953.

- Benjamin Franklin was nominated as the 6th President of Pennsylvania in the period 1785-1788.
- He further carried out his political practices through his son being proposed to be the governor of New Jersey.
- Being a writer, Benjamin Franklin wrote a couple of published books, amongst which he famous include 'Poor Richard's Almanac' which bought him sufficient recognition and wealth.
- Benjamin Franklin had an innovative mindset and he was well-known for his discoveries regarding lightning rod, bifocals and the Franklin stove.
- Benjamin Franklin was the founder of various civic organizations including Library Company in the year 1757.
- He also introduced various physics theories as he was a Scientist, and discovered electricity and its efficient generation.
- Being a Polymath, Benjamin Franklin served various fields of interest including science, physics, politics and mathematics.
- Benjamin Franklin died at the age of 80, on 17th April in the year 1790 in Pennsylvania, U.S.
- His teachings and studies have been preserved and available to be read and used in related theories globally.

Leonhard Euler

- Leonhard Euler was born on 15th April in the year 1707 in Basel, Switzerland (Debnath, 2009)
- He was a famous Swiss physicist, astronomer, engineer, logician and mathematician.
- Leonhard made important contributions towards mathematics with relatable discoveries such as calculus and the graph theory.
- His works in the field of fluid dynamics, mechanics and astronomy also earned him great recognition.
- Leonhard Euler was ranked amongst the highly eminent mathematicians of the 18th century (Debnath, 2009)
- The work he has collected and delivered for the mankind is more than any of the contributions of any scientist in history.
- His mathematics was designed in a different way, such that easy to be applied within public affairs and technology.
- In the year 1727, Euler was made the associate of St. Petersburg Academy of Sciences
- With due hard work and extraordinary efforts, Euler lost the sight of one eye in the year 1735
- The formula for trigonometry was also developed by Leonhard Euler (Debnath, 2009)
- Euler's conclusions regarding the solar system were efficient enough to assist the British Admiralty for the calculation of lunar tables.

- Euler also published the book, Institutiones Calculi Differentials in the year 1755 which served for the various prototypes of calculus.
- In the year 1766, Euler was invited by Catherine II to Russia.
- Because of the loss of one eye's sight, Euler's productivity started to decline
- The theory and a brighter concept of lunar motion is also amongst the important discoveries of Euler (Debnath, 2009)
- As compared to any mathematician of history, Euler had an increased pervasive pedagogical influence
- Although in Russia his influence was limited, yet he managed to set up a vivid educational base to teach mathematics.
- His eye sight became further fatal which caused his cataracts to be completely damaged.
- This further lead towards mental disabilities and Euler was finally bought to bed rest.
- Euler died on 18th September 1783 in Saint Petersburg, Russia (Debnath, 2009)

Carl Linnaeus

- Carl Linnaeus or Carl Von Linne was born on 23rd May in the year 1707 in Rashult, Sweden.
- Through his profession, he was identified as the highly qualified Swedish physician, botanist and zoologist.
- Carl Linnaeus was also called as 'the father of taxonomy'.
- His findings that have been published are mostly in Latin with his name been changed to Latin as Carolus Linnaeus.
- In his childhood and teenage life, Linnaeus received his education at the Uppsala University where he further pursued his career as a botany lecturer in the year 1730 (Anderson, 2009)
- His first ever writing, namely 'Systema Naturae' was published in the year 1738 in Netherlands.
- Linnaeus spent most of his time in the study of plants and animals for which he had been travelling great miles to gather relevant and sufficient data.
- By the year 1778, Carl Linnaeus was believed as amongst the most acclaimed scientists.
- In early 1735, Carl Linnaeus set off for Russia where he intended to pursue with his medical studies.
- Despite of the above discussed achievements of Linnaeus, in his early bought up age he was being groomed to be a churchman just like his parents (Anderson, 2009)

- His interest for flowers, especially in the field of botany, grew and could be supported with his published book, namely Flora Laponica, in the year 1737.
- In the year 1739, Linnaeus married Sara Morea, who was the daughter of a well-known physician.
- In the year 1741, Linnaeus succeeded for the chair of medicine which he further exchanged with the chair of botany.
- The transformation of his name, as Carl Von Linne was knighted to him in the year 1755.
- The botanical garden developed by Linnaeus can be visited in Uppsala (Anderson, 2009)
- The work and the contributions of Carl Linnaeus bought him greater responses and respect and recognition.
- He officially retired from the active teaching profession, yet continued contributions for the students in minimal amount.
- The decline of Carl Linnaeus started due to his worsening illness which remained unidentified for a couple of years.
- Car Linnaeus was diagnosed with being suffering from the Uppsala fever.
- He later died at the age of 70, on 10th January in the year 1778 (Anderson, 2009)

David Hume

- David Hume was a well-known Scottish economist, historian, enlightenment philosopher and an essayist from the UK (Mossner, 2001)
- David Hume was the younger descendant of the lord of Ninewells, Joseph Hume.
- David Hume's mother, Catherine, was the daughter of the president of Scottish Court sessions, Sir David Falconer.
- David Hume was admitted to the Edinburgh University at the age of 12 which he left at the age of 14.
- He further decided to pursue with Law studies which had been perceived by majority of his family members (Mossner, 2001)
- In the year 1729, David Hume suffered a great nervous breakdown which took a sufficient time to recover from.
- In the year 1734, David Hume shifted to France for three years.
- In France he had been involved in pursuing with further studies and wrote his book, A Treatise of Human Nature.
- In the year 1737, David Hume returned back to England to finally publish his book in three volumes.
- David Hume was born on May 7th in the year 1711 in Edinburg, UK (Mossner, 2001)
- In the modern world, David is mostly known for his naturalism, empiricism and skepticism systems

- The beginning of Hume's work was taken from his published book, A Treatise of Human Nature (1739) explaining the science involved within a man.
- The main motto of life of a man identified by David Hume was 'Passion, other than the reason, governs Human Behavior'
- He was able to conclude the process of the human mind in order to obtain a specific information
- He debated on the fact that all information that a human has is solely because of their experiences (Mossner, 2001)
- David Hume was highly inspired by the great scientist Sir Isaac Newton.
- Through the findings and conclusions of Hume, it can be derived that he was definitely a moralist
- One of the important concepts and theories of Hume was 'Belief'. He differentiated through the fact of thoughts and beliefs
- David Hume's findings are vividly practiced in the modern world.
- David Hume died on 25th August in the year 1776 in Edinburgh, UK (Mossner, 2001)

Immanuel Kant

- Immanuel Kant is known as the central figure in the context of philosophy (Hoffe, 1994)
- He was a German philosopher
- Immanuel Kant was born on 22nd April in the year 1724 in Konigsberg, Russia.
- His main research and work was in light of ethics, epistemology and aesthetics.
- Kant was referred as being amongst the high grade thinkers of Enlightenment and was perhaps the greatest scholar of his reign (Hoffe, 1994)
- Kant resided in a far-from-city location and spent his whole life there.
- His father was a Scottish immigrant
- His mother was however not educated, but was referred by the society for having a good nature and her God-gifted intelligence.
- Kant received his early education at the Pietist School at the age of eight.
- He further was admitted to the University of Konigsberg to study theology in the year 1740 (Hoffe, 1994)
- Kant's mother passed away earlier in 1737, while his father died in 1746.
- The death of Kant's parents forced him to leave university.
- His main attraction was in the fields of mathematics and physics.
- In the year 1744, Kant started to write his first book 'Thoughts on the true estimation of living forces'

- Kant started his mission towards looking for means to support himself financially (Hoffe, 1994)
- The findings of Kant had a higher influence over the general philosophies, especially the school of Kantianism and Idealism.
- The highly productive years for Kant were the period of 1780s where he wrote a couple of books and was popular amongst the known philosophers.
- The findings of Kant are effectively practiced in the modern world and his belief theory applied in the teaching of moral sciences and ethics.
- The last book published of Kant's was 'On the Form and Principles of the Sensible and the Intelligible World' in the year 1770.
- Kant died on 12th February in the year 1804 in Konigsberg, Russia (Hoffe, 1994)

James Hutton

- James Hutton was a popular Scottish physician, naturalist, chemical manufacturer and the agricultural expert (Dean, 1992)
- James Hutton was born on 3rd June in the year 1726 in Edinburgh, UK.
- James was well-known for his theory of uniformitarianism that reflected the main contents of geology approach, further explaining the earth's crust and its features.
- James Hutton's father was a merchant and a city officeholder.
- His father died while James was quite young thus he obtained his initial education at the local grammar school (Dean, 1992)
- He further pursued higher studies at the University of Edinburgh.
- James Hutton selected Chemistry as his sole profession.
- James had a fair grip on chemistry and he did exciting experiments as concluded by his work mates.
- James spent a lot of time studying, starting from Edinburgh, travelling to Paris and finally receiving the M.D Degree in Holland in the year 1749.
- James had a high interest in evaluating the manufacture of Sal Ammoniac from coal soot (Dean, 1992)
- His intention was further to develop an inexpensive method for the manufacturing of Sal Ammoniac along with his good friend, James Davie.
- James had a very little interest in medicine.
- His methodology supporting the view of inexpensive Sal Ammoniac manufacturing was successful and rewarded both of the James, a handful amount.

- He set up his own farm to produce Sal Ammoniac in Berwickshire, Scotland.
- In the year 1765, the farming business and James' company were much successful (Dean, 1992)
- However, James quit farming in 1768 after earning enough in order to establish him through pursuing with his scientific interests.
- Being interested in natural processes, Hutton vividly studied and researched through reading and travelling, inspecting Rocks of various kinds and types.
- The contributions of Hutton were great and by the end of the 18th century he had transferred enough knowledge regarding strata, fossils and rocks.
- The findings of Hutton are vividly available in text and course books used in the modern world and he is known as 'Father of Modern Geology'.
- James Hutton died on 26th March 1797 in Edinburgh, UK (Dean, 1992)

James Cook

- James cook, well-known and well-popular for being known as Captain James Cook (Hough, 1997)
- He was a British cartographer, navigator, captain and an explorer in the Royal Navy.
- James Cook was born on 7th November in the year 1728 in Marton, UK.
- James Cook conducted three major expeditions which were; Pacific Ocean (Bering Strait), North America to Australia and New Zealand.
- James Cook's father was a farmhand migrant from Scotland (Hough, 1997)
- In the childhood of James, his father was made the foreman on a farm in a nearby village.
- James had an intelligent mind and he received his education till the age of 12 through his father's employer.
- He worked with his father at the farm, but also worked part time on stores in the cities which enabled him to experience ships and the sea.
- In the year 1746 when James was 18 years old, he was introduced to a well-known shipper and by the age of 21, James was referred as an able seaman.
- Cook served the shipping line in the day time and at night he studied mathematics (Hough, 1997)
- In the year 1752, Cook was promoted to mate and was offered the command of a bark three years later.

- However, Cook did not accept the offer and continued himself being an able seaman in the Royal Navy.
- The Navy offered Cook an interesting career and enabled him to learn a couple of critiques.
- Cook was able to quickly retain what he was taught which attracted the higher authority enabling Cook to be advanced in his territory.
- At the age of 29, Cook was made the Master of HMS Pembroke (Hough, 1997)
- At the very first expedition of the Pacific in the year 1768, Cook was appointed as the commander of the expedition, while he was 40 years old at the time.
- Cook's success at expeditions earned him the title of lieutenant.
- Being presented to King George III, he was selected to be assigned with more great voyages.
- The discoveries of James Cook are published in various books read around the world.
- James Cook died on February 14th in the year 1779 in Hawaii, US (Hough, 1997)

Henry Cavendish

- Henry Cavendish was a famous English scientist, physicist, chemist and a philosopher (Jungnickel, et al., 1996)
- Henry Cavendish is vividly popular for his discovery and conclusion regarding hydrogen also referred by him as 'inflammable air'
- Henry Cavendish was born on 10th October in the year 1731 in Nice, France.
- Cavendish conducted extensive researches in context of gases and their properties, atmospheric air and the mechanism of water in great depth.
- He also proposed a method to weigh the earth through heat and density mechanism and calculations (Jungnickel, et al., 1996)
- His method to weigh the earth is known as the Cavendish Experiment.
- Cavendish is also known and referred as 'The Honorable Henry Cavendish'
- Henry gained his initial education at a private school, Hackney Academy near London.
- In the year 1748, Henry went to the Peterhouse College for three years but left it prior to receiving his degree.
- Henry Cavendish lived with his father after the death of her mother in London (Jungnickel, et al., 1996)
- In London, Henry started his own laboratory.
- Henry Cavendish efficiently served two different fields, politics and science.

- Henry's father, Charles Cavendish also had high influences as a political worker.
- In the year 1773, Henry joined his father as an elected trustee of the British Museum.
- Cavendish was a rather shy person and avoided crowds (Jungnickel, et al., 1996)
- He spoke very little and was always dressed in old fashioned outfits.
- Following the death of Henry's father, he started working under the observation of Charles Blagden where he began to build his interest in science as his career.
- Henry Cavendish wrote various publications and his very initial book was a compilation of three short chemistry papers regarding gases that are developed within laboratories.
- The findings of Cavendish not only assisted the humans of yesterday and today, but enabled other scientists to continue their important discoveries to sustain the available gas reserves.
- Henry Cavendish died on February 24th in the year 1810 in London, UK (Jungnickel, et al., 1996)

George Washington

- Amongst the founders and the developers of the United States, one famous name is George Washington (Irving and Neider, 1976)
- George Washington is also known as the Father of the Nation (US).
- George Washington served the Nation through being the nation's first president.
- He was made the General for the American Revolutionary war.
- George Washington was born on 22nd February in the year 1732 in Virginia, US (Irving and Neider, 1976)
- George's father was Augustine Washington, the owner of Virginia Estates, while his mother was Mary Ball, whom Augustine married while she was a widow.
- Augustine sent George Washington for his education to England, along with his two other siblings.
- The early life of George Washington is available in limited amount, yet it is known that he had been working on the Ferry Farm from an early age in Virgina.
- From 7th standard till 15th standard, his school attendance was pathetic.
- However, he had a high interest in mathematics, especially trigonometry (Irving and Neider, 1976)
- George mastered in the field of the growing of tobacco and raising its stock in his early teenage.
- George's father died while he was only 11 years, in the year 1743, and then he was given under the care of his elder brother, Lawrence.

- George Washington was the Commander in Chief of the Continental Army during the American Revolutionary War (1775-1783).
- Before being the President of U.S, George was elected as the President of Convention to write the U.S constitution in the year 1787.
- In January 1759, George got married to Martha Dandridge Custis who was a widow with two children (Irving and Neider, 1976)
- George became the step-father of these two children and further did not conceive any other child.
- Being the Father of the Nation, the State of Washington (U.S) is named after George Washington.
- George Washington served office as a President for 7 years and died three years following his retirement.
- George Washington died aged 67 on 14th December in the year 1799 in Washington, Virginia, U.S.
- At the time of his death, George had about 300 slaves, but he became anti-slavery during his life and ordered to free the slaves after the death of his wife (Irving and Neider, 1976)

Joseph Priestley

- Joseph Priestley was an English separatist theologian, chemist, natural philosopher, multi-subject teacher and an innovative grammarian of the 18th century (Schofield, 1997)
- Joseph published almost 150 plus of his works and findings in his books.
- Joseph Priestley also had much influence in the politics.
- Joseph Priestley was born on 24th March in the year 1733 in Birstall, UK.
- Through findings of the history, Joseph had also been involved in the discovery of oxygen (Schofield, 1997)
- Priestley was originally born to a well-established family in Birstall.
- His father was Jonas Priestley and mother Mary Swift and had 5 other siblings.
- Since the age of one, Joseph was sent to live with his grandfather from whom he returned after five years.
- In the early year of 1749, Priestley became seriously ill and was near to death.
- He had been raised as a Calvinist and had the belief that in order to achieve salvation, conversion experience is necessary (Schofield, 1997)
- Priestley continued his studies in the year 1752 and matriculated from Daventry Academy.
- Priestley shortly became well-popular for his invention of the soda water which became much important for the electric field.

- Priestley was a man of freedom and believed in the open exchange of ideas in order to become innovative.
- He was a great scholar in his life time and provided many contributions within the field of pedagogy.
- He also contributed towards publishing books on history and enabling the understanding of language through English Grammar (Schofield, 1997)
- Priestley was a multi-lingual person and had command on various languages including French, Arabic, Lisbon, German and Italian.
- In the year 1761, Priestley shifted to Warrington in order to teach modern languages at the Dissenting Academy of the town.
- On 23rd June 1762, Joseph Priestley got married to Mary Wilkinson.
- Joseph Priestly was an all-rounder and is vividly known for major contributions to the philosophies developed and studied around the world.
- Joseph Priestley died on 6th February in the year 1804 in Pennsylvania, U.S (Schofield, 1997)

James Watt

- James Watt was the extensively known Scottish mechanical engineer, chemist and inventor (Dickinson, 2010)
- He was bought up through improvements within Thomas Newcomen's steam engine (1712) and produced the Watt Steam Engine in the year 1776.
- His work to build the Watt Steam Engine was in line to the changes that have been developed as a result of the Industrial Revolution.
- James Watt was born in January in the year 1736 in Greenock, UK.
- James Watt was also elected as the fellow of the Royal Society of London in the year 1785 (Dickinson, 2010)
- James Watt's father was the treasurer and magistrate of Greenock and also owned his own business.
- Initially, James was taught at home by his mother and then he later joined the grammar school.
- His very important aspect of education had been his father's ship building garage where James made models out of his father's tools.
- This was the time when James got much attraction and information regarding ships and their instruments.
- At the age of 17, James Watt decided to become a mathematical-instrument maker (Dickinson, 2010)
- To achieve this goal, James Watt travelled to Glasgow and then further travelled to London in the year 1755.

- He returned to Glasgow in 1757 and opened his own shop at the university and made mathematical instruments.
- James Watt got married to his cousin Margaret Miller in the year 1764 and had six children with her.
- The most important contribution of James Watt, the Steam Engine, was intended while he was attracted to the steam waste while repairing a ship model.
- His solution to the model was successful which enabled him to be proposed with a partnership opportunity with a British Physician, John Roebuck in the year 1768 (Dickinson, 2010)
- However, James Watt patented his work.
- In the year 1766, James Watt became a land surveyor and was making efforts to develop routes for Canals in Scotland for eight years, till 1774.
- James Watt started a partnership with Boulton in the year 1775 in order to assist the canal building, which continued for 25 years.
- James Watt's total life had been engaged in serving for the world with his discoveries and he is greatly known for his contributions.
- James Watt died on 25th August in the year 1819 in Heathfield Hall, UK (Dickinson, 2010)

Antoine Lavoisier

- Antoine Lavoisier originally named as Antoine-Laurent de Lavoisier (Duveen and Klickstein, 1954)
- He was a French nobleman and a chemist.
- He was amongst the main personalities involved within the chemical revolution in the 18th century.
- His works were highly important within his era and so on and he had high influences on the histories of biology and chemistry.
- Antoine Lavoisier was born on 26th August in the year 1743 in Paris, France (Duveen and Klickstein, 1954)
- He is vividly known as the 'father of modern chemistry'.
- His major contributions towards chemical revolution include the discovery of chemical reaction of oxygen.
- Before the French revolution, Antoine Lavoisier served as a leading financier and public administrator.
- Antoine was born to an extremely wealthy family and was the only child of the house.
- He received early education at the Prestigious College in Mazarin in the field of science and humanities and later graduated in Law from Paris (Duveen and Klickstein, 1954)
- Along with the above courses, Antoine had a never ending interest for chemistry and physics which he spared out a routine time of three hours to learn more.

- Antoine was enrolled at the Elite Order of Barristers like his father and grandfather.
- Soon, Antoine discovered that his law practices had been going down along with increasing his scientific researches by the year 1768.
- He was enrolled at the Academy of Sciences in Paris in the year 1768.
- One important conclusion that Antoine made was that within chemical experiments, he believed that the original matter was never created or destroyed, even if it goes wrong (Duveen and Klickstein, 1954)
- Antoine's independent wealth is an evergreen sign for his success within his experiments.
- His theory of 'the conservation of mass' is still taught to students across the globe today as 'Lavoisier's Law'.
- In the year 1771, Lavoisier married Marie Anne Paulze, who was one of the members of the farms where he worked at.
- However, Antoine had no children or his descendants.
- Antoine Lavoisier died on 8th May in the year 1794 in Paris, France (Duveen and Klickstein, 1954)

Thomas Jefferson

- Thomas Jefferson is also known as the father and the founder of the America (Malone, 1993)
- He was the main person who declared the independence of the United States of America.
- Thomas Jefferson served the US as being the third president of the nation from the year 1801-1809.
- Prior to being the president, he was elected as the second vice president of the nation.
- Thomas Jefferson was born on 13th April in the year 1743 in Virginia, US (Malone, 1993)
- Apart from his contributions for the state for independence, Thomas Jefferson was also the architect and the founder of the University of Virginia.
- His main aim was to inform majority of the humans regarding their promised individual freedom and evaluate the main meaning of the American Revolution.
- His father, Peter Jefferson was a well-established man and bought up Thomas in a luxury surrounding.
- Thomas Jefferson studied at the local boarding school and further enrolled at the college of William and Mary in the year 1760.
- Jefferson was an active individual who studied a lot and aced with good grades (Malone, 1993)
- His hobbies included playing the violin.

- In the year 1762-1767, Thomas Jefferson studied law and after graduation, served his practices in the western cities.
- In the year 1767, Thomas Jefferson nominated himself as a candidate for the House of Burgesses.
- He was selected amongst the five members committee in the year 1776 to set out their views to enforce independence.
- Thomas Jefferson developed a draft report for the congress in the same year which was highly appreciated as it focused over the practicalities (Malone, 1993)
- Jefferson was also amongst the individuals to encourage trade within the country.
- He enforced the trade of tobacco and whale oil over the French coast.
- Jefferson's contributions have been great and are remarkable in the history.
- Thomas Jefferson died on 4th July in the year 1826 in Virginia, US.
- The Jefferson Memorial in Washington D.C was dedicated for Thomas Jefferson in 1943 for his 200th birth anniversary (Malone, 1993)

Alessandro Volta

- Alessandro Volta is originally named as Alessandro Giuseppe Antonio Anastasio Volta (Bellis, 2008)
- He was an Italian chemist, expert of power and electricity and a physicist.
- He is the pioneer founder of methane and electric batteries.
- Alessandro Volta was born on 18th February in the year 1745 in Como, Italy.
- Volta was only seven years old when his father died (Bellis, 2008)
- The measurements of volts and voltage in the modern world are thus a finding of Volta.
- His discoveries enabled the mankind to be exposed to the initial source of continuous current supply.
- Volta was made the professor of Physics at the Royal School of Como in the year 1774.
- His discovery of the methane gas ranges back to the year 1776.
- He is also the core inventor of the electrophorus which is a device used to create static electricity (Bellis, 2008)
- In the year 1779, Alessandro Volta was promoted as the chairman of physics at the University of Pavia.
- In the year 1779 the French troops destroyed the laboratories of Volta.
- Volta developed the very first electric battery in the year 1800 which was named as the voltaic pile.

- Volta was made the senator and a count of the Kingdom of Lombardy in the year 1801 by Napoleon who was amazed by Volta's battery generating electricity at a demonstration set up.
- Alessandro Volta was also made the director of philosophical faculty at the University of Padua in the year 1815 by the Austrian Emperor, Francis I (Bellis, 2008)
- The volt (unit) driving current is named in Alessandro's honor since the year 1881.
- Volt's experiments attracted many of the scientists within the field and hence assisted the field to grow.
- In the modern world, the electric engineering filed highly honors the work of Alessandro Volta and his work is taught to other students.
- Alessandro Volta died on 5th March in the year 1827 in Como, Italy.
- His very first model of battery is displayed as an artifact at the Royal School of Como (Bellis, 2008)

Jeremy Bentham

- Jeremy Bentham was an English philosopher, social reformer and a jurist (Bentham, 1989)
- He was also the founder of modern utilitarianism.
- Bentham explained 'fundamental axiom' of his philosophy as the best approach to differentiate between right and wrong.
- Jeremy Bentham was born on 15th February in the year 1748 in London, UK.
- Jeremy Bentham was the elder son of an attorney (Bentham, 1989)
- He built up an interest to read and learn since the age of 4.
- He was amongst some philosophers who conducted in-depth studies regarding the Latin language.
- Jeremy Bentham achieved his initial education from the Westminster School.
- He went to the Queen's College, Oxford in the year 1760 to study law.
- In the year 1763, Bentham graduated the college with a law degree (Bentham, 1989)
- Rather than reading law books for practical experiences, Jeremy was more interested in evaluating the theoretical aspects of legal abuses.
- In the year 1776, Bentham published his very first book, 'A Fragment on Government'.
- By the year 1811, Bentham had written a couple of books which have been highly appreciated by various scholars of the time.

- During Bentham's stay at Russia with his brother, he was indulged in the army and their uniformity over which he wrote his book Defense of Usury in the year 1787.
- Basically, Jeremy Bentham is referred as being a disciple of the great economist, Adam Smith (Bentham, 1989)
- Bentham's work for the political economy bought the idea of laissez-faire exposed for the community.
- In the year 1792, Bentham was given citizenship of France.
- Bentham took various decisions for the economy where he redesigned the principles of the prison and developed the 'Panopticon' in order to govern prison rules.
- Jeremy Bentham died on 6th June in the year 1832 in Westminster, UK.
- After his death, his body was mummified and preserved in a glass-based coffin at University College, London, UK (Bentham, 1989)

Edward Jenner

- Edward Jenner was the English scientist and physician who introduced the approach of small-pox vaccination, the first vaccine of the world (Bazin and Jenner, 2000)
- He reformulated the term vaccination from the word Variolae Vaccinae in order to refer to 'cowpox'.
- Edward Jenner was born on 17th May in the year 1749 in Berkeley, UK.
- The birth of Jenner took place at the time of major changes made to the British medical and education system.
- Edward Jenner was the son of a clergyman (Bazin and Jenner, 2000)
- He received his initial education at a nearby grammar school.
- Graduated from the grammar school, in the year 1762, Jenner was apprenticed to a known surgeon in town.
- Edward Jenner also introduced the connection between science and law while at the college.
- Till the year 1770, Jenner had a fair knowledge regarding various medical practices.
- In the year 1770, Jenner went to London and became a house pupil of John Hunter, a known surgeon of London (Bazin and Jenner, 2000)
- Jenner learnt from Hunter that any problem must be tried before being thought and wasting time.
- Jenner also showed interest and efforts in order to learn clinical surgery.
- Edward had multiple hobbies and was intelligent and skillful.
- He used to play violin at a nearby musical club.

- Jenner was married in the year 1788 (Bazin and Jenner, 2000)
- Interested to do something for the community, in the year 1796, Jenner found the right remedy to treat small-pox which had been taking away many lives recently.
- Through his devotion and success, Jenner received worldwide honors and recognition.
- Soon in the year 1815, Jenner's wife was diagnosed with tuberculosis and died in the same year.
- His efforts and works for the world are remarkable rather he is believed to be a role model for the modern world.
- Edward Jenner died on 26th January in the year 1823 in Berkeley, UK (Bazin and Jenner, 2000)

Pierre-Simon Laplace

- Pierre-Simon Laplace was originally named as Marquis de Laplace (Hahan and Hahn, 2005)
- Laplace was a French Scholar from France.
- His major work performed was in line with statistics, mathematics, astronomy, physics and engineering development.
- The work he did was originally performed by his predecessors been compiled in his five-volume Mecanique Celeste.
- Pierre-Simon Laplace was born on 23rd March in the year 1749 in Beaumont-en-Auge, France (Hahan and Hahn, 2005)
- He is also vividly known for his evaluations and conclusions regarding the solar system's stability.
- Laplace was the son of a peasant farmer.
- He received early education at the Military Academy of Beaumont where his mathematical skills were exposed.
- Laplace further got admitted at the University of Caen in the year 1766, leaving the degree incomplete due to moving to Paris.
- Laplace was highly admired by the findings and the work of Sir Isaac Newton which he intended to take ahead (Hahan and Hahn, 2005)
- The major work in the practical field of Laplace began from the year 1773.
- Laplace effectively translated the geometric study of classical mechanics to one based calculus.

- In the field of statistics, Laplace also developed the Bayesian interpretation of probability.
- Laplace was the one to identify the shrinking appearance of Jupiter and the constant expansion of the Saturn.
- His expertise in astronomy won Laplace membership in the French Academy of Sciences in the year 1773 (Hahan and Hahn, 2005)
- Laplace's contributions within the field of physics started from the year 1784-1785 working upon the attraction between spheroids.
- Some of the major works of Laplace had been published by him in his book 'The System of the World' in the year 1796.
- During the French revolution, Laplace was lucky enough to escape imprisonment and execution.
- In his final years, Laplace served as a minister for six weeks under Napoleon.
- Pierre-Simon Laplace died on 5th March in the year 1827 in Paris, France(Hahan and Hahn, 2005)

Adrien-Marie Legendre

- Adrien-Marie Legendre was a famous French Mathematician (Itard, 1981)
- Within the field of mathematics, majority contributions have been included by Adrien-Marie Legendre.
- Important concepts and theories of mathematics including polynomials and transformation are named after Adrien-Marie Legendre.
- Adrien-Marie Legendre was born on 18th September in the year 1752 in Paris, France.
- His mathematical work is differentiated as it stands unique in terms of physics and mathematics combined (Itard, 1981)
- Adrien-Marie Legendre was born to a wealthy family that allowed him to study both, mathematics and physics.
- He began college in the year 1770 at Mazarin College in Paris and continued till the French Revolution.
- Legendre also taught mathematics at the Ecole Militaire in Paris from the year 1775 to 1780.
- In the year 1782, Legendre earned a prize in terms of his work regarding 'evaluating curves identified by cannonballs through accounting for resistance in the air'.
- In the year 1783, Legendre provided research on celestial mechanics and with its success he was granted membership (Itard, 1981)
- In the year 1787, Legendre became member of the British Royal Society.

- Legendre undertook several projects which were connected with the development of trigonometry tables and logarithms.
- While in the year 1793 when the Academy of Sciences was enforced closure due to the French Revolution, Legendry lost all of his family wealth.
- Legendre got married in the year 1793 to Marguerite-Claudine Couhin.
- The very first of Legendre's publication was 'Elements of Geometry' published in the year 1794 (Itard, 1981)
- When the French Academy of Sciences reopened in the year 1795, Legendre was assigned the responsibility of the whole mathematics section.
- The number theories identified by Legendre had been published by him in his published volumes.
- The work of Legendre was highly recognizable and within his life earned him honors, respect and affection.
- His mathematics works are still taught in the modern life and have been enhanced by modern scholars.
- Adrien-Marie Legendre died on 10th January in the year 1833 in Paris, France (Itard, 1981)

Marie Antoinette

- Marie Antoinette was a well-known political figure who originated from Austria (Marrone, 2011)
- Marie Antoinette was the last queen of France before the start of the French Revolution.
- At birth, she was referred as an Archduchess of Austria.
- Marie Antoinette was born on 2nd November in the year 1755 in Vienna, Austria.
- Her name is directly linked with the decline in the morality of French Authority (Marrone, 2011)
- She was the one who resisted the court policy regarding the French Revolution progress and eventually enabled the overthrow of the Monarchy in the year 1792.
- Marie Antoinette was the 11th daughter of Holy Roman Emperor Francis I and Maria Theresa.
- Antoinette was only 14 years old when she got married to Dauphin Louis in the year 1770.
- In her life, Antoinette's close friend was princesse de Lamballe.
- Antoinette's husband was unsupportive for her and did not like her being into politics (Marrone, 2011)
- Marie Antoinette was able to encounter the opposition of Vergennes and Louis XVI.
- Marie Antoinette played a major role with many efforts during the crisis of the year 1789.

- During the mid-year of 1789, Antoinette assigned very little attention to politics as she had been highly disturbed due to her elder son's illness.
- The illness of her elder son became fatal and he died the very next month.
- Antoinette was indeed a sharp political leader who played every move with thorough understanding of the situation (Marrone, 2011)
- The monarchy of Marie Antoinette was eventually thrown in the year 1792.
- The rest of the life of Antoinette was thus spent in Parisian prisons.
- The loyal friend of the queen, princesse de Lamballe was also imprisoned with her.
- The modern history is equipped with a detailed and compulsory knowledge regarding Marie Antoinette which is another victory and achievement for her.
- Marie Antoinette died on 16th October in the year 1793 in Concorde, Paris, France (Marrone, 2011)

Wolfgang Amadeus Mozart

- Wolfgang Amadeus Mozart was originally named as Johannes Chrysostomus Wolfgangus Theophilus Mozart (Barth, 2003)
- He was an influential and a prolific composer within the classical context.
- Most of his classical skills were those which he had inherited through birth.
- Wolfgang Amadeus Mozart was born on 27th January in the year 1756 in Salzburg, Austria.
- He has been extensively recognized as amongst the greatest composers of western music (Barth, 2003)
- Not common for every music artist, Mozart wrote his songs in every genre and excelled each of them.
- In the practical life, Mozart was normally called as Wolfgang Amade or Wolfgang Gottlieb.
- Mozart was the son of Leopold, the author of a famous violin playing manual.
- Mozart since childhood had an attraction towards music.
- At the age of three, he began to play chords (Barth, 2003)
- At the age of four he turned out to compose notes and songs himself.
- Amadeus Mozart and his sister Maria Anna ('Nanner') accompanied him towards singing contests.
- After the death of their family, for their living, Mozart and Maria used to sing at churches, in public and many times in a court.
- The first ever published music of Mozart was in Paris.

- In the year 1767, Mozart was affected by smallpox (Barth, 2003)
- In the year 1769, Mozart was selected as the honorary konzertmeister at the Salzburg court.
- Mozart achieved a fairly good grasp on notes and classical approach while he was only 13 years old.
- Most of the performances done by Mozart were in Italy as well as in London.
- The notes and the manual of Mozart are still present at the Arts museum of Austria.
- Wolfgang Amadeus Mozart died on 5th December in the year 1791 in Vienna, Austria (Barth, 2003)

Eli Whitney

- One of the greatest American inventors with a sharp mind was Eli Whitney (Green, 1997)
- He was vividly known for inventing and introducing the cotton gin.
- The invention of the cotton gin was of immense importance as it gave a successful turn to the economy at the time of the Industrial Revolution.
- Eli Whitney was born on 8th December in the year 1765 in US.
- Not only for cotton gins, but Whitney was also well-known for introducing the concept of mass production of interchangeable parts (Green, 1997)
- Whitney was born to a middle class family while his father was a respectable farmer.
- In the year 1789, Whitney was admitted to the Yale College in order to experience science.
- Whitney completed his graduation in the year 1792.
- In the year 1792, Whitney left for Georgia where he was home and cash less.
- In order to go ahead with the cotton gin project, Eli Whitney initially set up a crude model (Green, 1997)
- His machinery getting him a successful run enabled Whitney to take advantage from patenting his creation in the year 1794.
- In the year 1794, Whitney partnered his business with Miller and began their production of cotton gins.

- In his later years, Whitney has also been reported to invent important machinery, the milling machine, which he never patented.
- Whitney was a down to earth inventor who learned from his experiences and knew his limits.
- While the government had been threatened in the year 1797 for war with France, Whitney took the step of supplying 10,000 muskets in two years (Green, 1997)
- His abilities were strong enough that turned out situations to be having a prescribed solution.
- In the year 1817, Whitney married Henrietta Edwards.
- Whitney's work for the cotton gins and mass production has been highly honored and recognized and his approach is still followed in the modern production units.
- Eli Whitney died on 8th January in the year 1825 in US.
- The incomplete muskets are still preserved at universities to demonstrate production (Green, 1997)

John Dalton

- One important name within the UK for multi-skilled researchers/practitioners is John Dalton (Mollon, Dulai and Hunt, 1997)
- John Dalton was a famous English meteorologist, chemist and physicist.
- He is commonly known for his discovery of atomic theory within the context of chemistry.
- He also laid out extensive research regarding color blindness which he referred as Daltonism.
- John Dalton was born on 6th September in the year 1766 in Cumbria, UK (Mollon, Dulai and Hunt, 1997)
- Dalton was born to a Quaker family of tradesmen where his grandfather was a shoemaker and his father was a weaver.
- The initial education of Dalton was commenced at John Fletcher's Quaker Grammar School in Eagles-field.
- At the age of 12, Dalton began teaching at the grammar school as it was not under direct control of his elder brother.
- With the teaching qualities of the brothers, they purchased another school in Kendal two years later where they taught 60 students.
- For the rest of his life, Dalton had a relatively high interest for meteorological measurements (Mollon, Dulai and Hunt, 1997)
- This further enabled him to practice his skills through maintaining regular weather forecast records.
- In the year 1793, Dalton shifted to Manchester in order to teach mathematics.

- A fair experience of teaching encouraged Dalton to publish his theories and thoughts which he did in his first publication 'Meteorological Observations and Essays' in the year 1793.
- Dalton was able to conclude that the atmosphere is a mixture of 20% oxygen and 80% nitrogen.
- Amongst great achievements of Dalton was him being honored as 'father of meteorology' by scientist John Frederic Daniell (Mollon, Dulai and Hunt, 1997)
- While Dalton arrived at Manchester, he was elected as a member of the Manchester Literary and Philosophical Society.
- In his life, the most important discovery and work of Dalton was the atomic theory.
- He concluded that the atomic powers are a repel situation of the gases combining in the atmosphere.
- Dalton came across various problems, yet his theories and works have been highly honored and respected across the globe, published and mentioned by scholars in every century.
- John Dalton died on 27th July in the year 1844 in Manchester, UK (Mollon, Dulai and Hunt, 1997)

Joseph Fourier

- Joseph Fourier was originally named as Jean-Baptiste Joseph Fourier (Debnath, 2012)
- He was a famous French physicist and mathematician born in Auxerre.
- Fourier was well-known for enabling the evaluation of the Fourier series and their applications in order to evaluate vibrations and heat transfers.
- The Fourier law and its transformation are named in the honor of Joseph Fourier after him.
- Joseph Fourier was born on 21st March in the year 1768 in Auxerre, France (Debnath, 2012)
- Joseph Fourier was also known as an administrator and an Egyptologist.
- Fourier enforced his teachings through his developed mathematical physics within his published book, 'The Analytical Theory of Heat, 1822'.
- The work of Joseph Fourier highly influenced one of the core elements of mathematics, the function of real variables.
- Being the son of a Tailor, the initial education was received by Joseph at a local military school.
- His skills at mathematics were outrageous and later were asked employment in the same school (Debnath, 2012)
- French Revolution highly invaded the mind of Joseph Fourier which thus kept his life on risk.
- In the year 1794 in Paris, Fourier was offered mathematician teacher's employment at the Ecole Normale.
- In the year 1798, Fourier travelled to Egypt for an expedition.

- Till the year 1801, Fourier conducted great research on the antiquities of Egypt.
- Fourier had been sufficiently equipped with much information regarding his visit that he wrote his own book pointing towards the Egyptian culture (Debnath, 2012)
- Joseph Fourier served as the secretary of institut d'Egypte built in Cairo in the year 1798.
- Joseph Fourier was also appointed as the administrator for swamp drainage system at the Grenoble headquarters from the years 1802-1814.
- The achievements of Joseph Fourier were finally accomplished in the year 1822 in Paris.
- His work is highly practicable and is preached around the world in the modern sciences as well.
- Joseph Fourier died on 16th May in the year 1830 in Paris, France (Debnath, 2012)

Alexander von Humboldt

- Alexander von Humboldt was originally named as Friedrich Wilhelm Heinrich (Rupke, 2008)
- He was a Prussian influential proponent of romantic philosophies, a naturalist, explorer, polymath and a geographer.
- He was the younger sibling of the Prussian philosopher and minister.
- Alexander was born on 14th September in the year 1769 in Berlin, Germany.
- He was an individual scientist who was intended in encouraging popularization of science (Rupke, 2008)
- The area of Humboldt Current off the west coast of South America was named in his honor.
- He was the son of an officer within the army of Frederick the Great.
- Alexander and his brother had been raised by their mother after the death of their father in the year 1779.
- Alexander received his initial education privately.
- Alexander did not like studying much as was forcefully being taught with the intention to join the army (Rupke, 2008)
- Following his initial education, he went to Berlin for relevant training where he developed interest in botany.
- Alexander's turning point within sciences started from the year 1789-1780 while he was enrolled at the University of Gottingen.

- In the year 1792, Alexander was offered employment at the mining department of Prussian government and was posted to the Fichtel Mountains.
- At his posting, Alexander invented the safety lamp and supervised the tasks carried out in respect of mining.
- Alexander was the pioneer founder of the modern geomagnetic and meteorological monitoring (Rupke, 2008)
- He made endless efforts in the field of botany which enabled him to set the foundation of biogeography, extensively practiced in the modern world.
- Alexander spent a total of 27 years (1804-1827) in order to make South American expedition data publicly available.
- As part of his personal life, Alexander was a rather friendly person and quickly developed long-lasting friendships, especially with talented scientists in order to learn.
- Through his efforts, works and discoveries, Alexander Humboldt secured high respect and recognition.
- Alexander Humboldt died on 6th May in the year 1859 in Berlin, Germany (Rupke, 2008)

Jane Austen

- Jane Austen was a known English Novelist from the UK (Halperin, 1996)
- She was commonly known for the six of her major novels that represented the reign of the British at the end of the 18th Century.
- Majority of Austen's novels were based on women with regards to their marriages and the constraints through society and social surroundings.
- Jane Austen was born on 16th December in the year 1775 in Steventon, UK.
- The novels written by Jane were distinctive in a way being helpful for the ordinary people within their daily lives (Halperin, 1996)
- Within her lifetime, four of her novels had been published, and many were termed being classic and their success remained many years even after her death.
- Jane Austen was the daughter of Reverend George Austen who was a rector.
- Jane's family had been inheritably involved in the field of acting, even as a part of their regular amusement.
- Jane Austen's writings have been in a varied genre field ranging from parody, comedy, plays, short novels, etc.
- The marriage of Jane Austen itself is a mystery as one night she decided to marry someone while the next morning she changed her mind, where, many contradictions conclude that she had been loving someone who passed away in an accident (Halperin, 1996)

- The closest companion and friend of Jane Austen was one of her five sisters.
- In the writing career of Jane's, she had been frequently travelling to and from Bath and London.
- In the year 1805, Jane's writing faced a break as her father died.
- She and her family were then supported by their elder brother, Edward.
- The very first published novel/book of Jane Austen was 'Sense and Sensibility and Pride and Prejudice' (Halperin, 1996)
- The compiled work of Jane Austen was extensive and is available in original and detox copies around the world in famous libraries.
- Even in the final 18months of her life, Austen spent them writing regarding her illness and the journey of her life spent.
- Jane Austen finally died being her disease fatal on 18th July in the year 1817 in Winchester, UK.
- In the memory and in order for an appreciation, many of the novels of Jane Austen have been enacted in the modern world as films.
- Jane Austen has been a role model for many writers today who can get their required matter just within their surroundings (Halperin, 1996)

Amedeo Avogadro

- Amedeo Avogadro also known and referred as Amedeo Carlo Romano Avogadro and Cerreto (Morselli, 2012)
- Avogadro was an Italian scientist from Turin, Italy.
- Avogadro is famous for the Avogadro's Law which defines the molecular theory explaining the fact that equal volumes of gases will be containing equal number of molecules.
- Amedeo Avogadro was born on 9th August in the year 1776 in Turin, Italy.
- Avogadro was the son of a distinguished lawyer and senator in the Piedmont, namely Filippo Avogadro (Morselli, 2012)
- In the year 1792, Avogadro graduated in jurisprudence but did not practice law until he received his doctorate degree in the year 1796.
- In the year 1800, Avogadro privately engaged himself to study mathematics and physics.
- His main aim and intention was to focus on the elements of electricity.
- In the year 1804, Avogadro was made the corresponding member of the Academy of Sciences of Turin.
- Avogadro received his recognition due to his molecular conclusions that began in the year 1811 (Morselli, 2012)
- The approach Avogadro used was to divide the chemical reactions appropriately and using the density of hydrogen gas for standard comparison.

- In the year 1815, Avogadro married Felicita Mazze and had a total of six children with her.
- He adored his home-town the most and it is hardly that he ever left Turin.
- During his life, his work was normally criticized due to being cited by his own self.
- Later, in the reign of modern physics, his work has been earning sufficient recognition and importance (Morselli, 2012)
- In order to make understandability easier for the chemical reactions he concluded, he developed multi formulas which can make elements clearer.
- The work of Avogadro is practicable around the world and has been worked upon to make necessary changes in accordance with environmental and technological requirements.
- The hypothesis of Avogadro has now been referred as being a law and is known in the modern world as Avogadro's Number (6.022140857 × 1023)
- Amedeo Avogadro died on 9th July in the year 1856 in Turin, Italy.
- (Morselli, 2012)

Carl Friedrich Gauss

- Carl Friedrich Gauss was originally named as Johann Carl Friedrich Gauss (Dunnington, Gray and Dohse, 2004)
- He was a German physicist and a mathematician.
- His contributions to the field of physics and mathematics are vast and highly recognized across the world.
- Carl Friedrich Gauss was born on 30th April in the year 1777 in Braunschweig, Germany.
- He his highly regarded for his contributions within the mathematics field including the numbers theory, geometry, geodesy, probability, etc. (Dunnington, Gray and Dohse, 2004)
- Gauss did not belong from a rich family and he was the only child of his parents.
- The element that differentiates him from the rest of the mathematician was his ability to calculate prodigy.
- Gauss studied mathematics at the University of Gottingen from the year 1795 to 1798.
- The very initial discovery of Gauss was made in the year 1792, that a 17 sided polygon can be constructed through just a ruler and a compass.
- In the year 1797, Gauss presented a complete explanation of fundamental theorem of algebra (Dunnington, Gray and Dohse, 2004)
- Gauss became famous through his two major publications.
- In the year 1801, Gauss published his first text book on algebraic number theory 'Disquisitiones Arithmeticae'.

- Following the first publication, he started his work towards Asteroid Ceres.
- The longest of Gauss's projects was the Hanover territory survey lasting from the year 1818 to 1832.
- Some important and modern used publish of Gauss includes the theory of map construction and the number theories (Dunnington, Gray and Dohse, 2004)
- In the year 1823, Gauss was awarded the prize of Danish Academy of Sciences.
- Gauss also developed his works in respect of map projections, termed as cartography in the late 1800s.
- Gauss is believed to have achieved his long term scientific research aims within his life and is said to be ranked amongst most important mathematicians of all times.
- Gauss died on 23rd February in the year 1855 in Gottingen, Germany.
- After the death of Gauss, most of his findings and influences have been witnessed in various novels (Dunnington, Gray and Dohse, 2004)

Hans Christian Oersted

- Hans Christian Oersted was a Danish chemist and physicist from Denmark (Christensen, 2013)
- He is vividly known for his important discoveries of magnetic fields evolving from electric currents.
- The extensively practiced Oersted's law is named after him in his honor.
- Hans was born on 14th August in the year 1777 in Rudkobing, Denmark.
- He initially worked at a pharmacy which was owned by his father (Christensen, 2013)
- He is the pioneer discoverer of Aluminum in the year 1825.
- Hans was the initial personality who inspired the research over the electromagnetic theory.
- Hans Oersted also did various writings and one of his poetry series 'Luftskibet' became much popular.
- Hans was made a professor in the field of electric sciences at the University of Copenhagen in the year 1806.
- In the year 1822, Hans was appointed as a foreign member of the Royal Swedish Academy of Sciences (Christensen, 2013)
- In the year 1849, he was made the Foreign Honorary member of the American Academy of Arts and Sciences.
- The Technical University of Denmark today was also originally founded by Hans in the year 1829.
- One of the most important of Han's contributions towards chemistry was the discovery of piperine in the year 1820.

- He was the founder of a society which was dedicated in the spread of scientific knowledge in the year 1824.
- Hans Died on 9th March in the year 1851 in Copenhagen, Denmark (Christensen, 2013)
- After his death, since 1903, Hans has been awarded various awards in an honor of producing his researches.
- The Oersted Park in Copenhagen is also named after him in the year 1879.
- The Oersted Park also has a statue of Hans which was mounted in the year 1880.
- The very first Danish Satellite launched in the year 1999 was also named after Hans.
- Before his death, Hans published a book named 'The Soul in nature' that contained all of his work and his detailed biography (Christensen, 2013)

Humphry Davy

- Humphry Davy is honored in the era of physicists and chemists as Sir. Humphry Davy (Knight, 1998)
- He was the 1st Baronet of PRS MRIA FGS FRS.
- Humphry Davy was a Cornish inventor and a chemist.
- He is vividly known for his approach of isolating potassium and sodium through electricity.
- Humphry Davy was born on 17th December in the year 1778 in Penzance, UK (Knight, 1998)
- Davy also discovered the invention of safety lamp for miners.
- Davy is referred as amongst the greatest exponents of scientific approaches.
- Davy belonged to a middle-class family.
- His initial education was obtained from a local grammar school at Penzance in the year 1793.
- After the death of Davy's father in the year 1795, he was appointed as a helping surgeon and was believed to graduate in medicine (Knight, 1998)
- Davy was a humble person and had various hobbies such as fishing, collecting materials, shooting, etc.
- Davy had the intention of pursuing his career in writing poems.
- In the year 1797, Davy started his studies in the scientific field and continued it thoroughly.

- In the year 1805, Davy discovered the production of electricity through simple electrolysis cells.
- In the year 1808, Davy discovered Boron through heating borax with potassium (Knight, 1998)
- He was also able to explain the scientists and students the process of bleaching through the use of chlorine.
- In the year 1812, Davy was married to Jane Apreece.
- Since the year 1825, Davy's health started to decline.
- He fled to England the same year and continued his hobby of writing.
- Humphry Davy died on 29th May in the year 1829 in Geneva, Switzerland (Knight, 1998)

Michael Faraday

- Michael Faraday was a British Scientist from London, UK (Shortland and Yeo, 1996)
- He was a great scientist who is well-known for his research over electrochemistry and electromagnetism.
- His popular conclusions within his discoveries are comprised of electrolysis, induction of electromagnetism and diamagnetism.
- Michael Faraday was born on 22nd September in the year 1791 in London, UK.
- Michael Faraday is known as the greatest scientist of the 19th Century (Shortland and Yeo, 1996)
- Michael's father was a blacksmith.
- Michael was born to a rather poor family where it was almost difficult to eat three meals a day.
- The approaches of Michael have been in line to his religious sect within Christianity, known as Sandemanians.
- The education of Faraday was limited to the ability of reading and writing only through a Sunday school.
- At his early age, Faraday used to earn his living by delivering newspapers (Shortland and Yeo, 1996)
- Books that were bought for rebinding took the attraction of Faraday and he read them.
- At the age of 14, he developed a model of crude electrostatic generator that enhanced his interest within scientific inventions further.

- His initial career started as a chemist.
- In the year 1812, Faraday joined work with Davy, a chemical scientist in Great Britain.
- In the year 1820, Faraday introduced the formulas for carbon and chlorine as C2Cl6 and C2Cl4. (Shortland and Yeo, 1996)
- He discovered various organic compounds amongst which the very first discovered were the Benzene as a permanent gas.
- He was the first person to invent the electric motor.
- In the year 1845, Faraday discovered diamagnetism through refraction of indexes.
- Faraday's works were indeed greatest of his time and are found in the modern world in an enhanced view.
- Michael Faraday died on 25th August in the year 1867 in Molesey, UK (Shortland and Yeo, 1996)

Charles Babbage

- Charles Babbage was born on 26th December, 1791 in the city of London (Hyman, 1982).
- Charles Babbage was born in a Christian family, he had contradiction therefore he studied religion deeply.
- Charles Babbage is considered to be a Polymath: A person who is interested in various subjects.
- He well known for the notable work he did in the field of computer and its making.
- Charles Babbage was a very versatile person of his time: A Mathematician, a Mechanical engineer, an inventor, etc. (Hyman, 1982).
- At a very young age he developed the love for mathematics, and for that he a variety of teachers to help him out.
- In the early 1800, Charles Babbage was accepted at the Trinity College for his initial studies.
- Later, he got a transfer to Peterhouse Cambridge, where an honorary degree was achieved by him.
- Charles Babbage joined the Analytical society at Cambridge as he was disappointed by the qualitative work of it.
- In 1812, Charles got the idea of making a machine to carry out calculations mechanically.
- In 1810s, he designed a calculator which could do mathematical calculation up to 8 decimals (Hyman, 1982).

- In 1823, with the help of government, he made a machine called the Difference engine, which did mathematical calculations up to 20 decimals.
- Charles Babbage is also considered as “Father of the computer” by many known scholars.
- In 1830s, Charles Babbage designed a plan for Analytical engine, which is an ancient type of digital computer.
- Charles Babbage is also famous for Natural Theology, Babbage principle, postal system, etc.
- Charles Babbage married a woman named Georgiana Whitmore on July 25th, 1814.
- He and Georgiana Whitmore had 8 children in total out of which only 4 survived.
- Charles received a Gold Medal from the Royal Astronomical Society of England.
- Charles Babbage dies in his home place in London on 18th of October 1871(Hyman, 1982).
- After his death, his half of the brain was used in an Autopsy, and the other half is preserved at the Hunterian Museum in London.

Charles Babbage

- English polymath.
- A mathematician, philosopher, inventor and mechanical engineer, Babbage originated the concept of a digital programmable computer.
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- He well known for the notable work he did in the field of computer and its making.
- Charles Babbage was a very versatile person of his time: A Mathematician, a Mechanical engineer, an inventor, etc (Hyman, 1982).
- At a very young age he developed the love for mathematics, and for that he a variety of teachers to help him out.
- In the early 1800, Charles Babbage was accepted at the Trinity college for his initial studies.
- Later, he got a transfer to Peterhouse Cambridge, where an honorary degree was achieved by him.
- Charles Babbage joined the Analytical society at Cambridge as he was disappointed by the qualitative work of it.
- In 1812, Charles got the idea of making a machine to carry out calculations mechanically.

- In 1810s, he designed a calculator which could do mathematical calculation up to 8 decimals (Hyman, 1982).
- In 1823, with the help of government, he made a machine called the Difference engine, which did mathematical calculations up to 20 decimals.
- Charles Babbage is also considered as "Father of the computer" by many known scholars.
- In 1830s, Charles Babbage designed a plan for Analytical engine, which is an ancient type of digital computer.
- Charles Babbage is Also famous for Natural Theology, Babbage principle, postal system, etc.
- Charles Babbage married a woman named Georgiana Whitmore on July 25th, 1814.
- He and Georgiana Whitmore had 8 children in total out of which only 4 survived.
- Charles received a Gold Medal from the Royal Astronomical Society of England.
- Charles Babbage dies in his homeplace in London on 18th of October 1871 (Hyman, 1982).
- After his death, his half of the brain was used in an Autopsy, and the other half is preserved at the Hunterian Museum in London.

Joseph Henry

- Joseph Henry was an American scientist from New York, US (Moyer, 1997)
- He served as the first secretary of the Smithsonian Institution.
- During his time, Henry had been highly honored and regarded for his contributions.
- Joseph Henry was born on 17th December in the year 1797 in New York, US.
- Joseph Henry was born to a very poor family and his father passed away in his early teenage (Moyer, 1997)
- His most important principle of electricity was the self-induction, playing the greatest role in electric circuitry.
- Joseph Henry worked with electromagnets at the Albany Academy in the year 1829.
- In the year 1831, Henry started his project to convert magnetism into electricity.
- In the year 1829, Henry made an electromagnet for the Yale University that was capable of holding 2,063 pounds.
- In the year 1831, Henry also designed and built his own telegraph (Moyer, 1997)
- In the following year, 1832, Henry was able to lay down the laws over which transformers are based.
- The discovery of electromagnet by Henry was practically applied to different devices.

- In the year 1835, Henry invented a doorbell which could be operated from a distance through an electric wire.
- Joseph Henry got married to Hariet Henry in the year 1830.
- Henry had four children, one son and three daughters (Moyer, 1997)
- Henry was made a member of the Unite States Lighthouse Board from the year 1852 until his death.
- In the year 1846, Henry became the very first secretary of the Smithsonian Institution.
- Joseph Henry died on 13th May in the year 1878 in Washington D.C, US.
- After his death in the year 1893, his name was allotted to the standard electric unit of inductive resistance.
- The work of Henry has been highly recognized in the modern world and is still practiced (Moyer, 1997)

Charles Goodyear

- Charles Goodyear was an American self-taught manufacturing engineer and a chemist (Guise-Richardson, 2010)
- He is vividly known for his amazing discovery of the vulcanized rubber.
- He received a patent on his rubber discovery from the United States Patent office in the year 1844.
- Charles Goodyear was born on 29th December in the year 1800 in US.
- The career of Goodyear started being a partner in his father's hardware business (Guise-Richardson, 2010)
- After the business going bankrupt in the year 1830, Goodyear looked ahead to treat the Indian rubber in order to make its use commercially available.
- He discovered vulcanization of rubber in the year 1839 when he accidently dropped some rubber mixed with sulfur on a hot stove.
- He then received his patents and travelled to England in the year 1850 where his patents and articles were displayed in an exhibition.
- In the year 1837, Goodyear was contracted by the U.S government to produce mailbags.
- In the year 1824, Goodyear got married to Clarissa Beecher (Guise-Richardson, 2010)
- Clarissa Beecher bore Goodyear with six of his own offspring's.
- While working for developing rubber, Goodyear came across various acids which were important for further discoveries, including the nitric acid and lead oxide.

- Being continuously exposed towards acids affected the health of Goodyear negatively and twice he was nearly suffocated to death.
- In the year 1837, Goodyear planned to set up a factory with his old friend in order to sell rubber-made products.
- Charles Goodyear died on 1st July in the year 1860 in the U.S (Guise-Richardson, 2010)
- Goodyear's death occurred while he was on he went to see her dying daughter in New York.
- Charles Goodyear is buried in New Heaven at the Groove Street Cemetery.
- The work of Goodyear is undoubtedly a great ease for the modern mankind and his theories are still being practiced.
- The Goodyear tire company found in the year 1898 is named in his honor.
- There is also a school named after Charles Goodyear in Massachusetts (Guise-Richardson, 2010)

Joseph Plateau

- Joseph Plateau was originally named as Joseph Antoine Ferdinand Plateau (Wautier, Jonckheere and Segers, 2012)
- He was a Belgian physicist.
- He was amongst the few people who evaluated the physics behind a moving image.
- Joseph Plateau was born on 14th October in the year 1801 in Brussels, Belgium.
- To enable the illusion of a moving image understandable, Joseph invented a device called phenakistiscope in the year 1832 (Wautier, Jonckheere and Segers, 2012)
- Joseph's father was a talented flower painter in Tournai.
- He was the pioneer discoverer of motion illusion influencing the modern cinemas today.
- While only at the age of six, Joseph was easily able to read and write.
- Since childhood, being at the elementary school, Joseph was highly attracted towards the different chapters of physics.
- He studied at the University of Liege in the year 1829 (Wautier, Jonckheere and Segers, 2012)
- He became a mathematics teacher at the Atheneum school in Brussels in the year 1827.
- In the year 1835, Joseph was selected as the professor of experimental physics at the Ghent University.

- In the year 1815, Joseph lost his parents in an accident which got him severely ill.
- In the year 1840, Joseph married Augustine.
- Augustine bore Joseph two children, a son and a daughter (Wautier, Jonckheere and Segers, 2012)
- His daughter was the first collaborator and biographer regarding Joseph Plateau.
- In the year 1872, Joseph became the member of the Royal Netherlands Academy of Arts and Sciences.
- Due to losing his eyesight by looking at the sun constantly for 25 seconds in the year 1871, Joseph suffered various illnesses.
- Joseph Plateau died on 15th September in the year 1883 in Ghent, Belgium.
- The modern art is definitely an effort of the works of Plateau and the universities across the world highly respect the work of Joseph Plateau (Wautier, Jonckheere and Segers, 2012)

Julius Plucker

- Julius Plucker was a German physicist and a mathematician (Lorenat, 2016)
- He was the main person behind the evaluation of the cathode rays lading towards the finding of electrons.
- His great efforts were in line of the analytical geometry.
- His studies also enhanced in the field of Lame Curves.
- Julius Plucker was born on 16th June in the year 1801 in Wuppertal, Germany (Lorenat, 2016)
- Plucker received his initial schooling at Dusseldorf.
- Plucker attended the university in Bonn, Berlin and Paris.
- Plucker was educated under great French geometers.
- Plucker also conducted extensive researches regarding spectroscopy of various gases.
- In the year 1829, Plucker was made the professor at University of Bonn (Lorenat, 2016)
- Plucker studies were also extended to the fields of curve, duality, line and magnetism.
- In the year 1865, Plucker introduced the line concept through the matching of coordinates.
- Plucker published a wide range of books in his reign.
- His very first book was published in the year 1825 known as Analytisch Geometrische Entwicklungen explaining the methodology of abridged notation.

- His second publication was in the year 1831 which was another volume of the same listed above (Lorenat, 2016)
- In the year 1839, Plucker introduced the theory of Algebraic curves.
- During his life, Plucker won the Copley Medal from the Royal Society in the year 1866.
- Plucker died at the age of 66 on 22nd May in the year 1868 in Bonn, Germany.
- The contributions of Plucker have been highly recognized in his life and after.
- His work is highly practicable in the modern mathematics context today (Lorenat, 2016)

Thomas Davenport

- Thomas Davenport was a Vermont Blacksmith from the US (Davenport, 1929)
- He is well-known for his invention of the very first American DC electric motor in the year 1834.
- His battery-powered electric motor has been revolutionizing the modern world till date.
- Davenport was born on 9th July in the year 1802 in Vermont, US.
- Davenport lived in a village which was named Forest Dale in the town of Brandon (Davenport, 1929)
- Davenport's father was also a blacksmith at Vermont.
- Davenport continued his further inventions through the use of his electric motor development.
- Davenport's researches were amazing as for the wiring of electromagnets he used silk from his wife, Emily's wedding gown.
- Davenport's research in the electric field began in the year 1831 through electromagnets in Crown Point.
- He was the first person to enforce a small car around an electric track (Davenport, 1929)
- In the year 1837, Davenport's inventions have been patented.
- Despite of his ideas, Davenport was short of financial assistance which led him towards publishing his journals.
- In the year 1833, Davenport got married to Emily.

- In the year 1840, Davenport used his electric motor to print The Electro Magnetic and Mechanics Intelligencer.
- Davenport's electric motor was later utilized in an extensive amount to run electric cars and trains (Davenport, 1929)
- In the year 1849, Davenport was assigned a project by Charles Grafton Page in order to build an electromagnetically powered locomotive.
- In the modern world, the inventions of Davenport are being extensively practiced and regularly upgraded with the Hybrid technology as amongst best examples.
- The model electric track developed by Davenport is still framed for the students at the University of New York.
- Thomas Davenport died at a very young age (48) on 6th July in the year 1851 in Salisbury, US.
- Within his life, Davenport received various awards and many monuments have been named after him in his honor (Davenport, 1929)

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John Gorrie

- John Gorrie was an English scientist, inventor and a physician (Brereton, 1997)
- He is vividly known for his invention of the mechanical cooling and the humanitarian system.
- John Gorrie was born on 3rd October in the year 1803 in Nevis, US.
- His main motive was to control the temperature of patients suffering from fever through cooling hospital rooms.
- The early childhood of John was spent in South Carolina (Brereton, 1997)
- He studied medicine at the College of Physicians and Surgeons of the Western district of New York.
- Gorrie was an active physician in the community representing the residential-ship of two hospitals.
- At times, John also served as Postmaster and an active council member.
- He was also referred as amongst the founders of the Trinity Episcopal Church.
- The initial practices of John started through experimenting on ice blocks as they were easily transported through boats from the lakes (Brereton, 1997)
- After the end of the year 1845, John left his education in order to pursue his experiments on refrigeration products.
- In the year 1851, John also received an official patent (8080) for a machine that could make ice.

- In the year 1842, John designed and built an air-cooling device.
- The purpose of making this device was to treat patients suffering from yellow fever.
- It is also reported that John Gorrie never profited from his ice making inventions (Brereton, 1997)
- However, John did travel to numerous cities in order to propose his intentions to financial supports in order to gain sufficient finance to assist his creations.
- John Gorrie died on 29th June in the year 1855 in Apalachicola, Florida, US.
- The reason of Gorrie's death was the failing partnership and criticism which have humiliated him to a great extent causing his health to decline.
- Practices of John have been further taken to extensive scales in the modern world and home and vehicle cooling systems can be referred as live examples.
- The Gorrie Square in Apalachicola is named after John Gorrie in his honor (Brereton, 1997)

Christian Doppler

- Christian Doppler was originally named as Christian Andreas Doppler (Stoll, et al., 1992)
- He was an Austrian physicist and a mathematician.
- Doppler is vividly known for his findings of the 'Doppler effect theory'.
- He used the Doppler Effect Theory to evaluate the colors of the binary stars.
- Christian Doppler was born on 29th November in the year 1803 in Salzburg, Austria (Stoll, et al., 1992)
- After his initial schooling, Doppler further pursued mathematics and physics at the Imperial-Royal institute along with philosophy in Salzburg.
- He was also made the assistant at Imperial Royal institute in the year 1829.
- In the year 1835, Doppler began work at the Prague Polytechnic.
- At the age of 38, Doppler published his work for the first time, named as 'On the colored light of the binary stars and some other stars of the heaven'.
- The Doppler Effect theory also became popular with the French and they named it as the Doppler-Fizeau Effect (Stoll, et al., 1992)
- Doppler worked at the Prague Polytechnic for a longer time period.
- He published more than 50 articles on physics, mathematics and astronomy.
- In the year 1847, Doppler planned to study mechanics, mathematics and physics at the Academy of Forests and Mines in Selmecbanya.

- Doppler shifted to Vienna in the year 1849.
- His move to Vienna was due the revolutionary incidents that were having constraints on Doppler's researches (Stoll, et al., 1992)
- Doppler was selected as the head of Experimental Physics at the University of Vienna in the year 1850.
- During the stay of Doppler at Venice, he was diagnosed with pulmonary disease.
- The disease proved fatal and Christian Doppler died on 17th March in the year 1853 in Venice, Austria.
- His tomb has been established at the entrance of the Venetian Island.
- During his reign, Doppler taught a student of his, Gregor Mendel, in-depth in order to further carry his teachings for the modern world (Stoll, et al., 1992)
- Robert Stephenson
- Robert Stephenson was an English railway and civil engineer from the UK (Rolt, 2009)
- He was the only child of the 'father of railways' George Stephenson.
- Robert intended to carry forward the intentions within the rail line of his father's.
- Robert Stephenson is referred as the greatest engineer of the 19th Century.
- Robert Stephenson was born on 16th October in the year 1803 in Wallsend, UK (Rolt, 2009)
- Robert's initial inspiration was his father whom he would watch while working or reading his books.
- The initial work of Robert is inclusive of the Britannia Bridge.
- Robert's initial education trails back from the Bruce's Academy in New Castle followed by University of Edinburgh.

- Till the year 1821, Robert assisted his father at the railway.
- In his spare time, Robert used to amend clocks and repair shoes (Rolt, 2009)
- Robert also served as a mining engineer in Colombia.
- In the year 1833, Robert was elected as the chief engineer of London and Birmingham railways.
- In the year 1829, Robert was married to Frances Nee Sanderson.
- Robert and Frances did not have any of their children.
- His wife Frances (Fanny) died at a very early age in the year 1842 due to suffering from tuberculosis (Rolt, 2009)
- In the year 1849, Robert was awarded with the Fellow of the Royal Society award.
- He further also succeeded for the honorable recognition as 'Knight of the order of Leopold'.
- Some of the greatest projects of Robert within his lifetime are; Rocket, Birmingham and London Railway, High Level Bridge, Royal Border Bridge, Britannia Bridge and Victoria Bridge.
- Robert's work is extensively practiced in an enhanced view in the modern world and every railway in the Europe has a picture of him or his father framed.
- Robert Stephenson died on 12th October in the year 1859 in Northumberland, England (Rolt, 2009)

Justus von Liebig

- Justus von Liebig was originally named as Justus Freiherr von Liebig (Shenstone, 1895)
- He was a German chemist.
- Just made important efforts within the fields of biological and agricultural chemistry.
- Justus was known as the founder of organic chemistry.
- Justus was born on 12th May in the year 1803 in Darmstadt, Germany (Shenstone, 1895)
- Justus was born to a middle-class family where his father, Johann Georg Liebig was hardware merchant and a dry-salter.
- Justus had an attraction towards chemistry since his early childhood.
- From the age of 8-14, Justus attended the local grammar school at the Ludwig-Georgs-Gymnasium.
- On the completion of school, he worked with his father till the age of 16 and was then admitted at the University of Bonn.
- During the youth-age of Justus, he borrowed chemistry books from the royal library and read them (Shenstone, 1895)
- In the year 1822, Justus received his doctorate degree.
- Justus travelled to Paris and stayed there from 1822-1824 discovering the explosive silver fulminate.
- In the year 1824, seeing Justus's talents, he was appointed as a professor at the University of Giessen.

- Liebig sets the roots of teaching chemistry within the boundaries of Germany.
- Liebig is extensively known for the Law of Minimum and the Liebig condenser (Shenstone, 1895)
- In the year 1869, Justus Liebig was awarded with the Albert Medal.
- During his life, Justus trained several of his students his works which were carried on generation to generation benefiting the modern world.
- In the year 1826, Liebig got married to Henriette, the daughter of a state official.
- Justus and Henriette had five children in total however they were differently bought up in religion as the sons being Lutheran and the daughters Catholic.
- Justus Liebig died on 18th April in the year 1873 in Bavaria, Germany (Shenstone, 1895)

Emil Lenz

- Emil Lenz was originally named as Heinrich Friedrich Emil Lenz (Tooker, 2007)
- He was a Russian physicist.
- He belonged from Baltic German ethnicity.
- Lenz is vividly known for his formulation of the Lenz law regarding electrodynamics in the year 1834.
- Emil Lenz was born on 12th February in the year 1804 in Tartu, Estonia (Tooker, 2007)
- Lenz completed his primary and secondary education by the year 1820 from Russia.
- He then enrolled himself at the University of Dorpat in the field of chemistry and physics.
- Lenz travelled on the third expedition around the world in the year 1823 to 1826.
- He was highly attracted by the mechanics of the climatic conditions of the sea and the seawater itself.
- He drafted his experience which had later been published in 'Memoirs of the St. Petersburg Academy of Sciences' (Tooker, 2007)
- From the year 1840 to 1863, Lenz served as the Dean of Mathematics and Physics at the University St. Petersburg, Russia.
- From the year 1863 till 1865, Lenz also served as a Rector.
- Petrischule was also taught by Lenz from 1830 to the year 1831.

- Lenz started his research and studies in the field of electromagnetism from the year 1831.
- Lenz also proposed with the Joule's law in the year 1842 (Tooker, 2007)
- Much of Lenz's efforts are also in line of the electroplating technology.
- In the year 1839, Lenz developed various medallions through his development of electrotyping.
- Lenz had made several contributions to the world which has been further developed by his students for the modern world.
- Emil Lenz died on 10th February in the year 1865 in Rome.
- In the honor of Emil Lenz, a part of the lunar crater of the moon is named after him (Tooker, 2007)

Zerah Colburn

- Zerah Colburn was an English child math prodigy from the U.S (Mortimer, 2005)
- Zerah was born on 1st September in the year 1804 in Vermont, US.
- His skills and abilities allowed Zerah to multiply between the numbers 13 and 97 within his head.
- Until the age of seven, Zerah's parents have taken him as being mentally unwell.
- His abilities were further exposed by his father who had the intention of making excess money (Mortimer, 2005)
- Zerah received a full scholarship at the Dartmouth College based on his exceptional abilities.
- Zerah gained recognition and popularity as being a mental calculator of the 19th century.
- Zerah's abilities were polished further by the passage of time and soon he was able to handle critical scenarios.
- He was famous for his calculation of the square root of 1,449 and the product of 12,225 with 1,223.
- Seeing this, his father took him initially to the national cities where his talent was exposed (Mortimer, 2005)
- Later, Zerah was called internationally and he earned a fair amount of popularity.
- Being offered full scholarship at the Dartmouth College, Zerah's father refused as their income would be affected negatively.

- During his life, famous professors of known universities, such as Harvard, visited Zerah and further enlightened themselves with his talents.
- Several articles were published regarding the exceptional skills of Zerah during his life.
- In the year 1812, Zerah's father transported him to England to be exposed there as well (Mortimer, 2005)
- In the year 1813, Zerah was presented at an important exhibition in Dublin.
- Zerah was then enrolled at the Westminster School in the year 1816 which he continued till 1819.
- In the year 1824, Zerah's father died and Zerah returned to the U.S.
- In the year 1833, Zerah published his first biography.
- Zerah Colburn died on 2nd March in the year 1839 in Vermont, US (Mortimer, 2005)

Joseph Smith

- Joseph Smith also known as Joseph Smith Jr. was an American religious leader (Hill, 1983)
- He was also the founder of the Latter Day Saint movement and of the Mormonism.
- At the age of 24, his book of Mormon was published.
- His book got a fair attraction and several people followed him.
- He had developed a new religion that continued from 14 years after his death (Hill, 1983)
- Joseph Smith was born on 23rd December in the year 1805 in Vermont, US.
- While very young, Smith suffered with crippling bone infection.
- Smith did not pursue any education and was highly attracted towards the deepness of religions.
- Smith concludes that he has seen various illusions amongst which the popular had been two passengers, mainly God and Jesus.
- In the year 1830, the translated the publishing of the plates through the Book of Mormon (Hill, 1983).
- In the year 1838, he announced that the church of Christ will be re-named as Church of Jesus Christ of Latter Day Saints.
- In the year 1831, the followers of Smith intended to communalize the American Zone.
- In the period of 1830s, Smith actively supervised the construction of the Kirtland Temple.

- Smith has been reported to have published several revelations that are referred as scriptures by his followers.
- Smith is taken as a prophet under equality with Moses and Elijah (Hill, 1983)
- Smith was also active in performing religious folk magic with his other family members.
- Through reports from followers, Smith was once visited by an angel, Moroni, in the year 1823 at night while praying.
- Smith got married to Emma in the year 1827.
- Smith and Emma had five children, of them 2 daughters and 3 sons.
- Joseph Smith died on 27th June in the year 1844 in Carthage, Illinois (Hill, 1983)

Thomas Graham

- Thomas Graham was a well-known chemist from the Great Britain (Parry, 2014)
- He was popular for his extensive efforts regarding diffusion of gases and dialysis.
- Graham is well-known for the discovery of colloid chemistry.
- Thomas Graham was born on 20th December in the year 1805 in Glasgow, UK.
- Graham's father was a textile manufacturer (Parry, 2014)
- Graham received his initial education at the Glasgow high school.
- He then was enrolled at the University of Glasgow in the year 1819.
- Graham had a fairly high interest in the field of chemistry.
- Graham completed his MA degree in the year 1824.
- Graham also enrolled as a student at the University of Edinburgh (Parry, 2014)
- He also taught chemistry at the Glasgow Mechanics Institution and at the Portland Street Medical School.
- During his professor-ship, Graham won the Society's Keith Medal for the period 1831-1833.
- In the year 1866, Graham was elected as the Foreign Member of the Royal Swedish Academy of Sciences.
- Thomas Graham is also the pioneer founder of the Chemical Society of London (1841).

- During his life, he was the professor of chemistry at various universities and colleges (Parry, 2014)
- He was appointed as the Chair Person of Chemistry at the Royal College of Science and Technology.
- Within his life, Graham did not marry nor did he have any children.
- Before his death, he was at the position of Master of the Mint.
- Graham died on 16th September in the year 1869 in London, UK.
- He is buried at a family plot in Glasgow Cathedral (Parry, 2014)

Jean Eugène Robert-Houdin

- Jean Eugene Robert-Houdin was a French magician (Robert-Houdin, 1859)
- He was the most popular for being the father of modern conjuring.
- His father was Prosper Robert whose job was to make watches.
- His mother passed away while Jean was quite young.
- At the age of eleven, Jean was sent to the University of Orleans which was thirty five miles away from Loire (Robert-Houdin, 1859)
- After graduation, Jean returned back to Blois at the age of 18.
- His father intended him to work as a lawyer however he continued his profession being a watchmaker.
- He started a job as a clerk at the attorney's office due to exceptional penmanship skills of Jean.
- However, Jean still had no interest in the profession of law and he was retuned back to his father where he worked with his cousin as a watchmaker in partnership.
- Jean was adhered towards magic when at home he read a book 'Scientific Amusements' (Robert-Houdin, 1859)
- He learned the basics of magic and was reportedly practicing it all day long.
- Jean was able to learn the secrets of magic yet applying them was difficult.
- In the year 1821, he paid 10 Francs to a man named Maous from Blois in order to receive a series of lessons on magic.

- However, magic was the part time hobby of Jean and he still continued his studies in the field of horology.
- Later when he felt he was established, he set up various watch making businesses in several towns (Robert-Houdin, 1859)
- In the year 1830, Jean got married to Cecile.
- Jean and Cecile had eight children out of which only four survived.
- While Jean was admired by the huge magic shows, he dreamed of having one of his own when one of his friends hired him to perform at private parties.
- Jean got much fame through his 'French Magic' trick.
- Jean Eugene Robert-Houdin died on 13th June in the year 1871 in France (Robert-Houdin, 1859)

Hans Christian Anderson

- Hans Christian Anderson was a Danish author (Zipes, 2014)
- He was much famous for his novels, poetries, plays and poems.
- Around the world, Anderson is vividly known for his fairy tales.
- For the fairy tales, Anderson was not just popular within the young ones, but his writings attracted people from any age or nationality.
- Hans Christian Anderson was born on 2nd April in the year 1805 in Odense, Denmark (Zipes, 2014)
- Anderson was born to a rather poor family.
- The initial education of Anderson was conducted at home by his father, who usually read him the Arabian Nights.
- He was later shifted to a local school for poor children.
- The father of Anderson died in the year 1816 when her mother remarried in the year 1818.
- At the age of fourteen, Anderson shifted to Copenhagen in order to look for employment as an actor (Zipes, 2014)
- Luckily, Anderson got work at the Royal Danish Theatre as he had excellent voice of soprano.
- However, his voice soon got changed and he lost his position.
- Anderson was shortly referred by one of his colleagues that he should focus on poetry and since then he started to begin his writing career seriously.
- Anderson was sent to the grammar school in Slagelse by the director of the Royal Danish Theatre, Jonas Collin.

- Anderson published his first story in the year 1822, named 'The Ghost at Palnatoke's Grave' (Zipes, 2014)
- Till the year 1827, Anderson attended school at Elsinore.
- He included that his schooling days were the bitterest as he stayed at the schoolmaster's home where he was badly abused.
- Anderson has made contributions towards more than 3300 works of his own.
- In the modern world, the Ugly Duckling is one of his creations.
- Anderson died at the age of 70 on 4th August in the year 1875 in Copenhagen, Denmark (Zipes, 2014)

Matthew Fontaine Maury

- Matthew Fontaine Maury was a known astronomer from America (Lewis, 1936)
- He also belonged to the US Navy, was a cartographer, a meteorologist, historian, educator and geologist.
- Maury was born on 14th January in the year 1806 in Virginia, US.
- Maury was also referred as 'The Pathfinder of the Seas'
- During his early age, Maury wanted to pursue naval career like his brother (Lewis, 1936)
- Maury joined the Navy as a midshipman after the death of his father.
- However, Maury's sea expeditions did not last long and his career ended at the age of 33.
- Maury was a talented individual and he used the logs of old ships in order to chart the migration of whales.
- Maury soon published his first writing which was the Wind and Current Charts of the North Atlantic which enabled the sailors to be assisted with the oceanic situations.
- Maury was amongst the individual who assisted the complete launch of the American Association for the Advancement of Science (AAAS) (Lewis, 1936)
- Due to the launch of the American Civil War, the career of Maury ended and he was ordered to leave the country due many reasons on the basis of being a foreigner.
- He then joined the Virginia Military Institute in the year 1872.

- While at the Institute, Maury wrote 'The Physical Geography of Virginia'.
- Maury also studied regarding the extraction of minerals and published various drafts.
- Maury was also a social speaker and gave various sessions regarding weather bureau for land (Lewis, 1936)
- Maury died on 1st February in the year 1873 in Lexington, US.
- His death occurred due to him being exhausted of intense travelling.
- After his death, Maury's body has been put up on display at the Virginia Military Institute library.
- Mary had been originally buried in the Gilham Family Vault.
- Many ships have been named after Maury in his honor (Lewis, 1936)

Isambard Kingdom Brunel

- Isambard Kingdom Brunel was an English civil and mechanical engineer (Brunel, 2011)
- He is believed to be the most prolific and ingenious personality within the history of engineering.
- He is also referred as amongst the engineering giants and one of the important personalities of the industrial revolution.
- Isambard Kingdom Brunel was born on 9th April in the year 1806 in Hampshire, England.
- During Brunel's life time, he built various monuments (Brunel, 2011)
- One of his main creations was the Brunel dockyards.
- Brunel's father worked at block-making machinery.
- The middle name of Isambard (Kingdom) was the maiden name of his mother.
- He was taught drawing by his father who was his early life teacher as well.
- By the age of eight, Brunel had a fair knowledge of the Euclidean Geometry (Brunel, 2011)
- At the age of 15, Isambard's father being accused for having a lot of debts was sent to the debtor's prison.
- At the age of 14, Brunel was enrolled at the University Caen Normandy.
- Brunel had his extreme efforts put up in order to build the Thames Tunnel under the River Thames in London.

- Brunel is vividly known for his amazing design of the Clifton Suspension Bridge in Bristol which he built in the year 1831.
- Brunel got married to Mary Elizabeth Horsley in the year 1836 (Brunel, 2011)
- Brunel and Mary had three children in total, 2 sons and 1 daughter.
- In the year 1833, Brunel was also appointed as the Chief Engineer of the Great Western Railway.
- The London Paddling Station presently had also been built by Brunel in the year 1854.
- Brunel had been a great teacher in his life as well and his students have pursued his work in the modern life to a great extent.
- Brunel died on 15th September in the year 1859 in Westminster, London, England (Brunel, 2011)

Ezra Cornell

- Ezra Cornell was a known American politician, philanthropist and a businessman (Cornell, 1884)
- He was the chief founder of the Western Union
- Cornell was also termed as the founder of the Cornell University.
- Cornel served the nation under presidency of New York state senator and New York Agriculture Society.
- Ezra Cornell was born on 11th January in the year 1807 in New York, US (Cornell, 1884)
- Ezra Cornell was the cousin of Paul Cornell, the Co-Founder of the Hyde Park neighborhood in Chicago.
- Cornell travelled extensively during his life
- He served as a carpenter in the New York state to earn his living.
- Being under an association with a friend, Beebe, he built stone dams and mill race for the town.
- Ezra Cornell married Marry Ann Wood in the year 1831 (Cornell, 1884)
- After his marriage with Marry, Cornell was disowned by the society for marrying outside of the faith to a 'world's woman'.
- This was because Mary Ann was a methodologist.
- Being unable to generate sufficient income, Cornell decided to patent for a new type of plow system in the year 1834.
- The telegraph business of Cornell went quite well.
- From the year 1862 to 1863, Cornell was an active republican member of the New York State Assembly (Cornell, 1884)

- Cornell retired himself from the Western Union in the year 1863
- He then pursued his rest life towards learning philanthropy.
- He also developed the Cornell Library, which was available for the public of Ithaca.
- In the year 1873, Cornell also joined the rail road business but failed miserably due to the Panic created in the year.
- Ezra Cornell died on 9th December in the year 1874 (Cornell, 1884)

David Alter

- David Alter was a prominent American scientist and an inventor (Pratt, 2007)
- He was amongst the well-known scientist of the 19th Century.
- David Alter was born on 3rd December in the year 1807 in New York, US.
- David Alter is known to have a Swiss ancestry.
- David Alter was the son of John Alter (Pratt, 2007)
- David began his career as a scientist and a physician.
- In the 1830s, David Alter married Laura Rowley.
- In the year 1836, David Alter invented the electric telegraph.
- David Alter obtained his medical schooling at the Reformed Medical College in New York.
- In the year 1842, David's wife Laura passed away when he later married her sister Amanda Rowley (Pratt, 2007)
- With Amanda, David had 13 children of his own.
- In the year 1840, David invented the electric buggy which later turned out to be an important part for the invention of modern automobiles.
- Before Graham Bell invented the telephone, David introduced a short range of telephones.
- In the year 1858, David got patents to method for extracting oil from shale and coal.
- David settled in Freeport, Pennsylvania in the year 1837 with his first wife, Laura (Pratt, 2007)

- During his stay at the Freeport, David invented the light spectrum through melting of glass.
- David Alter died on 18th September in the year 1881 in US.
- Much of David's work has been carried forward to the modern era through his published writings.
- Out of the 13 children, not every of them had pursued the teachings of their father.
- The students of David however made efforts in making his researches easy to be applied in every century and for every generation (Pratt, 2007)

Antonio Meucci

- Antonio Meucci was originally named as Antonio Santi Giuseppe Meucci (Campanella, 2007)
- He was the associate of the Giuseppe Garibaldi.
- Antonio Meucci was also a renowned Italian inventor.
- He was popular for developing the very first telephone of the world.
- He set up a voice communication network that connected from his bedroom on the second floor to his laboratory (Campanella, 2007)
- Antonio was born on 13th April in the year 1808 in Florence, Italy.
- He also received a patent for his communication device from the U.S patent office in the year 1871.
- Antonio was the son of Amatis Meucci who was a government clerk and a member of the local police.
- Antonio was enrolled initially in the field of mechanical and chemical engineering at the Florence Academy of Fine Arts at the age of fifteen.
- He was further employed at the Teatro Della Pergola in Florence as a stage technician (Campanella, 2007)
- As a part time work, he was employed as a gatekeeper of the custom office.
- In the year 1834, Antonio developed an acoustic telephone to establish communication between the stage and control room.
- In the year 1834, Antonio got married to the costume designer Esterre Mochi.

- In the year 1835, Antonio and his wife Esterre immigrated to Cuba to find a respectable job.
- In the year 1850, Antonio and his wife again immigrated to the United States and settled in New York (Campanella, 2007)
- In the late 1860s, Antonio got bankrupted due to some debtors and he auctioned his house in the year 1861 to pay off the debts.
- Antonio's wife Esterre got severely ill and died in the year 1884.
- Following her death, 5 years later, Antonio Meucci also died in the year 1889 in New York, US.
- However, there have been conflicts of who was the first inventor of telephone, Graham Bell or Antonio Meucci.
- Antonio and Esterre had no children during their life in order to carry his work ahead (Campanella, 2007)

Napoleon III

- Napoleon III was the first elected president of France from the year 1848 to 1852 (Bierman, 1988)
- Failing to be reelected, Napoleon seized power in the year 1851.
- He became the French emperor from the year 1852 to 1870.
- Napoleon III was born on 20th April in the year 1808 in Paris, France.
- Napoleon III is also regarded for finding the French Empire (Bierman, 1988)
- Napoleon III captured Prussia during the Franco-Prussian war in the year 1870.
- Napoleon III was also known as Louis Napoleon.
- His father was Louis Bonaparte.
- While at the age of fifteen, Napoleon passed his time through learning the Italic language.
- Napoleon received his initial education from the local grammar school of Augsburg from the year 1821-1823 (Bierman, 1988)
- Belonging from a rich family, Napoleon was often taught by private tutors as well.
- After the death of Napoleon's cousin, Duke in the year 1832, Napoleon believed that he was the family claimant for the French Throne.
- He quickly put efforts to complete military training and gained political education regarding economics to achieve the throne.
- Due to the revolutionary war in 1848, Napoleon travelled to Paris but was sent back by the government.

- In order to lead his followers well, Napoleon focused over public opinion in order to take the best decision under their consent (Bierman, 1988)
- He highly encouraged works for the public including the building of roads, dams, railroads, etc.
- He kept the economy stable and lowered prices for basic necessities.
- Napoleon got married to Eugenie de Montijo in the year 1853.
- Napoleon and Eugenie had four children in total.
- Napoleon III died on 9th January in the year 1873 in Chislehurst, UK (Bierman, 1988)

Charles Darwin

- Charles Darwin was originally named as Charles Robert Darwin (Himmelfarb, 1959)
- He was an English biologist, naturalist and geologist.
- He was indeed much popular for his efforts within science and its enhancements turning it towards evolution.
- His theory that each species in life has transformed through common ancestors is highly accepted in the modern world.
- Darwin's concepts are taken as forming the foundation of science (Himmelfarb, 1959)
- Charles Darwin was born on 12th February in the year 1809 in UK.
- Charles Darwin was the 6th child of Robert Darwin and Susannah Darwin who were quite wealthy.
- Darwin joined his elementary school in the year 1817.
- Since childhood, Darwin had an attraction towards natural history and collecting antiques.
- In the year 1817, Darwin's mother died when he had to continue school with his elder brother (Himmelfarb, 1959)
- Darwin had been initially studying medicine which he found boring and wanted to do what he liked.
- Darwin had been pursuing his medical education at the University of Edinburgh Medical School.
- Having interest for natural history, Darwin joined the Plinian Society at his university.

- In the year 1831, Darwin accompanied a group of his friends over a survey voyage expedition to the HMS beagle.
- Darwin is also the pioneer founder of transmutation of species (Himmelfarb, 1959)
- Darwin published several journals with his historic and medical interlinked researches for his students.
- Darwin got married to Emma in the year 1839.
- Darwin and Emma had ten children in total whom Darwin educated himself.
- In the year 1853, Darwin was awarded with the Royal Medal.
- Charles Darwin died on 19th April in the year 1882 in Kent, England (Himmelfarb, 1959)

Louis Braille

- Louis Braille was a well-known French inventor (Mellor, 2006)
- He is vividly known for the invention of writing and reading system which can be used by the blind individuals.
- His system got an excellent response and is unchanged till today.
- His system is known as Braille around the globe.
- Louis Braille was born on 4th January in the year 1809 in Coupvray, France (Mellor, 2006)
- Braille himself was blinded by both eyes due to being met with an accident in the early childhood.
- However, being an intelligent kid, Braille mastered anything he did despite of his disability.
- Braille did excellent in education.
- He was awarded with full scholarship at the Royal Institute for Blind Youth.
- At the institute, Braille did efforts to produce a tactile code enabling blind people to write and read efficiently (Mellor, 2006)
- Braille introduced his system and invention the first time in the year 1824.
- As a hobby, Braille wanted to be a musician.
- While Braille grew up, he started his career through teaching at the institute as a professor.
- Braille mostly received knowledge from the Hauy books which were available in all shapes and sizes.

- By the end of year 1833, Braille had full control of the professorship at his institute and was adored by the students highly (Mellor, 2006)
- His Braille system was basically an effort in order to bridge the gap between the sense of sight for those who can see and hearing for those who were deaf.
- His initial edition of the system was published in the year 1829 while the next edition followed its launch in the year 1833.
- Braille was usually ill as he was a sick child since birth.
- Braille spent 16 years of his life fighting with illness.
- His illness being fatal lead towards his death on 6th January in the year 1852 in Paris, France (Mellor, 2006)

Benjamin Peirce

- Benjamin Peirce was a popular American mathematician from the US (Archibald, et al., 1925)
- Pierce taught at the Harvard University for a period of more than 50 years.
- His contributions within the context of teaching were extensive.
- Pierce basically taught subjects, inclusive of algebra, statistics, celestial mechanics, number theory and mathematics philosophy.
- Peirce was born on 4th April in the year 1809 in Massachusetts, US (Archibald, et al., 1925)
- Peirce was the son of the librarian of the Harvard University.
- Peirce graduated from the Harvard University in the year 1829.
- However, he did not leave the university and continued there as a tutor.
- Later in the year 1831, Peirce was selected as the professor for mathematics.
- In the year 1842, Peirce also pursued with studying and researching over astronomy (Archibald, et al., 1925)
- He was made the director of the U.S Coast survey in the year 1867.
- He was also elected as the Foreign Member of the Royal Society of London in the year 1852.
- Benjamin Peirce was amongst very few American Scientists whose researches and findings have been termed as being 'World Class'.
- Peirce strictly condemned the trend of slavery.

- The field within which Peirce mastered greatly was statistics within which he developed the Peirce's Criterion to treat the statistical outliers (Archibald, et al., 1925)
- In the year 1838, Peirce was married to Sarah Hunt Mills.
- Peirce and Sarah had five children in total, one son and four daughters.
- Peirce took efforts to educate his son greatly and thus his ideas were later adopted by his son.
- In order to award Peirce for his contributions, The Lunar Crater Peirce has been named after him.
- Benjamin Peirce died on 6th October in the year 1880 in Massachusetts, US (Archibald, et al., 1925)

Abraham Lincoln

- Abraham Lincoln was a known personality worldwide and is still known extensively (Thomas, 2008)
- He was an American Lawyer and a Statesman.
- He served the American nation as a president from March 1861 till 1865.
- The American Civil war was lead by Abraham Lincoln.
- Abraham Lincoln was born on 12th February in the year 1809 in Kentucky, US (Thomas, 2008)
- Lincoln was born in a rather poor family.
- Lincoln is best known for his anti-slavery policies, strengthening the federal government and modernizing the US economy.
- Before coming fully to politics, Lincoln served as a lawyer in Illinois.
- He was self taught since the family had affordability issues.
- However, he had interest in politics and served the state legislation and congress (Thomas, 2008)
- However, he was condemned by majority leading him to leave politics.
- Yet, in the year 1858, Lincoln was again forced to come back to office.
- Lincoln was elected as the president in the year 1860.
- Lincoln was the son of Thomas Lincoln who was a farmer and his mother Nancy Lincoln.
- Lincoln also had a step mother whom his father later married in the year 1819, with whom Lincoln became much closer (Thomas, 2008)
- Lincoln got married to Mary Todd in the year 1842.
- Lincoln and Mary had four of their children.

- Earlier in the year 1832, while at the age of 23, Lincoln and his partner Denton started a small general store in New Salem which Lincoln further sold while going into politics.
- Lincoln also served as the postmaster of New Salem in the same year.
- Abraham Lincoln died on April 15th in the year 1865 in Washington D.C, being assassinated (Thomas, 2008)

Theodor Schwann

- Theodor was a well-known German physiologist and a physician (Florkin, 1957)
- His significant and important contribution to the century was the extension of cell theory for the animals.
- Theodor Schwann was born on 7th December in the year 1810 in Neuss, Germany.
- Schwann also discovered the Schwann cells in the peripheral nervous system.
- He is also regarded for the invention of metabolism (Florkin, 1957)
- Schwann was the son of Leonard Schwann who was a goldsmith.
- Schwann studied his initial schooling at the Three Kings School.
- Schwann belonged from devout Roman Catholic ethnicity.
- Schwann was enrolled at the University of Bonn in the year 1829.
- He completed his bachelor's in philosophy and received his degree in the year 1831 (Florkin, 1957)
- Schwann was also the founder of scientific medicine in Germany.
- In the year 1831, Schwann enrolled himself at the University of Wurzburg to gain clinical training sessions.
- In the year 1833, Schwann went to the University of Berlin.
- In the year 1834, Schwann undertook the medicine practice examination which he successfully passed.
- In the year 1834, Schwann started his career as an assistant at the Museum of the University of Berlin (Florkin, 1957)

- Schwann researched over the animal tissues through the powerful microscopes that took his attention.
- Soon, Schwann was involved in the construction of devices and apparatus to conduct his own experiments.
- In the year 1839, on his return to Bonn, Schwann was made the Chair of Anatomy at the University of Catholic Leuven, Belgium.
- After excess contributions within the science field, Schwann took retirement in the year 1879.
- Theodor Schwann died on 11th January in the year 1882 (Florkin, 1957)

Asa Gray

- Asa Gray was a known personality belonging from America making great efforts in the history (Dupree, 1988)
- Asa Gray was an American botanist of the 19th Century.
- His theory of Darwiniana had been significantly important to evaluate the no-relation between science and religion.
- Asa Gray was born on 18th November in the year 1810 in New York, US.
- Asa Gray taught botany at the Harvard University for several decades (Dupree, 1988)
- Gray took every decision under deep analysis of great scholars of the time including Charles Darwin.
- In order to collect the most accurate and substantial results, he travelled frequently to England and different areas of the US.
- The most important of the works of Gray in botany was found within his publication 'Manual of the Botany of the Northern United States'
- Gray was the eldest amongst all his siblings.
- He received his initial education at the Clinton Grammar School from the year 1823 to 1825 (Dupree, 1988)
- Gray loved reading and during his school life he read several books from a nearby library.
- In the year 1825, Gray got enrolled at the Fairfield Academy in order to pursue his medical education.
- There, Gray began to experience through experiments regarding extensive botany.

- In the year 1832, Gray was selected to teach chemistry and botany at the Bartlett's High School in Utica.
- The botany career of Gray actually began in the year 1836 when he was selected as the botanist for the United States Exploring Expedition (Dupree, 1988)
- Gray also became the permanent professor for botany at the newly started University of Michigan in the year 1838.
- Along with botany, Gray also researched in the field of zoology to enrich his skills.
- Gray got married to Jane Loring in the year 1848.
- Gray and Jane had a total of six children of them.
- Asa Gray died on 30th January in the year 1888 in US (Dupree, 1988)

James Young Simpson

- He was born on 7 July, 1811 (Simpson, 1896)
- Simpson was born in Bathgate the child of Mary Jervais and David Simpson, a baker.
- He went to the neighborhood school, and in 1825, at 14 years old, entered the University of Edinburgh to contemplate for an expressions degree.
- After two years he started his study at the University, graduating with aMBChB.
- He turned into a licentiate of the Royal College of Surgeons of Edinburgh in 1830 and got his MD in 1832 (Simpson, 1896)
- As an understudy he turned into a part and after that Senior President of the Royal Medical Society, starting a deep rooted enthusiasm for the Society's headway.
- At 28 years old, he succeeded James Hamilton as Professor of Medicine and Midwifery at the University of Edinburgh.
- In 1838, he structured the Air Tractor, the soonest known vacuum extractor to help labor.
- His first job was as a general specialist in the Stockbridge area based at 2 Deanhaugh Street.
- In 1847, Simpson initially exhibited the properties of chloroform upon people, amid try different things with companions in which he discovered that it could be utilized to put one to rest (Simpson, 1896)

- He was an early backer of the utilization of birthing assistants in the healing center condition.
- Simpson was chosen President of the Royal College of Physicians of Edinburgh in 1850.
- Simpson introduced iron wire sutures and acupressure, a method of arresting hemorrhage, and established the long obstetrics forceps that are named after him.
- He is also known for his writings on medical history on pathology and hermaphroditism.
- He was appointed one of the queen's physicians for Scotland in 1847 (Simpson, 1896)
- He was created baronet in 1866.
- Simpson married his cousin Jessie on 26 December 1839. They had 9 children.
- Simpson was a devout member of the Free Church of Scotland.
- In 1850 Simpson was announced as president of Royal college of Edinburgh.
- He died on 6 May, 1870 (Simpson, 1896)

Robert Bunsen

- He was born on Mar 30, 1811 (Jensen, 2005)
- Robert Bunsen contemplated science, mineralogy and arithmetic at the University of Gottingen.
- In 1831 he earned his PhD and went through two years voyaging and examining in Germany, France and Austria.
- Amid his movements he met FriedliebRunge who had found aniline and segregated caffeine.
- In 1833 Bunsen turned into an instructor at the University of Gottingen (Jensen, 2005)
- While there he explored different avenues regarding the metal salts of arsenous corrosive.
- From 1836 to 1839 Bunsen educated at the Polytechnic School of Kassel.
- He acknowledged a partner residency at the University of Marburg where he turned into a full educator in 1841.
- Cacodyl is to a great degree dangerous and immediately combusts in dry air.
- A cacodyl blast left Bunsen daze in his correct eye (Jensen, 2005)
- In 1841 he created the Bunsen cell battery which supplanted the costly platinum anode with carbon.
- In 1851 he was an educator at the University of Breslau.
- In 1852 he turned into an educator at the University of Heidelberg where he proceeded with his investigations on the electrolysis of metals.

- Utilizing electrolysis he had the ability to deliver unadulterated types of chromium, magnesium, aluminum, sodium, barium, calcium and lithium among others.
- In 1855 he and his colleague, Peter Desaga, culminated the Bunsen burner, a research center gas burner with a hot, clean fire (Jensen, 2005)
- He and his partner, Henry Enfield Roscoe, found the correspondence law which expresses that there is an opposite connection between the power and term of light which decides the response of light touchy materials.
- In 1859 he proceeded with his work on range investigation with Gustav Kirchhoff.
- In 1859 Bunsen and Kirchhoff designed an early spectroscope.
- In 1877 they shared the Davy Medal "for their looks into and disclosures in range examination."
- He died on Aug 16, 1899 (Jensen, 2005)

Henry Bessemer

- He was born on 19 Jan, 1813 (Bessemer, H., 1989)
- Henry was conceived in Charlton, child of effective designer Anthony Bessemer.
- Henry Bessemer's soonest effective creation was a perplexing steam-driven machine for making the bronze powder utilized in gold paint.
- The main place bronze powder had been accessible was Nuremberg, Germany and it was over the top expensive.
- His father invented the process for making gold chains (Bessemer, H., 1989)
- The new Bessemer process made the make of bronze powder less expensive and less complex and marked down the cost to 1/40th of its past expense.
- From 1850 to 1855 Bessemer dealt with the issue of making shabby steel for use in different businesses.
- Preceding the Bessemer procedure, steel was restrictively costly to deliver and numerous enterprises needed to depend on cast press which was substantially less solid.
- There had been numerous railroad connect catastrophes when solid metal extension bolsters essentially fallen.
- On 24 August 1856 Bessemer announced his procedure to the British Science Association in a paper titled "The Manufacture of Iron without Fuel (Bessemer, H., 1989)

- The Bessemer procedure constrained air through liquefied iron which raised the temperature, consumed off the contaminations and evacuated carbon which disentangled the produce of steel.
- Since Bessemer was not able induce existing iron organizations to utilize his technique, he and his accomplices constructed their own gigantically beneficial iron works in Sheffield, England.
- From 1838 to 1883 Bessemer held 129 licenses for his different innovations including for mobile kicks the bucket for emblazoned government stamps, a gadget to extricate sugar from sugar and a machine to clean jewels.
- In 1868 he structured a gimbaled gadget for traveler boats to keep them level amid unpleasant oceans however it was never put into real use.
- In 1857 he got a patent for a machine to move steel and his unique thought is still being used (Bessemer, H., 1989)
- He paid the Mushet family off since he used Robert Mushet's idea for increasing the creation quality in 1866.
- In 1879 Bessemer was knighted for his commitments and was made a Fellow of the Royal Society.
- Henry is buried in the same cemetery as Sir Henry Tate and Sir Henry Doulton.
- In the town of Rotherham, there is a road named after him. It is called Bessemer Way.
- He died on Mar 15, 1893 (Bessemer, H., 1989)

Alexander Parkes

- He was born on Dec 29, 1813 (Crowdy, 1976)
- He created Parkesine, the first man made plastic.
- He apprenticed to a metal author at Messenger and Sons before going to work at Elkingtons.
- arkes took out his first patent (No. 8005) in 1841 on a procedure for electroplating sensitive show-stoppers.
- Parkes' most essential improvement identified with metallurgy came amid the three years he spent as the director of the development of an Elkington and Mason copper purifying plant in Pembrey, South Wales (Crowdy, 1976)
- He imagined a procedure by which silver is extricated from lead by utilizing liquid zinc, a technique that ended up known as the Parkes procedure.
- The Parkes procedure increased impressive consideration in Germany and was broadly utilized in the United States for quite a while.
- In 1846 he licensed the chilly fix process for vulcanizing elastic, called by Thomas Hancock "a standout amongst the most significant and remarkable revelations of the age."
- In spite of the fact that Parkes was a productive designer and was granted 66 licenses amid a time of 46 years, the vast majority of which identified with metallurgy, he additionally added to progressions in different regions.

- In 1846 he was allowed a patent for the creation of a cool vulcanization process (Crowdy, 1976)
- Parkes is best associated with his creation of what might later be produced into plastics.
- He spearheaded the expansion of little amounts of phosphorus to metals and composites, and created phosphor-bronze (patent 12325 of 1848, taken out together with his sibling.
- In 1850 he created and protected the Parkes procedure for financially desilvering lead, additionally licensing refinements to the procedure in 1851 and 1852.
- In 1866 he set up The Parkesine Company at Hackney Wick, London, for mass minimal effort generation.
- In 1856, he patented Parkesin, the first thermoplastic celluloid based on nitrocellulose treated with a selection of solvents (Crowdy, 1976)
- In total, Parkes held at least 66 patents on procedures and products commonly linked to electroplating and plastic development.
- Parkes was twice married.
- In Sept 2005, Parkes was subsequently inducted into the American Plastics Academy's Hall of Fame.
- He died on June 29, 1890, West Dulwich, London, United Kingdom.
- He is buried in West Norwood Cemetery, London, although his memorial was removed in the 1970s (Crowdy, 1976)

Claude Bernard

- He was born on 12 July, 1813, Rhône, France (Gross, 1998)
- Bernard was the first to characterize the term milieu intérieur, which is currently known as homeostasis.
- He got his initial training in the Jesuit school of that Saint-Julien, and afterward continued to the school at Lyon, however he before long left to end up partner in a pharmacist's shop.
- Regardless of growing up with a religious training, Bernard was not religious.
- His spare time was given to composing a vaudeville parody, and after this achievement he was moved to endeavor a writing dramatization in five acts, Arthur de Bretagne (Gross, 1998)
- At the age of twenty-one of every 1834, , he went to Paris, with his play and a prologue to Saint-Marc Girardin, however the faultfinder discouraged him from composing as a calling, and persuaded him rather to take up the investigation of drug.
- Bernard pursued this counsel, and in due time he moved toward becoming interne at the Hôtel-Dieu de Paris.
- Along these lines he was carried into contact with an incredible physiologist named François Magendie, who filled in as doctor at the healing center. In 1841 Bernard progressed toward becoming 'preparateur' or lab collaborator at the Collège de France.

- In 1845, Bernard wedded Marie Françoise "Fanny" Martin for cash; the marriage was organized by a partner and he utilized her endowment helped back his tests.
- He was selected Magendie's delegate educator at the school in 1847, and in 1855 he succeeded him as full teacher (Gross, 1998)
- His exploration field was viewed as sub-par at the time, the lab that was relegated to him was just an "ordinary basement".
- Sometime before Bernard had been the principal tenant of the recently organized seat of physiology at the Sorbonne, yet no research center was accommodated his utilization.
- Louis Napoleon who, after a meeting with him in 1864, fixed the inadequacy, and assembled a research facility at the Muséum national d'Histoirenaturelle in the Jardin des Plantes.
- In 1845 he married Marie Françoise.
- In the meantime, Napoleon III set up a residency for Bernard which he acknowledged, leaving the Sorbonne (Gross, 1998)
- In 1868, he was likewise conceded an individual from the Académiefrançaise and chose to be a remote individual from the Royal Swedish Academy of Sciences.
- Claude Bernard was appointed as a foreign member of the Royal Swedish Academy of Sciences in 1868.
- In 1847 he was appointed as deputy to Dr. François Magendie at the Collège de France.
- He died on 10 Feb, 1878.
- He was given a public funeral, an honor which had never been imparted by France on a man of science (Gross, 1998)

Ada Lovelace

- English mathematician and writer, chiefly known for her work on Charles Babbage's proposed mechanical general-purpose computer, the Analytical Engine.
- Augusta Ada Lovelace was born on 10th of December, in 1815, in the city of London (Moore, 1977).
- She was the countess of Lovelace and daughter of famous poet Lord Byron.
- Ada Lovelace's parents separated after her birth. She did mot know her father and when she was 8, her father died in Greece.
- She was taught science and mathematics by tutors when she used to live with her mother.
- She was called the "Princess of Parallelograms" by the mathematics society.
- She conceptualized the flying machine, at the age of just 12 years.
- Father of the computer, Charles Babbage was Ada Lovelace's mentor.
- At the age of 17 she started working with Charles Babbage.
- Ada Lovelace started studying at University of London, through the courtesy of Charles Babbage.
- In 1835, Ada married William King who became the Earl of Lovelace, later.
- Ada Lovelace and William kind had three children together, and were very supportive of each other (Moore, 1977).

- Ada Lovelace is considered the first computer programmer because she introduced several computer concepts.
- Ada Lovelace's were not notified till 1950', until B.V Bowden republished them.
- Ada Lovelace became a gambler in 1940, and pawned her family's diamonds.
- Once, Ada Lovelace lost over three thousand pounds over a bet.
- There is a computing language which is named after the one and only Ada Lovelace.
- There was a service award which was later named as Augusta Ada Lovelace award to honour her.
- Ada developed a problem of asthma and digestive system in 1837. The medications of these problems made her hallucinate.
- Ada Lovelace died on November 27th, 1852 in Marylebone, United Kingdom (Moore, 1977).
- Ada Lovelace was buried next to her father Lord Byron, whom she never knew.

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- Father of the computer, Charles Babbage was Ada Lovelace's mentor.
- At the age of 17 she started working with Charles Babbage.
- Ada Lovelace started studying at University of London, through the courtesy of Charles Babbage.
- In 1835, Ada married William King who became the Earl of Lovelace, later.
- Ada Lovelace and William kind had three children together, and were very supportive of each other (Moore, 1977).
- Ada Lovelace is considered the first computer programmer because she introduced several computer concepts.
- Ada Lovelace's were not notified till 1950', until B.V Bowden republished them.

- Ada Lovelace became a gambler in 1940, and pawned her family's diamonds.
- Once, Ada Lovelace lost over three thousand pounds over a bet.
- There is a computing language which is named after the one and only Ada Lovelace.
- There was a service award which was later named as Augusta Ada Lovelace award to honor her.
- Ada developed a problem of asthma and digestive system in 1837. The medications of these problems made her hallucinate.
- Ada Lovelace died on November 27th, 1852 in Marylebone, United Kingdom (Moore, 1977).
- Ada Lovelace was buried next to her father Lord Byron, whom she never knew.

Rudolf Virchow

- He was born on 13 Oct, 1821, Germany (Maulitz, 1978)
- His Father was a rancher and the city treasurer.
- He was a splendid understudy and was conversant in German, Latin, Greek, Hebrew, English, French and Italian.
- He graduated at the highest point of his class and was conceded a grant turn into a military specialist.
- On October 21, 1843 he earned his M.D. from friedrich-Wilhelms Institute in Berlin with a proposition on corneal indications of rheumatic sickness (Maulitz, 1978)
- In 1845 Virchow distributed the primary paper depicting leukemia.
- His 190-page paper, Report on the Typhus Epidemic in Upper Silesia was distributed in 1847 and impelled an enthusiasm for general wellbeing in Germany.
- He began a paper, Die Medicinische Reform, to spread thoughts of drug as a sociology and the doctor as a backer for poor people.
- In 1849 he acknowledged the Chair of Pathological Anatomy at the University of Wurzburg.
- In 1854 he came back to Charite as leader of the Institute of Pathology (Maulitz, 1978)
- He was one of the originators of the Deutsche Fortschrittspartei party and spoke to it in the Prussian House of Representatives.
- He was an enormous essayist and composed more than 2000 logical papers and compositions.

- In 1858 he distributed his most celebrated work, Cellular Pathology, which based on the past work of different researchers and rejected the possibility of unconstrained age.
- He established the fields of relative pathology and cell pathology and was the first to connect human and creature ailments.
- He depicted and named a few ailments including leukemia and was the first to connect disease to ordinary cells (Maulitz, 1978)
- Virchow named numerous therapeutic and logical terms including chromatin, parenchyma and spina bifida.
- Virchow was the first to find the value of hair analysis in criminal examinations.
- He made broad investigations of hair, skin and eye shading and expressed that there was no Aryan race.
- In 1861 he was chosen remote individual from the Royal Swedish Academy of Sciences and in 1862 was granted the Copley Medal.
- He died on Sept 5th, 1902 (Maulitz, 1978)

Gregor Mendel

- He was born on 20 July, 1822 (Mendel, Corcos and Monaghan, 1993)
- Johann Mendel was conceived in HeinzendorfbeiOdrau in Moravia.
- He experienced childhood with a ranch that had been in the family for more than 130 years.
- From 1840 to 1843 he contemplated reasoning and material science at the University of Olomouc Faculty of Philosophy.
- He joined the Augustinian Friars and took the name Gregor (Mendel, Corcos and Monaghan, 1993)
- He turned into a priest in 1847 and turned into a secondary teacher in 1849.
- From 1851 to 1853 he went to the University of Vienna where he considered science, science and material science.
- In the wake of finishing his investigations in 1854 he came back to the religious community and for the following 16 years showed secondary school material science at a school in Brunn.
- Mendel was keen on plant science and heredity and somewhere in the range of 1856 and 1863 he developed and tried exactly 29,000 pea plants in the religious community plant.
- The importance of variability and its evolutionary implications were largely overlooked (Mendel, Corcos and Monaghan, 1993)
- He inventoried the heredity of seven attributes in peas: seed shape, blossom shading, seed coat tint, pod shape, unripe pod shading, bloom area and plant stature.

- His investigation uncovered that one fourth of the plants had purebre passive alleles, one half were mixture and one fourth were thoroughbred prevailing.
- Around 1854, Mendel began to research the transmission of hereditary traits in plant hybrids.
- These outcomes drove him to make the Law of Segregation which expresses that different haphazardly from one another amid the generation of gametes so the posterity will acquire one allele from each parent.
- The Law of Independent Assortment expresses that each match of alleles isolates freely of alternate sets amid gamete development (Mendel, Corcos and Monaghan, 1993)
- The vast majority of Mendel's peers trusted that genetic attributes were gone on through a mixing or averaging of every parent's qualities and Mendel's discoveries were not acknowledged by established researchers until after his demise.
- Mendel likewise explored different avenues regarding bumble bees and hawkweed yet the consequences of the examinations have not endure.
- In 1865 he established the Austrian Meteorological Society and a greater amount of his compositions were about meteorology than about science.
- George is also known as " Father of modern genetics"
- Mendel died on 6 Jan, 1884 (Mendel, Corcos and Monaghan, 1993)

Louis Pasteur

- He was born on Dec 27, 1822 (Geison, 2014)
- Louis Pasteur was conceived in Dole, France to a poor family.
- In 1831 he began primary school in Arbois where he was a normal understudy yet a skilled craftsman.
- In 1840 he earned a B.A. from the College Royal de Besancon and was delegated the post of instructing collaborator.
- In 1844 he entered the EcoleNormaleSuperieure in Paris and got a B.S. in 1845 and in 1847 he presented his proposals in science and material science (Geison, 2014)
- In his most imperative early work he exhibited the rule of sub-atomic chirality which has applications in a few territories of science.
- He demonstrated that microorganisms originate from different microorganisms and do emerge from unconstrained age.
- In 1848 he moved toward becoming teacher of science at the University of Strasbourg and in 1854 he progressed toward becoming senior member of the workforce of sciences at Lille University.
- In 1857 he turned into the executive of logical investigations at the EcoleNormaleSuperieure and where he established a progression of changes to enhance the principles.
- Because of his cruel and dictatorial style, two understudy revolts happened amid his residency (Geison, 2014)
- Pasteur's examinations plainly settled the germ hypothesis and he advanced it to the vast majority of Europe.

- He designed a procedure to warm drain, wine and brew to execute the microorganisms in them and avert ruining.
- In 1862 the French Academy of Sciences offered the Alhumbert Prize to any individual who could demonstrate or refute the hypothesis of un-constrained age.
- In his most celebrated examination, Pasteur demonstrated decisively that germs could just originate from different germs and won the prize and the 2,500 francs.
- In 1865 the silk business was in peril since two parasitic maladies were slaughtering the silk worms (Geison, 2014)
- Pasteur found the microorganism that was tainting the silkworm eggs and that sterilizing the nurseries would stop the infection.
- In 1870 his trials demonstrated that a debilitated type of malady could make resistance ensuing introduction to the causative operators.
- He delivered the principal rabies immunization and in 1885 he utilized it effectively on a tyke who had been destroyed by an out of control hound.
- In 1887 he made the Pasteur Institution and was its chief.
- He died on 8 Sept, 1895 (Geison, 2014)

Alfred R. Wallace

- He was born on Jan 8, 1823, Monmouthshire, UK (Clements and Clements, 1983)
- Wallace had no proper teaching as a biologist and never went to university.
- Likewise his interest in insects produced, he became encouraged analysis about biologists such as Carl Linnaeus, Charles Darwin, and Alexander von Humboldt.
- Wallace spent six long years in South America before cruising back to the United Kingdom in 1852 with his gathering of samples.
- In Brazil he understood that geological hindrances regularly stamp species limits (Clements and Clements, 1983)
- In 2002, perceiving Wallace's revelation, the developmental researcher Richard Dawkins said we ought to discuss the Darwin-Wallace component of common choice.
- Wallace revealed the idea of evolution by natural selection.
- Wallace was a highly innovative intellectual and was not terrified of controversy.
- Wallace enjoyed a high status in his era and received many of science's most high-status awards.
- He was the first biologists to prompt concern about the effects creatures were having on the natural world (Clements and Clements, 1983)
- Wallace spent a lot of time outdoors, both for work and liking.

- He turned into an big figure in England amid the second half of the nineteenth century.
- His plan of the hypothesis of development by common determination, which originated before Charles Darwin's distributed commitments, is his most remarkable heritage.
- Wallace married Annie Mitten in 1848, with which he had three children.
- Wallace's two-volume Environmental Distribution of Wildlife and Island Life became the standard authorities in zoogeography (Clements and Clements, 1983)
- Wallace received many awards including Royal Medal from Royal society London.
- He was also given honorary Doctor of Philosophy from the Universities of Dublin and Oxford.
- In 1893 He won election to the Royal Society.
- Wallace published 21 books, and the list of his articles, essays, and letters in periodicals contains more than 700 items.
- He died on Nov 7, 1913, Dorset, UK (Clements and Clements, 1983)

James Clerk Maxwell

- He was born on June 13, 1831 (Tolstoy, 1982)
- James Clerk Maxwell was conceived in Edinburgh, Scotland and was the single offspring of a blue-blooded family.
- In his initial years he was self-taught in the works of art by his mom and in November 1841 at 10 years old he entered Edinburgh Academy.
- When he was 13 he won the Mathematics Medal and the principal prize in both English and verse.
- At 14 he composed a logical paper on utilizing a bit of twine to draw scientific bends (Tolstoy, 1982)
- He composed two primary papers, Oval Curves and Rolling Curves for the Transactions of the Royal Society of Edinburgh however was viewed as too youthful to even consider presenting them himself.
- In 1847 he entered the University of Edinburgh and his tests with spell-bound light prompted his disclosure of photo elasticity as a method for deciding the pressure circulation in physical items.
- In October 1850 he entered Cambridge University and got his degree in arithmetic in 1854.
- In 1855 he introduced his paper, Experiments on Color to the Royal Society in which he demonstrated that white light is a blend and portrayed the standards of shading mix.
- On October 10, 1855 he was made a kindred Trinity College and was requested to address on hydrostatics and optics (Tolstoy, 1982)

- In February 1856 he connected for and got the Chair of Natural Philosophy at Marischal College, Aberdeen.
- In 1857 he got the Adams Prize for his paper "On the solidness of the movement of Saturn's rings" which demonstrated they were neither fluid nor strong yet were made out of little particles in circle.
- In the 1980 the Voyager affirmed Maxwell's speculation with an immediate fly-by.
- In 1860 he acknowledged the Chair of Natural Philosophy at King's College, London however a genuine instance of smallpox deferred his landing by a couple of months.
- In 1860 he was granted the Rumford Medal by the Royal Society for his work on shading and in 1861 was chosen to the Society (Tolstoy, 1982)
- In 1861 he distributed On physical lines of power which depicted electromagnetic enlistment and attractive motion.
- In 1871 he turned into the principal Cavendish Professor of Physics at Cambridge and administered the advancement of the Cavendish Laboratory.
- His most eminent accomplishment was to plan the traditional hypothesis of electromagnetic radiation, uniting out of the blue power, attraction, and light as various appearances of a similar wonder.
- He was also a main inspiration on other main geniuses, alike Albert Einstein.
- He died on Nov 5, 1879 (Tolstoy, 1982)

Alfred Nobel

- He was born on October 21, 1833, Stockholm, Sweden (Fant, 2006)
- Alfred Bernhard Nobel was a Swedish chemist, engineer, inventor, businessman, and philanthropist.
- Alfred wound up keen on building and explosives at an early age, bolstered by his dad, who was additionally an architect.
- His dad, who developed both the way toward making pressed wood and the torpedo, affected Nobel's interests in science and concocting.
- Alfred was just in his twenties when he petitioned for his first of 350 known licenses, this one for a gas meter (Fant, 2006)
- His family started in genuinely outrageous destitution, yet his dad's manufacturing plant changed to making weapons for the Crimean War. Shockingly, it was hard to keep up this financial steadiness once the war finished and they changed back to making family unit products.
- He started a mechanical workshop which provided equipment for the Russian army.
- When he found out about the newfound nitroglycerin, Nobel designed the remote detonator and the impacting top.
- Following a blast at his manufacturing plant that murdered five individuals (counting his more youthful sibling), Alfred concentrated on building up a more secure hazardous, bringing about the improvement of explosive.

- He did this by joining nitroglycerin with diatomaceous earth, which made it less unstable and accordingly more secure to deal with (Fant, 2006)
- Later investigations enabled him to create a gelatin-based nitroglycerin blend that he protected as impacting gelatin, or Gelatignite.
- An even later creation, ballistite, made ready for smokeless explosives and black powder, all antecedents to advanced rocket force.
- Lamentably, numerous in the media and popular culture accepting Nobel's ninety weapons manufacturing plants as an indication of his interest with war and slaughtering, in spite of his faith in pacifism.
- This prompted his moniker in the press as the "dealer of death."
- Because of his extraordinary and lifesaving commitments to science and science, one of the components on the intermittent table is named after him (Fant, 2006)
- Amid his lifetime, two of Nobel's more seasoned siblings had built up oil fields which Alfred put resources into, ending up immensely affluent.
- Over the years he founded factories and laboratories in some 90 different places in more than 20 countries.
- Alfred Nobel’s greatness lay in his ability to combine the penetrating mind of the scientist and inventor with the forward-looking dynamism of the industrialist.
- Alfred Nobel died in San Remo, Italy, on December 10, 1896.
- He left this wealth in trust upon his death to fund the awards that bear his name (Fant, 2006)

Edwin Abbott Abbott

- Edwin Abbott Abbott was born on 20th December 1838, Marylebone, Middlesex, England.
- Edwin Abbott Abbott is known to be a school master and a theologian.
- Parents of Edwin Abbott's were Jane Abbott and Edwin Abbott. His father was headmaster of Philological school in Middlesex.
- Edwin's parents were cousins and both had a surname "Abbott" that is why he has Abbott twice in his name.
- Edwin Abbott had received fine education at the City of London school.
- After his early education he went to St John's College, Cambridge to continue his education, in 1857.
- After tremendous educational undergraduate years, he receiver fellowship at the college.
- In 1863, same year as fellowship, he was ordained a deacon and he became a priest.
- He wanted to marry Mary Elizabeth Rangeley from Unstone, Derbyshire, who was also a fellow.
- Fellows cannot marry each other, therefore Edwin had to resign from his fellowship.
- He and Mary married each other in 1863 and they had a son and a daughter, together.
- In the year 1965, he became the headmaster of City of London School.
- Edwin Abbott Abbott is one of the most significant names in Literature world.

- Some of his literary works are: Shakespearean Grammar (1870), in 1885 life of Francis Bacon, etc.
- Edwin Abbott catered most parts of literature: Biographies, religious research, philology, etc.
- Edwin Abbott Abbott's most famous work is Flatland: A romance of many dimensions. A novel he wrote in 1884.
- Flatland: A romance of many dimensions is categorized as a science fiction, though it was more of mathematical fiction (Abbot, 2017).
- Edwin's Flatland: A romance of many dimensions inspired many novelists and authors of the 20th century.
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Willard Gibbs

- He was born on February 11, 1839, New Haven, Connecticut, United States (Klein, 1990)
- Josiah Willard Gibbs was an American scientist who made important theoretical contributions to physics, chemistry, and mathematics.
- Willard Gibbs was privately educated at Hopkins Grammar School and at age 15 enrolled at Yale University.
- He was awarded his degree four years later, in 1858, with university prizes in Mathematics and Latin.
- He immediately began working for an Engineering Ph.D. at Yale, which he was awarded in 1863, at age 24 (Klein, 1990)
- In 1871, he was appointed Yale's first professor of Mathematical Physics.
- His work's reception brings to mind Isaac Newton's experience when he first published his laws of motion and gravitation.
- In 1873, two years into his professorship, the 34-year-old Gibbs began publishing work that revolutionized our understanding of thermodynamics.
- In 1878, Gibbs published a third thermodynamics paper, the most revolutionary of them all: On the Equilibrium of Heterogeneous Substances Part II.
- Gibbs discovered that in any equilibrium mixture of C components in P phases the number of variables F (Klein, 1990)

- In 2005, a U.S. stamp commemorated Gibbs' graphical thermodynamics methods bearing an image of Gibbs and a two-dimensional contour map of one of his thermodynamic surfaces.
- Gibbs developed a new branch of mathematics called vector analysis/ calculus.
- 02, Gibbs published a new scientific masterpiece – Elementary Principles in Statistical Mechanics. He had worked day and night on the book in late 1900 and early 1901.
- In 1880, Gibbs won the Rumford Prize of the American Academy of Arts and Sciences.
- In 1901, he was awarded the British Royal Society's Copely Medal, the greatest prize in science, equal to a Nobel Prize today (Klein, 1990)
- Except for three years in Europe, Gibbs lived all his life in the large family home his father built in New Haven, Connecticut.
- He founded modern statistical mechanics, and he founded chemical thermodynamics.
- Gibbs was perceived by people who knew him as kind, sympathetic, and happy. He never married.
- Josiah Willard Gibbs died at age 64 on April 28, 1903, just a year after he published his seminal work on statistical thermodynamics. His death was caused by an intestinal obstruction.
- He was buried in the Grove Street Cemetery, New Haven (Klein, 1990)

Alexander Graham Bell

- He was born on March 3, 1847 (Grosvenor and Wesson, 2016)
- Bell had a unique interest in working in auditory innovations as both his mother and his wife were deaf.
- He likewise originated from a few ages of noted scientists on discourse and elocution.
- His effort that prompted the development of the phone as it is realized today were really expected to be a gadget for the meeting debilitated.
- Bell's first creation was a custom made wheat dehusking machine that he made out of oars and nail brushes for his closest companion's dad, who claimed a flour process (Grosvenor and Wesson, 2016)
- The gadget was useful to the point that the factory proprietor gave Bell and his companion a little space in his plant to fill in as his creating lab.
- Bell's mom started to lose her hearing when he was 12, and joined with his relatives' spearheading work in statement and discourse systems for the hard of hearing, served to additionally Bell's enthusiasm for acoustics and correspondence.
- He instructed himself that talking straightforwardly against his mom's brow assisted her with hearing through fleeting conduction, a reality that interested him and assumed a job in his work.
- At 16 years old, Bell turned into a teacher at his own school in return for food and lodging.
- He was an immigrant (Grosvenor and Wesson, 2016)

- Bell and his older sibling Melville in the long run made a robot of the human head which would "talk" when a roars siphoned air through the fake larynx, throat, and mouth. Distinctive words were created by changing the state of the mouth and internal activities.
- Bell turned into an educator at a school for the hard of hearing and attempted to enable hard of hearing understudies to create vocal correspondence.
- In the wake of losing his two siblings to tuberculosis and getting the illness himself, Bell's folks moved with their outstanding child to Canada for his wellbeing.
- While living in Ontario, Bell as often as possible visited the Six Nations save where he took in the Mohawk dialect, as well as made an interpretation of it into his dad's Visible Speech dialect that helped the hard of hearing impart.
- Bell started deal with what we know as the phone with an end goal to spare expenses of building transmit lines that couldn't bolster different lines (Grosvenor and Wesson, 2016)
- With the assistance of Thomas A. Watson, Bell built up his phone first utilizing a fluid transmitter like the structure of Elisha Gray.
- On March 10, 1876, Bell spoke the first words into a telephone: "Mr. Watson...Come here...I want to see you."
- He faced more than 600 lawsuits over his telephone patent.
- He invented a rudimentary metal detector in a quest to save the life of a president.
- He died on August 2, 1922, BeinnBhreagh (Grosvenor and Wesson, 2016)

Thomas Edison

- Thomas Edison was born in Milan Ohio, on 11th February 1847 (Israel & Todd, 1998).
- He was the youngest child of seven children of his parents.
- Thomas Edison's father was political personality from Canada and his mother was a school teacher.
- Thomas Edison was a disturbed child with hyperactive qualities and he used to get distracted easily.
- When his family moved to Michigan, after some time his mother pulled him out of school and taught him at home.
- Edison showed his urge and thirst of knowledge at the age of 11.
- As being on home education, Edison had plenty of time to give to his inventions.
- In 1868 Edison moved to the east of US and started working as a Telegraph operator at Western Union Company (Israel & Todd, 1998).
- The first invention of Edison was Universal sock printer which happened in 1869.
- Till 1870s, Thomas Edison gained reputation as a first-class inventor.
- In 1876, he set up his own research facility in New jersey, with the money he had gathered through his inventions.
- Thomas Edison has numerous inventions under his name, the most significant is the light bulb.
- Some of his other inventions are: Phonograph, film, movie camera, kinetoscope, etc.

- Thomas Edison is not just known for his inventing skills, but he is also known as America's finest businessmen.
- In late 1800s, Edison started taking interest and doing business in mining.
- The business he did was: battery production, rubber business, bulb making, etc.
- Thomas Edison married twice. First in the age of 24, he married Mary Stilwell, who later died. Then in the age of 39, he married Mina Miller
- Thomas Edison had six children in total, 3 from the first wife and 3 from the second.
- Edison won numerous awards, and some of them are: Edward Longstreth Medal and Technical Grammy Award.
- Thomas Edison died on 18th October 1931 because of complications of Diabetes, in New Jersey (Israel & Todd, 1998).

J. J. Thomson

- He was born on December 18, 1856 (Falconer, 1987)
- Joseph John Thomson was born in Manchester, England and was the oldest child of a bookshop proprietor.
- He demonstrated incredible scholastic guarantee at an early age and was admitted to Owens College at the youthful age of 14.
- In 1876 he entered Trinity College, University of Cambridge where he got his B.A in science in 1880.
- He turned into a Fellow of Trinity College in 1881 and got his MA with distinction there in 1883 (Falconer, 1987)
- His Master's proposal, Treatise on the movement of vortex rings, portrayed the arithmetic of William Thomson's vortex hypothesis of iotas.
- He distributed a few imperative papers on numerical and exploratory electromagnetism.
- He estimated the electromagnetic mass of a charged molecule and showed that speed expanded the mass of a charged molecule.
- On 12 June 1884 he was chosen Fellow of the Royal Society and on December 22 of that year progressed toward becoming Cavendish Professor of Physics at the University of Cambridge.
- In 1887 he quantified the warmth produced by cathode beams and found that they were multiple times lighter than the hydrogen molecule and that their mass was equivalent to that of the iota from which they were created (Falconer, 1987)

- In 1888 he distributed Applications of elements to material science and science in which he expressed the arithmetic of the change of vitality.
- In April 1897 he found that cathode beams could be deserted by an attractive field and that their fluorescent way was the equivalent paying little mind to the material or gas utilized.
- This finding proposed that cathode beams were of a similar frame free of their cause.
- He distributed numerous papers setting out the scientific models for James Maxwell's speculations in electromagnetism.
- In 1906 he exhibited that hydrogen had just a single electron for every molecule (Falconer, 1987)
- He structured instruments to pas cathode beams through an attractive field and he was the first to decide the mass-to-charge proportion of cathode beams.
- In 1908 he was knighted for his commitments to science and in 1912 he got the Order of Merit.
- In 1912 he and his exploration colleague estimated the absconding of neon through an electric field and watched two separate diversions demonstrating out of the blue the nearness of isotopes in a non-radioactive component.
- In 1918 he became Master of Trinity College.
- He died on August 30, 1940, Cambridge, United Kingdom (Falconer, 1987)

Sergei Winogradsky

- He was born on September 1, 1856, Kiev, Ukraine (Waksman, 1946)
- Winogradsky attended a university prep school where he was taught Latin and Greek.
- Winogradsky married ZinaidaAlexandrovnaTikhotskaya in 1879.
- In 1881, age 24, he graduated with a science degree, then began post-graduate work investigating the effects of nutrients on yeast growth.
- In 1884 he obtained a master's degree in botany (Waksman, 1946)
- He worked at the University of Zurich and for the Imperial Institute of Experimental Medicine in Russia.
- By 1887, the 31 year old Winogradsky had discovered that Beggiatoa did not obtain energy by any previously known method.
- It was the first time anyone had discovered a living organism that survived using inorganic compounds/minerals as a source of energy.
- During his time in Strasbourg, Winogradsky invented the Winogradsky Column, which is still used today to learn which communities of bacteria are present in a sample.
- In 1888, Winogradsky moved from Strasbourg to the Swiss Polytechnic Institute in Zurich, Switzerland; there he began studying bacteria involved in nitrogen fixing (Waksman, 1946)
- During three years in Zurich, Winogradsky discovered three entirely new genera of nitrogen fixing bacteria.
- He founded microbial ecology, where the interactions of microbes in cycles with their natural environments are studied holistically.

- Winogradsky discovered an entirely new process (chemosynthesis) in which organisms use chemical reactions rather than light as the energy source to build organic matter.
- By 1890, Winogradsky's name had become well-known and respected. He had discovered something remarkable.
- In 1902, Winogradsky became director of the Institute of Experimental Medicine and was appointed editor of Archives of Biological Sciences (Waksman, 1946)
- Winogradskycontinuted as the Institute's director until 1905, when he was 49 years old.
- In 1910, aged 54, he retired to spend most of each year at his family's estates in the Ukraine and winters in his holiday home on Lake Geneva in Switzerland.
- The Russian revolution, which began in 1917, was bad news for wealthy landowners and in 1921 Winogradsky left his homeland permanently. He worked in Belgrade, Serbia for a year.
- In 1922, he was invited once again to join the Pasteur Institute.
- Sergei Winogradsky died in his sleep at the age of 96 in Brie-Comte-Robert, France, on February 25, 1953 (Waksman, 1946)

Nikola Tesla

- Nikola Tesla was a Serbian-American scientist, born on 10th July 1856 (Hunt & Draper, 1964).
- He had a religious background as his father was a priest and, his mother was also a daughter of priest.
- He was the fourth child, out the five children of his parents.
- He was a bright student and had a major interest in the field of Physics.
- Tesla was an inventor, a mechanical engineer, an electrical engineer, and a futurist (Hunt & Draper, 1964).
- He was born and raised in the Austrian Empire which is now a part of Croatia.
- He never married as he thought of women as superior than him in every way.
- Another reason he did not marry was that he tough chastity was beneficial for his scientific skills.
- In 1870s, Tesla received advanced education for physics and engineering.
- In 1880s, he acquired practical experience when he worked at Continental Edison (Hunt & Draper, 1964).
- In 1891 Tesla became the naturalized citizen of the United states of America.
- He was thought of as futurist because of his work in the field of wireless technology.

- Tesla did notable work in Mechanical engineering and electrical engineering. He is famous for these works.
- Some of his noteworthy works are: Alternating current based inventions, high frequency and high voltage experiments.
- The first invention of Nikola Tesla was the voice amplifier for a telephone receiver.
- Some of Tesla's invention are said to be classified. They were confiscated by the office of alien property.
- Tesla also worked with the well-known inventor Thomas Edison, but they eventually got separated due to their conflicts.
- He received numerous awards, such as: Elliott Cresson Medal (1894) and AIEE Edison Medal.
- Though Tesla did great things and won many awards, he could not get his hands on a Nobel prize.
- Nikola Tesla died on 7th January 1943. He was 86 years old, and was staying in hotel in US (Hunt & Draper, 1964).

Heinrich Hertz

- He was born on February 22, 1857 (Buchwald, 1994)
- Heinrich Rudolf Hertz was conceived in Hamburg, Germany and was the child of a prosperous counselor.
- He went to the Gelhrtenschule des Johanneumsgrammer school where he demonstrated a present for dialects, learning Latin, Sanskrit, and Arabic.
- Heinrich also began studying the sciences and mathematics at home, again with the help of a private tutor.
- In spring 1876, aged 19, he moved again, to Dresden, to study engineering (Buchwald, 1994)
- After completing his army service, the 20-year-old Hertz moved to Munich to begin an engineering course in October 1877.
- In 1880 he got a PhD cum laude from the University of Berlin, and in 1883 he accepting a situation as teacher in hypothetical material science at the University of Kiel.
- From 1885 to 1889 while he was educator of material science at the Karlsruhe Polytechnic, he delivered electromagnetic waves and estimated their length and speed.
- His examinations demonstrated the conduct of the electromagnetic waves anticipated by James Maxwell, and he constructed a contraption to gauge the speed of the electromagnetic waves.
- In August 1879, aged 22, Hertz won the prize a gold medal. In a series of highly sensitive experiments (Buchwald, 1994)

- He demonstrated Maxwell's hypothesis that light and warmth are electromagnetic radiations.
- The result of Hertz's work was a highly regarded paper comparing Maxwell's electromagnetic theory with competing theories.
- From 1886 to 1894 he held the post of Professor of Physics and Director of the Physics Institute in Bonn, where he proceeded with his examination on power in tenuous gases.
- Between 1886 and 1889 Hertz distributed two papers on contact mechanics that would demonstrate critical to the field of electrodynamics.
- In 1887 he distributed his paper, "On Electromagnetic Effects Produced by Electrical Disturbances in Insulators." (Buchwald, 1994)
- Hertz found the photoelectric impact which expresses that a charged item loses its charge quicker when presented to bright light.
- He didn't understand the significance and commonsense ramifications of his investigations and did not predict their inevitable use in remote interchanges.
- In 1930 the hertz (Hz) was set up as the name for recurrence supplanting the past "cycles every second."
- J. J. Thomson's discovery was made in 1897, 18 years after Hertz's work.
- He died of Wegener's granulomatosis at the age of 36 in 1894 (Buchwald, 1994)

Max Planck

- He was born on April 23, 1858 (Milroy, et al., 2014)
- Max Karl Ludwig Planck was conceived in Kiel, Germany and was the 6th child.
- His Father, grandfather and great grandfather were all professors.
- In 1867 he moved to Munich and entered the Maximillian exercise room.
- Despite the fact that he was a skilled artist and arranger, he chose to consider Physics and entered the University of Munich in 1874 (Milroy, et al., 2014)
- In 1877 he considered Physics with Hermann von Helmholtz and Gustav Kirchhoff in Berlin.
- In February 1878 he defended his dissertation "On the second law of thermodynamics".
- Between 1880 and 1885 he continued his work on heat theory and in April 1885 he became the associate professor theoretical physics at the University of Kiel.
- In 1892 he turned into a full educator at the University of Berlin and in 1909 he was an Ernest Kempton Adams Lecturer in Theoretical Physics at Columbia University.
- In 1894 he was charged to make vitality proficient lights and directed his concentration toward the issue of dark body radiation (Milroy, et al., 2014)

- In 1897 he distributed his Treatise on Thermodynamics and proposed a reason for Arrhenius' hypothesis of electrolytic separation.
- On December 14, 1900 he displayed a paper to the German Physical Society delineating the Planck propose which expressed that electromagnetic vitality could be transmitted just in quantized shape.
- This methodology is viewed as the introduction of quantum material science and was viewed as one of the logical achievements that most impacted present day physical science.
- In acknowledgment of his making of another part of material science he got the Nobel Prize in Physics in 1918.
- In 1905 the Annals of Physics distributed three of Albert Einstein's papers on extraordinary relativity (Milroy, et al., 2014)
- Planck was named Dean of Berlin University and in 1914 made a residency for Einstein there.
- In February 1944 his house was totally obliterated by Allied bombs and the majority of his papers were lost.
- Planck's home in Berlin was a social place for neighborhood researchers, including Albert Einstein, Otto Hahn and Lise Meitner and they delighted in playing music together.
- Among his numerous honors are the Lorentz Medal in 1927, the Copley Medal in 1929 and the Goethe Prize in 1945.
- He died on October 4, 1947, Göttingen, Germany (Milroy, et al., 2014)

Nettie Stevens

- She was born on July 7, 1861, Cavendish, Vermont, United States (Ogilvie and Choquette, 1981)
- Her father's business prospered in Westford and Nettie attended Westford Academy, a private school. She enrolled there in 1872, aged 11 and graduated in 1880, and aged 18.
- After graduating, Nettie Stevens got work in New Hampshire, about 100 miles from her family, teaching at Lebanon High School for a year.
- It took her only two years to complete the college's four year course. She studied all of the sciences, scoring exceptionally high grades; her grades in Algebra, Chemistry, and Geometry were perfect.
- In 1883, aged 22, Stevens returned to the family home and began teaching at Minot's Corner School in Westford (Ogilvie and Choquette, 1981)
- In September 1896, aged 35, Stevens moved to California. She had been accepted by Stanford University to study for a bachelor's degree, majoring in Physiology. She got her degree in 1899.
- In 1901 Stevens was awarded a President's European Fellowship, and spent the 1901-1902 academic year carrying out research at the Naples Zoological Station in Italy and the University of Würzburg in Germany.
- In 1903, aged 42, Stevens submitted her thesis, which expanded upon the theme of her master's degree.
- While she was working for her master's degree, Stevens discovered two new species of single-celled organisms.

- In 1905 Stevens published a series of papers in which she demonstrated that the sex of an offspring is determined by the chromosomes it inherits from its parents (Ogilvie and Choquette, 1981)
- In 1905 Stevens became an associate in experimental morphology at Bryn Mawr College.
- She never married and had no children.
- In doing so she also provided the first evidence that a physical characteristic, in this case the sex of an individual is linked to differences in chromosomes.
- Nettie Stevens identified a large chromosome and a small chromosome. We now call these X and Y. An individual that inherits XX will be female and XY will be male.
- During her brief career in science, she managed to published about 40 papers and is widely regarded as having expanded the field of embryology and genetics (Ogilvie and Choquette, 1981)
- She determined that sex-determination must come from fertilisation of the egg from the male sperm.
- She earned her PhD from Bryn Mawr College in Pennsylvania in 1903.
- While working at Bryn Mawr, she was able to attain full researcher status.
- She and Richard Lewontin are recognized for their contributions as geneticists.
- Nettie Maria Stevens died aged 50 of breast cancer on May 4, 1912 in Baltimore, Maryland (Ogilvie and Choquette, 1981)

David Hilbert

- He was born on January 23, 1862, Königsberg, which is now part of western Russian known as Kaliningrad (Corry, 1997)
- David Hilbert was a German mathematician.
- From an early age, he was interested in mathematics.
- He eventually enrolled in Konigsberg University in 1880 and graduated with a Ph.D. in mathematics.
- In 1886 he became a mathematics lecturer at the University of Königsberg (Corry, 1997)
- Starting in 1886, David Hilbert worked for nine years at the University of Königsberg, first as a lecturer, then as a professor.
- He also famously developed an algorithm to generate fractals that would fill a shape like a rectangle or cube by drawing a single line that never intersected itself.
- In 1888 Hilbert proved the finite basis theorem for any number of variables.
- In 1895, Hilbert relocated to the University of Gottingen, where he joined some of the most prominent mathematicians of the time as a professor of mathematics.
- At Gottingen, he turned his attention to geometry and published a book titled The Foundations of Geometry in 1899 (Corry, 1997)
- One of Hilbert's most important contributions was the development of what is now known as Hilbert space.

- In 1900 Hilbert took a sweeping overview of mathematics, defining his famous 23 problems.
- In 1902, age 40, he became co-editor of the world's leading mathematical journal, MathematischeAnnalen.
- In summer 1915, Albert Einstein came to Göttingen at Hilbert's invitation to lecture for a week.
- Hilbert extended vector algebra and calculus so they could be used in any number of dimensions (Corry, 1997)
- In 1920 Hilbert founded mathematical formalism.
- In 1907 he took Einstein's Special Theory of Relativity, published in 1905, and showed it could be advantageous to consider it differently.
- David Hilbert retired from his professorship in 1930.
- His retirement years were spent living in Nazi Germany. Jewish mathematicians, many of whom had been his friends, were banished from Göttingen.
- David Hilbert died age 81 on February 14, 1943, in Göttingen. Only about 10 people attended his funeral (Corry, 1997)

Auguste Marie Louis Nicolas Lumière

- He was born on October 19, 1862, in Besançon, France (Neuse, et al., 1996)
- Auguste Marie Louis Nicolas Lumière was a French inventor, successful businessman and a medical professional.
- He started his career as a manager in his father's photographic business.
- Along with his brother Louis Lumière, invented the cinematograph and shot the very first motion picture with it.
- Their invention of Autochrome Lumière, a color photographic technique, also made a mark and earned them Elliott Cresson Medal (Neuse, et al., 1996)
- Auguste's real interest lay in medicine and so from the beginning of the twentieth century he began to concentrate more on it.
- He not only did extensive research on tuberculosis and cancer, but also opened a pharmaceutical company of his own.
- In 1881, Louis invented the 'dry plate' process, later known as 'Etiquette Bleue'.
- By 1894, the company under the guidance of Auguste and Louis Lumière began to produce 15,000,000 plates per year and earned a yearly profit of $15 million.
- In 1894, Antoine Lumière was invited to Pars to attend an exhibition of Thomas Edison's newly invented kinetoscope (Neuse, et al., 1996)

- He was also presented with a length of kinetoscope film by one of Edison's concessionaires.
- By early 1895, the Lumière brothers invented their own device, which they called 'Cinématographe'.
- On March 19, 1895, they recorded their first film titled 'La Sortie de l'Usine Lumière à Lyon' or 'Employees Leaving the Lumière Factory'.
- On December 28, 1895 the Lumière brothers made their public debut at the Grand Cafe on Paris's Boulevard de Capuchines.
- In 1914, Auguste joined the medical profession as a director of the radiological department in the local hospital (Neuse, et al., 1996)
- In 1909, he received Elliott Cresson Medal along with his brothers Louis Jean for their contribution to color photography.
- In recognition of his service to medicine he was made National Order of the Legion of Honor, posthumously, on October 19, 1962.
- The brothers have been included in the Hollywood Walk of Fame for their contribution to motion pictures.
- Auguste married Marie Euphrasie Marguerite Winckler Lumière on August 31, 1893. The couple had two children.
- Auguste Lumière lived until the age of 91 and died at home on April 10, 1954, in Lyon (Neuse, et al., 1996)

Louis Jean Lumière

- He was born on October 5, 1864, Besançon, France (Flori, 2004)
- Louis Lumière displayed his talent for science at an early age, while attending La Martiniere technical high school with his older brother, Auguste, in Lyon.
- Following his high school graduation, Louis Lumière joined his brother and father in Antoine's photography studio in 1880.
- Over the next several years, the family grossed millions of dollars manufacturing the plate under the corporation name Antoine Lumière and Sons Company.
- When their father retired in 1892 the brothers began to create moving pictures (Flori, 2004)
- Lumière by age 18 had opened a factory for manufacturing photographic plates using a highly successful process he had invented.
- The early research in color photography would serve as the foundation for their invention of the Autochrome process, introduced in 1907.
- The first footage ever to be recorded using it was recorded on 19 March 1895.
- The Lumière brothers saw film as a novelty and had withdrawn from the film business in 1905.
- They went on to develop the first practical photographic colour process, the Lumière Autochrome (Flori, 2004)
- Louis Lumière and his brother, Auguste, are reportedly responsible for the world's first commercial motion picture screening.

- Louis and his brother shifted the focus of their experiments to the blossoming field of motion-picture technology.
- In the 1920s, Louis invented a stereoscopic method of photography that created a hologram-like image.
- In December 1895, at the Grand Café in Paris, Louis and Auguste demonstrated their new invention to audiences for the first time.
- The brothers opened theaters throughout the United States, sending crews with equipment to demonstrate the Cinematograph to the delight and awe of growing audiences (Flori, 2004)
- To expand on material with which to demonstrate the invention, Louis began directing his own films shot with the Kinetoscope.
- Over the remainder of his lifetime, he amassed thousands of reels of footage.
- The most celebrated footage is Arrivée d'un train à la Ciotat, which features a train rushing toward the audience.
- He directed about 60 films and produced about 2000, mostly documentaries.
- He diedon June 6, 1948, Bandol, France (Flori, 2004)

Marie Curie

- She was born on November 7, 1867 (Curie and Sheean, 1937)
- Marie Skłodowska Curie was a Polish and naturalized-French physicist and chemist who conducted pioneering research on radioactivity.
- Maria SalomeaSklodowska was naturally introduced to a poor family in Warsaw, Poland which was a piece of the Russian Empire.
- She learned at the Floating University which was a Polish underground school that worked in Warsaw somewhere in the range of 1885 and 1905 and acknowledged ladies.
- She entered the University of Paris in late 1891 where she studied physics, chemistry and mathematics and earned a meager salary tutoring students (Curie and Sheean, 1937)
- Marie and Dr. Pierre Curie were hitched July 23, 1985, and he inevitably left his own field of research to work with her.
- Marie Curie chose to examine uranium outflows as a field of research for her doctoral proposition.
- Pierre had developed a delicate electrometer and she utilized it.
- In 1897 Marie took a situation at the EcoleNormaleSuperieure and she and Pierre proceeded with their exploration in a little, broken shed close to his school.
- In her investigations of the two uranium minerals, pitchblende and torbernite, she found that pitchblende was multiple times more dynamic than uranium and torbernite was twice as dynamic (Curie and Sheean, 1937)

- She accurately trusted that these two minerals must contain another substance that was more dynamic than and in 1898 she found radioactive thorium.
- On April 14, 1898 the Curies ground a 100 gram test of pitchblende trying to locate the tricky component that was a lot more radioactive than uranium.
- They needed to process huge amounts of metal to locate the new components since they were available in such moment amounts yet in July 1898 they distributed a paper declaring the revelation of another component which they named polonium and in December 1898 they found radium.
- In June 1903 she got her doctorate from the University of Paris.
- In December 1903 she, Pierre and Henri Becquerel shared the Nobel Prize in Physics (Curie and Sheean, 1937)
- Pierre was executed in a mishap in 1906 however Marie proceeded with her work and in 1910 she at last disengaged radium.
- In 1911 she was granted the Nobel Prize in Chemistry and was the main individual to win two Nobel Prizes.
- She established the Radium Institute for examination into radioactivity and declined to patent her procedure for radium separation so different researchers could proceed with the work unrestricted.
- Her work significantly influenced the material science and science of the cutting edge world and her achievements opened entryways for ladies researchers who pursued.
- On July 4, 1934 she died of aplastic anemia (Curie and Sheean, 1937)

Lise Meitner

- She was born on November 7, 1878, Austria (Sime, 1996)
- Lisa Meitner was the third of eight youngsters destined to a Jewish family in Vienna.
- In 1905 she turned into the second lady to procure a PhD in material science at the University of Vienna which was a significant achievement since it was unordinary for a lady to go to state funded colleges.
- She was the principal lady permitted by Max Planck to go to his addresses and following a year turned into his colleague.
- She worked with Otto Hahn at the University of Berlin and in 1909 she exhibited two papers on beta-radiation (Sime, 1996)
- In 1917 she got the Leibniz Medal by the Berlin Academy of Sciences for the disclosure of the principal seemingly perpetual isotope of protactinium.
- In 1926 she acknowledged a post at the University of Berlin and turned into the primary lady in Germany to end up a full educator of material science.
- In 1930 she instructed with Leo Szilard and investigated the likelihood of making components heavier than uranium in a research center.
- In 1938 she fled Nazi Germany to move first to the Netherlands and afterward to Sweden.
- In Stockholm she worked with Niels Bohr (Sime, 1996)
- In a progression of investigations she and Otto Frisch found the reason no steady component existed in nature past uranium.

- She and Frisch likewise acknowledged potential vitality clarified by Einstein's condition, E=mc2 and was the first to accurately distinguish atomic parting.
- At the point when the Manhattan venture was begun in 1942, Meitner was offered a position however declined to deal with a bomb.
- She stayed in Stockholm where she worked at the Nobel Institute for Physics, the Swedish Defense Research Establishment and the Royal Institute of Technology.
- In 1947 she turned into an educator at the University College of Stockholm (Sime, 1996)
- At the point when Otto Hahn got the Nobel Prize in Chemistry in 1945, numerous researchers felt that Meitner ought to have been named a co-beneficiary and that her exclusion was verification of sexual orientation inclination.
- In 1945 she was chosen to the Royal Swedish Academy of Sciences and in 1949 she turned into a remote individual from the Royal Society in London.
- In 1946 she was named "Lady of the Year" by the National Press Club and ate with the President of the United States.
- In 1949 she got the Max Planck Medal of the German Physics Society and in 1955 she got the first Otto Hahn Prize of the German Chemical Society.
- In 1960 she moved to Cambridge and died on October 27, 1968, Cambridge, United Kingdom (Sime, 1996)

Albert Einstein

- Albert Einstein was born in 1879, in Germany. He is one of the most renowned scientists of the 20th century (Brian, 1996).
- Einstein was born in the month of march in a non-practising Jew family.
- In his early age, he was hoped to become a mechanical engineer, his father.
- At the age of 12 he developed the love for Maths, when he read a book of geometry and named it as the holy book.
- He was not the brightest student in his early years of academics, though he was highly intellectual.
- Einstein's family lived in Switzerland for some time, and after Hitler came into power, they moved to the US.
- In 1896, he abandoned his citizenship of Germany to avoid the conscription of military (Brian, 1996).
- In 1899 he applied for Zurich's Federal institute of technology, but he was rejected the first time.
- Next year, he cleared the test and got an admission at the institute which made him achieve the citizenship, as well.
- In college, he met a girl named Meliva Meric, who he later married in 1903.
- Einstein is famous for his works in the subjects of Physics and Maths.
- Some of his works like: special theory of relativity, quantum theory, and several others are of notable importance.

- Einstein had a love for music and he himself said, ""If I were not a physicist, I would probably be a musician.
- Einstein claimed to be Zionist Socialist. He was a supporter of Israel, as well.
- He was even offered a position of President of Israel, which he eventually refused to take.
- Einstein was against racism and considered it to be a disease of America.
- His works and power were seized by the Nazi party in 1933. And his books were burnt to ashes.
- He was devoted to the academic life so much that he did not care about his appearance in any way whatsoever.
- Albert Einstein won a Nobel prize in Physics, in 1921.
- He died on April 18, 1955 due abdominal aortic aneurysm, in US (Brian, 1996).

Alexander Fleming

- He was born on August 6, 1881, Darvel, United Kingdom (Maurois, 1959)
- Fleming finished his primary school a long time in Scotland, in spite of losing his dad while still just seven years of age.
- He went on to London to finish his tutoring at the Royal Polytechnic Institution.
- At the consolation of his more seasoned sibling, a doctor, Fleming proceeded to end up a specialist.
- His military administration really prompted his progress into research, as an individual from the military and the rifle group at St. Mary's Hospital Medical School.The commander of the group needed to keep Fleming on the group, so proposed he join the examination division subsequent to completing school (Maurois, 1959)
- Eventually, he started working in war zone healing centers when World War I broke out, however he came back to St. Mary's after the war to proceed with research.
- Fleming swung to encouraging when he was made educator of bacteriology in 1928 at the University of London.
- His military administration really prompted his most imperative work, in the wake of seeing such a large number of troopers bite the dust from contamination following fight wounds, he set going to discover a remedy for bacterial diseases.

- Fleming was one of the first to perceive that germicides just treated surface injuries, and that sterilizers likewise would in general slaughter off the advantageous specialists that helped battle contamination.
- Despite the fact that he had a strong notoriety as an incredible scientist, Fleming's lab and workspace were frequently exceptionally chaotic. This really prompted the disclosure of penicillin (Maurois, 1959)
- He had been examining the distinctive properties of a strain of staphylococcus microscopic organisms.
- When he went to work in his lab on September 28, 1928, he found that the staph couldn't develop close to the penicilliummold.
- Curiously, this equivalent procedure was the means by which Fleming had found lysozyme.
- Fleming nearly didn't keep investigating penicillin, since it was difficult to influence the shape to develop and it was hard to disengage its antibacterial property.
- An article he distributed on his discoveries got almost no consideration at first (Maurois, 1959)
- Fleming was named rector of Edinburgh University from 1951 to 1954.
- He was also awarded honorary doctorate degrees from nearly 30 European and American universities.
- He married twice and had only one son.
- He had to share the noble prize with two other scientists.
- Fleming died of a heart attack on March 11, 1955, at his home in London, England (Maurois, 1959)

Niels Bohr

- He was born on October 7, 1885 (Brown, 1997)
- Niels Bohr was born in Copenhagen and educated at Copenhagen University.
- Despite the university having no physics laboratory and only one professor in the discipline, Bohr designed a series of experiments that improved on Lord Rayleigh's model for measuring a liquid's surface tension.
- Bohr won a gold award from the Royal Danish Academy of Sciences and Letters for this exploration, which he later enhanced and republished (Brown, 1997)
- His Master's postulation and later doctoral proposition on electron structure was not notable outside of Denmark, as the college expected it to be distributed in Danish at the time.
- Bohr started the examination on what might wind up known as the Bohr model of the particle in 1911, starting his investigations in England at the Cavendish Laboratory.
- Bohr's examination was not generally gotten by set up physicists at the time, yet more youthful scientists were inspired with his exploration on the model of the molecule.
- Ernest Rutherford welcomed Bohr to learn at the Victoria University of Manchester and proceed with his examination on particles.
- Bohr was one of the first to finish a model that exhibited electrons circling the core of an iota, developing Charles Darwin's prior work.

- He clarified that every component on the intermittent table had synthetic properties that were controlled by the number and conduct of their electrons (Brown, 1997)
- Bohr was the first to speculate that an electron could move from a higher circle to a lower one, and that in the process vitality was produced.
- He worked on a model ofhydrogen, however it was hard to exhibit its exactness with different components, explicitly the synthetically comparative uncommon earth components.
- In 1921, long periods of diligent work prompted Bohr's foundation of the Institute of Theoretical Physics in Denmark. It is currently known as the Niels Bohr Institute.
- Amid the ascent of the Nazis in Europe and the subsequent World War II, Bohr was instrumental in helping Jewish researchers escape.
- Bohr came up with the idea to dissolve a number of scientists' Nobel Prize medals in aqua regia to prevent the Germans from confiscating them during the occupation, the gold was precipitated after the war and the Nobel Foundation recast them (Brown, 1997)
- Bohr had been granted his very own Nobel Prize for Physics in 1922.
- A separate scientist actually came up with a similar conclusion as Bohr's theorems on his ground breaking work with electron theory, and they therefore share credit for it under the Bohrs-van Leeuwen theorem.
- Niels Bohr was President of the Royal Danish Academy of Sciences.
- He was a Foreign Member of the Royal Society (London), the Royal Institution.
- He died on November 18, 1962, Carlsberg, Copenhagen, Denmark (Brown, 1997)

David Hilbert

- He was born on January 23, 1862, Königsberg, which is now part of western Russian known as Kaliningrad (Corry, 1997)
- David Hilbert was a German mathematician.
- From an early age, he was interested in mathematics.
- He eventually enrolled in Konigsberg University in 1880 and graduated with a Ph.D. in mathematics.
- In 1886 he became a mathematics lecturer at the University of Königsberg (Corry, 1997)
- Starting in 1886, David Hilbert worked for nine years at the University of Königsberg, first as a lecturer, then as a professor.
- He also famously developed an algorithm to generate fractals that would fill a shape like a rectangle or cube by drawing a single line that never intersected itself.
- In 1888 Hilbert proved the finite basis theorem for any number of variables.
- In 1895, Hilbert relocated to the University of Gottingen, where he joined some of the most prominent mathematicians of the time as a professor of mathematics.
- At Gottingen, he turned his attention to geometry and published a book titled The Foundations of Geometry in 1899 (Corry, 1997)
- One of Hilbert's most important contributions was the development of what is now known as Hilbert space.

- In 1900 Hilbert took a sweeping overview of mathematics, defining his famous 23 problems.
- In 1902, age 40, he became co-editor of the world's leading mathematical journal, MathematischeAnnalen.
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- In 1920 Hilbert founded mathematical formalism.
- In 1907 he took Einstein's Special Theory of Relativity, published in 1905, and showed it could be advantageous to consider it differently.
- David Hilbert retired from his professorship in 1930.
- His retirement years were spent living in Nazi Germany. Jewish mathematicians, many of whom had been his friends, were banished from Göttingen.
- David Hilbert died age 81 on February 14, 1943, in Göttingen. Only about 10 people attended his funeral (Corry, 1997)

Emmy Noether

- She was born on March 23, 1882 (Brewer and Smith, 1981)
- Noether was born to a middle class Jewish family in Germany, the daughter of another notable mathematician, Max Noether.
- She set out to become a language teacher with a focus on English and French.
- In the wake of accepting her degree, Noether worked for very nearly 10 years without pay at the Mathematical Institute of Erlangen because of the way that ladies were ordinarily denied from holding scholastic positions.
- She was offered a situation at the University of Gottingen, however the staff of the rationality office (which housed the arithmetic examinations) protested a female speaker (Brewer and Smith, 1981)
- She went through the following four years looking into and instructing under the name of one of the men who welcomed her to the college, David Hilbert.
- Noether turned into a critical figure in the comprehension of polynomial math.
- In 1907 the 25-year-old Emmy officially became Doctor Noether.
- Her commitments changed various long-held understandings in polynomial math, rings, and fields, and were critical in physics, particularly her hypothesis on the fundamental relationship among's symmetry and protection.

- Noether's work is isolated into three ages, each with real significance to different fields (Brewer and Smith, 1981)
- The main, which incorporates her work from 1907 to 1919, principally included differential and logarithmic invariants, and her vital work in material science, her two Noether's hypotheses.
- The second age, created somewhere in the range of 1920 and 1926, includes her hypothesis of scientific rings.
- In the third epoch, formed from 1927 to 1935, Noether focused on three distinct areas of mathematics, noncommutative algebra, linear transformations, and commutative number fields.
- At the point when the Nazis rose to control in Germany and issued orders banning Jews from holding college positions, Noether moved to the US and took a situation in the science division at Bryn Mawr College.
- One of Noether's hypotheses has been classified "a standout amongst the most essential numerical hypotheses at any point demonstrated in managing the advancement of present day material science." (Brewer and Smith, 1981)
- She has won Ackermann–Teubner Memorial Award.
- Noether’s Theorem also solved the worrying puzzle in General Relativity that she had initially set out to solve.
- Noether was totally devoted to mathematics and talked of little else. She never married and had no children.
- 1935, Emmy Noether was discovered to have a tumor.
- She died on April 14, 1935, Bryn Mawr, Pennsylvania, United States (Brewer and Smith, 1981)

C. V. Raman

- He was born on November 7, 1888 (Venkataraman, 1988)
- ChandrasekharaVenkata Raman was an Indian physicist born in the former Madras Province in India presently the state of Tamil Nadu.
- In 1902, he joined the Presidency College in Madras where his dad turned into an instructor arithmetic and material science.
- He surrendered from his situation in the legislature after he was made the first Palit Professor of Physics at the University of Calcutta, proceeding with his exploration at the Indian Association for the Cultivation of Science.
- In 1928 he was designated for the Nobel Prize for Physics however lost to Owen Richardson (Venkataraman, 1988)
- He drove probes the dissipating of light and found what is currently called the Raman impact.
- He lost another Nobel Prize of Physics to Louis de Brogile in 1929.
- Raman was leader of the sixteenth session of the Indian Science Congress of 1929.
- He was the main Asian and the first non-white individual to get any Nobel Prize in the sciences.
- In spite of his attention on the sciences, Raman is likewise known for his works, for which he additionally got the Nobel Prize for Literature in 1913 (Venkataraman, 1988)
- Raman found the quantum photon turn in 1932, which affirmed the quantum idea of light.

- He additionally contemplated the acoustics of melodic instruments and worked out a hypothesis to clarify the acousto-optic impact; this impact had a significant effect on Carl Sagan, when he saw it exhibited at the 1939 World's Fair.
- In 1933, he joined the Indian Institute of Science in Bangalore as its first Indian executive, an unexpected arrangement thinking about the beforehand all-white British pilgrim government.
- He began the Travancore Chemical and Manufacturing Co., Ltd., organization in 1943, which produced potassium chlorate for the match business.
- In 1948 he started contemplating the spectroscopic conduct of precious stones and created approaches for another way of basic issues of gem elements (Venkataraman, 1988)
- He likewise made commitments to the fields of human vision, the optics of colloids, and electrical and attractive anisotropy.
- In 1947, Independent India's new government appointed C.V. Raman as first National Professor of India.
- Raman did some significant work with musical instruments' acoustics. He is the person who gave the theory of transverse vibration of bowed strings.
- C.V. Raman became the first Indian director of Indian Institute of Science (IIS) in 1933. It was really ironic because IIS never had an Indian director as all previous directors were British during the colonial era.
- C.V. Raman died on November 21, 1970 (Venkataraman, 1988)

Ronald Fisher

- Fisher was born on February 17, 1890, East Finchley, London, United Kingdom (Kruskal, 1980)
- Ronald Aylmer Fisher was a British statistician and geneticist.
- He went to Harrow school not because his parents could afford it because he was a brilliant student.
- In 1909, at age 19, he won a scholarship to the University of Cambridge. Three years later he graduated with first class honors in mathematics.
- Subsequent to graduating, Fisher spent a further year at Cambridge contemplating postgraduate dimension physics, including the hypothesis of mistakes, a subject which elevated his enthusiasm for measurements (Kruskal, 1980)
- In 1912 distributed his first paper, in which he made the strategy for most extreme probability. He kept refining this strategy for a long time.
- In 1912 set up the rule that there is an example mean not the same as the populace mean.
- In 1914 volunteered for the British Army at the start of World War 1 and was rejected because of his poor eyesight.
- In 1919 became a statistician at Rothamsted Experimental Station in central England, working in agricultural research.
- He created the statistical method of analysis of variance (ANOVA) and introduced the concept of likelihood in 1921 (Kruskal, 1980)
- In 1924 he created the F distribution.

- In 1929 he elected to the Royal Society, joining the United Kingdom's scientific elite.
- In 1930 he released his book The Genetical Theory of Natural Selection.
- He was appointed Professor of Eugenics at University College London.
- In 1952 he was knighted by Queen Elizabeth, becoming Sir Ronald Aylmer Fisher (Kruskal, 1980)
- In 1955 he was awarded the Royal Society's Copley Medal, one of the greatest prizes in science.
- He retired from his chair at Cambridge in 1957, but continued working there for two years.
- In 1959 he moved to Adelaide, Australia to do examine work with E. A. Cornish at CSIRO. Presently 69 years of age, one of the fundamental reasons he moved was he delighted in the warm, radiant atmosphere of South Australia.
- By the end of his career, Fisher had written 7 books and almost 400 academic papers devoted to statistics.
- Ronald Fisher died aged 72 on July 29, 1962, in Adelaide, Australia following an operation for colon cancer (Kruskal, 1980)

Vannevar Bush

- Vannevar Bush was born Everett, Massachusetts, United states on 11th march 1890 (Wiesner, 1979).
- He was the son of Perry Bush who was a local pastor and his mother was Emma Linwood.
- Vannevar Bush was the third and only son of his parents with two elder sisters.
- He graduated from the Chelsea high school in Massachusetts in 1902.
- He then went to Tuffs and was a very famous boy there.
- He invented and then patented a device called "Profile tracer" for his master's thesis.
- In 1913, he graduated and received both bachelor's and master's degree (Wiesner, 1979).
- In 1919, Vannevar Bush join MIT's department of electrical engineering.
- In the time span of 10 year (1920-1930) his laboratory surpassed everyone else in the field.
- Vannevar Bush and his colleague designed and built Analog computers in this time period.
- Vannevar Bush is considered to be America's on of the most notable and brilliant scientist (Wiesner, 1979).
- Vannevar bush invented a machine named Differential Analyzer in 1931.
- Another differential Analyzer was made in 1935 which was the most powerful computer.

- In 1939, he made an organization named National Defence Research Committee.
- He played a significant role in aiding the military of US by informing them about new technologies.
- Vannevar Bush married Pheobe Davis in the year 1909.
- Vannevar Bush and his wife were married for over 50 years when his wife died.
- He had two children with his wife John Hathaway and Richard Davis.
- He received several awards, some of them are: IEEE Edison Medal, John Fritz Medal, etc.
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James Chadwick

- James was born on October 20, 1891, Bollington, United Kingdom (Brown, 1997)
- James Chadwick was a British physicist.
- In 1908 he entered the Victoria University of Manchester and inhabited home.
- In 1909 he got a Heginbottom Scholarship to study physics.
- The leader of the material science division was Ernest Rutherford and he appointed Chadwick to devise methods for contrasting the measure of radioactive vitality in two unique sources (Brown, 1997)
- Chadwick graduated with distinction in 1911 and in 1912 composed his first paper on the victories of his vitality tests.
- In 1912 he received his M.S. in Science and wrote a paper on the absorption of gamma rays by various gases and liquids.
- In 1913 he was granted a scholarship to the Physikalisch-TechnischeReichsanstalt in Berlin where he contemplated under Hans Geiger.
- At the point when World War I began he was a detainee at the Ruhleben Internment camp close Berlin.
- In November 1918 he came back to England and anchored a showing position at the University of Manchester (Brown, 1997)
- In April 1919 Ernest Rutherford moved toward becoming executive of Cavendish Laboratory at the University of Cambridge and he conveyed Chadwick to Cambridge.

- Chadwick was granted a Clerk-Maxwell studentship in 1920 and in 1921 he got his PhD.
- In 1923, aged 32, Chadwick became Rutherford's Assistant Director of Research in the Cavendish Laboratory where he continued to study the atomic nucleus.
- In May he sent a detailed account of his results entitled "the Existence of a Neutron" to the Royal Society.
- This discovery made it possible to artificially create elements heavier than uranium (Brown, 1997)
- For his revelation of the neutron Chadwick got the Hughes Medal of the Royal Society in 1932, the Copley Medal in 1950 and the Franklin Medal in 1951.
- He was knighted in England in 1945 for his accomplishments in physics.
- In 1935, before his Nobel Prize was awarded, Chadwick was offered the Lyon Jones Chair of Physics at the University of Liverpool, which he accepted.
- In 1935, James Chadwick received the Nobel Prize in Physics for his discovery of the neutron.
- James Chadwick died peacefully, at the age of 82, on July 24, 1974 (Brown, 1997)

Harold Urey

- He was born on April 29, 1893,Walkerton, Indiana, United States (Bylinsky, 1976)
- Harold went to secondary school in Kendallville, Indiana.
- Urey moved on from secondary school in 1911, matured 18, and went to Earlham College in Richmond, Indiana, where he got an educating authentication.
- In 1919 Urey went to the University of Montana as a science teacher. He worked in this job for a long time, at that point moved to the University of California, Berkeley, in August 1921.
- Urey earned a degree in zoology from the University of Montana and a Ph.D. in science, contemplating thermodynamics under Gilbert N. Lewis at the University of California, Berkeley (Bylinsky, 1976)
- At Berkeley, Urey was impacted by crafted by physicist Raymond T. Birge and before long joined Niels Bohr in Copenhagen to take a shot at nuclear structure at the Institute for Theoretical Physics.
- Between 1923 and 1929, Urey published 20 scientific papers or notes, almost all of them on aspects of atomic structure and the others on molecular band spectroscopy.
- He then served as one of three program chiefs of the Manhattan Project.
- He was awarded the Medal of Merit for working on the Manhattan project.
- Urey married Frieda Daum, a bacteriologist, in 1926 and they had four children (Bylinsky, 1976)

- During his residence at Berkeley and Copenhagen, Urey began to work with some of the most prominent physicists and chemists of the 20th century, including Werner Heisenberg, Wolfgang Pauli and Georg von Hevsey.
- In 1929 Urey became associate professor of chemistry at Columbia University in New York and professor in 1934.
- In 1945 Urey became Professor of Chemistry at the University of Chicago's Institute for Nuclear Studies.
- By early 1949 Urey had built mass spectrometers sensitive enough to measure oxygen isotope ratios with great precision, which enabled him to discover average temperatures millions of years ago.
- He also worked on meteoritic ages, composition, and classification (Bylinsky, 1976)
- Harold Urey discovered deuterium, for which he was awarded the Nobel Prize in Chemistry.
- After the war Urey, along with many others, was attracted to the plan of Chancellor Hutchins to build a group of research institutes at the University of Chicago.
- Urey's scientific work at Columbia became more and more concerned with the separation of isotopes of the lighter elements.
- At age 65 he retired from his position in Chicago, accepting a role as a professor at large at the University of California, San Diego, helping to build the science faculty there.
- Harold Urey died on January 5, 1981, aged 87, at La Jolla, California, and was taken back to Indiana where he was buried in the Fairfield Cemetery in DeKalb County (Bylinsky, 1976)

Srinivasa Ramanujan

- He was born on December 22, 1887, Erode, India (Rao, 2004)
- Srinivasa Ramanujan was an Indian mathematician who lived during the British Rule in India.
- In 1889 he contracted smallpox but recovered.
- In 1897 he passed his tests in English, Tamil, topography and number juggling with the most elevated scores in his region.
- In high school he devoured books on mathematics and discovered advanced theorems (Rao, 2004)
- In 1903 he read A Synopsis of Elementary Results in Pure and Applied Mathematics by G.S.Carr and it was instrumental in his future revelations.
- When he was seventeen he built up the Bernoulli numbers and determined the Euler-Mascheroni steady to 15 decimal spots.
- He got a grant to the Government Arts College however neglected to ponder any subject yet arithmetic and lost his grant.
- In 1905 he selected in another school yet again neglected to examine the other required subjects and left without a degree.
- In spite of the fact that he had no degree his scientific examinations inspired V. RamaswamyAiyer who was the organizer of the Indian Mathematical Society (Rao, 2004)
- Aiyer gave him letters of prologue to R. RamachandraRao who gave him monetary support while he proceeded with his examination in arithmetic.

- In 1912 he was enlisted in the workplace of the Chief Accountant of the Madras Port Trust.
- He started to send his numerical papers to the renowned British mathematician,G.H. Solid.
- Solid perceived and energized Ramanujan's splendor in arithmetic and exhibited his papers to his associates at Trinity College.
- On March 17, 1914 Ramanujan left India for England (Rao, 2004)
- He went through five years in Cambridge and was in the long run granted a PhD in arithmetic.
- He got numerous honors for his work and in 1917 he was chosen to the London Mathematical Society.
- In 1918 he was chosen Fellow of the Royal Society "for his examination in Elliptic capacity and the Theory of Numbers."
- He was determined to have tuberculosis and a serious nutrient lack however later restorative examinations point to an instance of undiscovered hepatic amoebiasis.
- He returned to India in 1919 and died in 1920 (Rao, 2004)

Henry Moseley

- He was born on November 23, 1887, Weymouth, United Kingdom (Heilbron and Moseley, 1974)
- His Father, Henry Nottidge Moseley, was a scientist and teacher of anatomy and physiology at the University of Oxford.
- Henry Moseley was granted a King's grant to Eton College where in 1906 he won the science and material science prizes.
- In 1906 he entered Trinity College of the University of Oxford where he got his B.S. in 1910.
- After graduation Moseley turned into a right hand to Sir Ernest Rutherford at the University of Manchester (Heilbron and Moseley, 1974)
- In 1912 Moseley explored different avenues regarding radioactive beta particles and designed the main nuclear battery.
- In 1913 utilizing X-beam spectroscopy he found Moseley's Law which expresses that there is an orderly scientific connection between the wave lengths of their X-beams and the nuclear quantities of the metals utilized.
- He was the first to utilize X-beam spectroscopy to quantify the X-beam spectra of metals which was imperative in the innovation of X-beam crystallography.
- Prior to his revelation, nuclear numbers were accepted to be founded on the grouping of nuclear mass.
- Moseley's Law accurately anticipated the revelation of new components at the numbers 43, 61, 72 and 75 (Heilbron and Moseley, 1974)

- In mid-1914 Moseley surrendered from Manchester turned down an occupation offer to Oxford to enroll in the Royal Engineers.
- He invented the first atomic battery in 1912, but was unable to stop the particles.
- He helped in the development of the x-ray equipment.
- His work helped redefine the number for the atomic numbers, making sure it represented the physical number of positive charges in the element.
- In a paper published in 1913, he reported that the frequencies are proportional to the squares of whole numbers that are equal to the atomic number plus a constant (Heilbron and Moseley, 1974)
- In 1914 Moseley published a paper in which he concluded that there were three unknown elements between aluminum and gold.
- He also concluded correctly that there were only 92 elements up to and including uranium and 14 rare-earth elements.
- He was filling in as specialized officer in correspondences amid that Battle of Gallipoli in Turkey when, on 10 August 1915, he was murdered by an expert marksman.
- As a result of Moseley's demise, the British government never again enabled its conspicuous researchers to serve in battle obligation.
- Moseley was a contender for the 1916 Nobel Prize however it isn't granted after death, the Nobel Prize for Physics and the Nobel Prize for Chemistry were not granted in 1916 (Heilbron and Moseley, 1974)

Irene Joliot-Curie

- Irene was born on September 12th, 1897, Paris, (France Brian, 2005)
- From 1912 to 1914 she studied at the College of Sevigne and received her B.S. from the Sorbonne.
- During World War I Curie worked at the mobile field hospitals her mother had established and assisted doctors in using the primitive X-ray equipment to local shrapnel in wounds.
- After the war she studied at the Radium Institute, and in 1925 her doctoral thesis on the alpha rays of polonium earned her a PhD.
- In 1926 she married Frederic Joliot and they hyphenated their surnames to Joliot-Curie (France Brian, 2005)
- In 1934 Curie and her husband discovered that one element could be turned into another by creating radioactive nitrogen from boron and radioactive isotopes of phosphorus from aluminum.
- Radioactive isotopes were becoming increasingly important in medicine and this discovery provided a way to make them cheaply and easily.
- She led a group studying radium nuclei that which became an important foundational work in the discovery of nuclear fission.
- In 1946 she was accidentally exposed to polonium in a laboratory accident; combined with her years of working with radioactive materials, this eventually resulted in leukemia.
- The Joliot-Curies actively opposed the Nazi Party's policies and in 1934 they joined the Socialist Party (France Brian, 2005)

- Until 1939 they had published all of their work for the benefit of science but, fearing its use by the German military, put all of their papers in the vaults of the French Academy of Sciences where they stayed until 1949.
- During World War II she contracted tuberculosis and spent several years in Switzerland at a convalescent hospital.
- She and her husband were awarded membership in the Legion d'honneur.
- She and her husband in 1935 shared the Nobel Prize in Chemistry for their discovery of artificial radioactivity.
- In the early 40's, she was diagnosed with tuberculosis (France Brian, 2005)
- Irene did work to promote women's education. She was a member of the National Committee of the Union of French Women.
- Even after her health deteriorated with her diagnosis of leukemia, she did not stop working to draw up plans for physics labs in Paris.
- She had two children who were also scientists. Her daughter is a nuclear physicist and her son is a biochemist.
- While she was not a part of the Manhattan Project, her earlier research was instrumental in the creation of the atomic bomb.
- Sadly she died working on March 17, 1956, Paris, France (France Brian, 2005)

Enrico Fermi

- Enrico Fermi was an Italian physicist (Cooper and Fermi, 1999)
- He was also the developer of the very first nuclear reactor, the Chicago Pile-1.
- He has been awarded with the quotes of 'architect of the atomic bomb' and 'architect of the nuclear age'.
- Enrico Fermi was born on 29th September in the year 1901in Rome, Italy.
- Enrico was the first person in the history of physics to be awarded with a Nobel Prize in the year 1938 (Cooper and Fermi, 1999)
- The accelerator laboratory, Fermium, in the US is named after Enrico Fermi in his honor.
- Fermi also introduced the mathematical statistics in order to evaluate the neurons.
- Fermi was born to a middle-class family where his father, Alberto Fermi was a chief inspector of the government railways.
- Fermi graduated from a local high school of Rome in the year 1918.
- In the year 1918, Fermi went to study at the University of Pisa, which he had won a scholarship (Cooper and Fermi, 1999)
- Fermi pursued with his doctorate degree at the University of Pisa.
- Fermi graduated 4 years later in the year 1922.
- Fermi returned back to Italy in the year 1924 and started his job as a professor at the University of Florence.

- His area of interest included quantum mechanics, general relativity and statistical mechanics.
- In the year 1926, Fermi was offered a complete professorship at the University of Rome (Cooper and Fermi, 1999)
- Fermi had very little interest in politics however he did participate in solving his homeland political issues.
- In the year 1928, Fermi got married to Laura, a Jewish girl.
- Atomic powers are highly regarded in the modern world and detailed studies are being taught to students in accordance with the practices of Fermi.
- Fermi was diagnosed with stomach cancer in the year 1954.
- Enrico Fermi died on 28th November in the year 1954 in Chicago, US (Cooper and Fermi, 1999)

Linus Pauling

- He was born on February 28, 1901, Portland, Oregon, United States (Serafini and Rigden, 1990)
- Linus Carl Pauling was an American chemist, biochemist, peace activist, author, educator, and husband of American human rights activist Ava Helen Pauling.
- He published more than 1,200 papers and books, of which about 850 dealt with scientific topics.
- As a young child, Pauling was a voracious reader and had interest in studying chemistry.
- In 1916 he decided to drop out of high school to earn the money to attend Oregon State University (Serafini and Rigden, 1990)
- In 1922 he graduated with a degree in chemical engineering and entered graduate school at the California Institute of Technology in Pasadena.
- His graduate research was on the use of X-ray diffraction to determine the structure of crystals and he published seven papers on the crystal structure of minerals while at Caltech.
- In 1925 he graduated summa cum laude with a PhD in physical chemistry and mathematical physics.
- In 1932 he published a scale and numerical value for most of the elements using their various properties which became known as the Pauling Electronegativity Scale.

- It is primarily for this work that he received the Nobel Prize in Chemistry and his book The Nature of the Chemical Bond is considered one of the most influential books ever written in the field (Serafini and Rigden, 1990)
- By 1951 Pauling had turned his attention of the chemistry of proteins and he correctly predicted the helix structure of protein structure.
- He was among the first to discover that antigen-antibody binding is due to a complementarity between their structures.
- In 1949 he and his colleagues published "Sickle Cell Anemia, a Molecular Disease" which was the first proof that an abnormal protein could cause a disease.
- They were also the first to prove that Mendelian inheritance influenced proteins which ushered in the field of molecular genetics.
- Pauling made significant scientific contributions to several different fields and is considered the father of molecular biology (Serafini and Rigden, 1990)
- Pauling was awarded the Nobel Prize in Chemistry, in 1954 for his work in the field of Science.
- He took active participation in peace activism after the Second World War and was again awarded the Nobel Peace Prize in 1962.
- He was an alumnus of the Oregon state University and also established one of its fraternities, the Delta Epsilon.
- He is the only person to receive two unshared Nobel Prizes.
- Pauling died on August 19, 1994, Big Sur, California, United States (Serafini and Rigden, 1990)

Karl Popper

- Karl was born on July 28th, 1902, Vienna, Austria (Corvi, 2005)
- Sir Karl Raimund Popper CH FBA FRS was an Austrian-British philosopher and professor.
- He studied mathematics, physics, and philosophy at the University of Vienna.
- In 1934 he published his first book, Logik der Forschung (it was not translated and published in English until 1959.
- Popper's first book laid the foundations for all the rest of his work (Corvi, 2005)
- At the end of World War II, Popper was invited to the London School of Economics as a reader.
- In 1949 he was made professor of logic and scientific method.
- Popper later applied his analysis of knowledge to theories of society and history.
- Popper's later works Objective Knowledge (1972) and The Self and Its Brain (1977) combined his scientific theory with a theory of evolution.
- He was knighted in 1965 (Corvi, 2005)
- Popper's work on political philosophy is also of great importance.
- Although Popper was an advocate of toleration, he thought intolerance should not be tolerated.
- Popper’s view aimed to account for the progress of science, not for its alleged reliability.

- Popper’s contribution to social and political philosophy accords with his negative philosophy of science.
- Popper later applied his analysis of knowledge to theories of society and history (Corvi, 2005)
- Popper won many awards and honors in his field, including the Lippincott Award of the American Political Science Association.
- Popper coined the term "critical rationalism" to describe his philosophy.
- Popper wrote an enormous amount, and most of his writings have appeared in many different editions and reprints, from many publishers.
- Popper's influence, both through his work in philosophy of science and through his political philosophy.
- Popper died on September 17th, 1994, Kenley, United Kingdom (Corvi, 2005)

Barbara McClintock

- Barbara was born on June 16th, 1902, Hartford, Connecticut, United States (Keller, 1984)
- Barbara McClintock was an American scientist and cytogeneticist.
- She received a bachelor's degree in botany in 1923, but her interest in genetics was established when she took a course as part of the degree program.
- During her research and teaching at Cornell, McClintock organized a group of research who would be vital to the study of genetics in corn.
- She focused on ways to understand and visual the genetic makeup of the plant for breeding and resistance purposes (Keller, 1984)
- McClintock later became the first scientist to understand and diagram the cross-shaped nature of chromosomes during meiosis, which led to later research proving chromosomal crossover.
- She also was the first scientist to fully understand and outline the centromere and its role in genetics.
- McClintock conducted research into the mutating properties of Xrays and created the first ever genetic map of corn's makeup.
- When Barbara McClintock went to Cornell University, women weren't allowed to major in genetics.
- In 1933, McClintock received a fellowship to work with famous German geneticist Curt Stern in Berlin (Keller, 1984)
- She studied corn for 26 years.

- McClintock is considered to be among the most distinguished scientists of the last century.
- One of the biggest honors of McClintock's life came in 1971, when President Richard Nixon awarded her the National Medal of Science.
- It was during the decade of the 1940s that she began the work which was later to result in the Nobel Prize.
- The rediscovery of McClintock's work began in the mid-1960s with the study of aspects of bacteria and became unavoidable in the 1980s with the growth of genetic engineering (Keller, 1984)
- In 1981 she was awarded the prestigious Wolfe Prize in Medicine for her work, as well as the Lasker Award.
- McClintock spent the remainder of her life studying transposition at Cold Spring Harbor.
- She was recognized among the best in the field, awarded prestigious fellowships, and elected a member of the National Academy of Sciences in 1944.
- In 1967, McClintock was awarded the Kimber Genetics Award.
- She died on September 2nd, 1992, Huntington, New York, United States (Keller, 1984)

Paul Dirac

- Paul dirac was born on August 8th, 1902, Bristol, United Kingdom (JACOB, et al., 1998)
- Dirac studied electrical engineering at the University of Bristol on a City of Bristol University Scholarship.
- In 1923 he graduated with first class honors and entered Cambridge University, St John's College.
- From 1925 to 1928 he had an 1851 Research Fellowship which had been established by the Royal Commission for the Exhibition of 1851.
- In June 1926 he earned his PhD from Cambridge University with the first thesis ever submitted on quantum mechanics (JACOB, et al., 1998)
- Dirac established the quantum field theory mechanics and the first to describe antimatter.
- He was the first to formulate the equation for the time evolution of a quantum-mechanical operator.
- His development of a quantum field theory with dynamic constraints forms the basis of superstring theory and gauge theory.
- In 1928 he postulated the existence of the positron and it was later observed by Carl Anderson in 1932 (JACOB, et al., 1998)
- In 1930 he published Principles of Quantum Mechanics which quickly became the standard textbook on the subject.
- From 1932 to 1969 he was Lucasian Professor Mathematics at Cambridge.
- He won the Noble prize in 1933.

- In addition to the 1933 Nobel Prize for physics, he received many other awards including the Royal Medal in 1939, and the Copley Medal and Max Planck Medal in 1952.
- He was elected a Fellow of the Royal Society in 1930, and became a member of the Order of Merit in 1973.
- He is credited with the discovery of relativistic equation for the electron and for drafting the most general theory of quantum mechanics, which are also named after him (JACOB, et al., 1998)
- Dirac also pioneered and invested the concept of magnetic monopole as a means of making the equations of electromagnetism more symmetrical.
- One of his discoveries includes, the 'Dirac Equation' which details the characteristics of fermions and also predicted the existence of 'anti-matter' today labeled as 'God's particle'.
- Dirac showed that quantization of electric charge occurs naturally if a magnetic monopole exists somewhere in the universe. He also created a prototype string theory.
- Dirac wrote up his thesis and got his Ph.D. in June 1926, aged 23.
- He died on October 20, 1984, Tallahassee, Florida, United States (JACOB, et al., 1998)

B. F. Skinner

- Skinner was born on March 20th, 1904, in Susquehanna Depot, Pennsylvania, United States (Vargas, 2005)
- He earned a B.A in literature and tried to become a novelist
- He did Ph.D. from Harvard, where he would return as a professor.
- Burrhus Frederic Skinner, commonly known as B. F. Skinner, was an American psychologist, behaviorist, author, inventor, and social philosopher.
- He invented the "operant conditioning" or "skinner" box (Vargas, 2005)
- He believed all behavior was affected by one of three "operants."
- He's responsible for the term "positive reinforcement."
- His work showed support for meaningful and consistent rewards or consequences for behavior, and as a means of controlling or developing certain behaviors.
- Skinner's most well-known experiments involve his Skinner box, which produced a positive reinforcement when a lever or button was pressed.
- B.F. Skinner was a prominent researcher in Harvard University till 1936. He accepted teaching position at the University of Minnesota and Indiana University (Vargas, 2005)
- He published the results of his operant conditioning experiments in The Behavior of Organisms (1938).
- In 1943 Skinner designed the “baby tender”, a crib that was designed to be safer than a normal crib.

- In 1944, Skinner worked on the Project Pigeon which trained pigeons during World War II to direct bombs by pecking at a target.
- Skinner wrote several works applying his behavioral theories to society, including “Beyond Freedom and Dignity” (1971).
- In 1974, he tried to set the record straight regarding misinterpretations of his with with “About Behaviorism.” (Vargas, 2005)
- Skinner wrote a bestselling novel for the general public exploring the effects of utilizing his behaviorism principles in a community of people.
- Skinner’s greatest discovery was of “immediate reinforcement” or “instant conditioning.”
- Skinner criticized the education system for relying too heavily on punishments and not enough on positive reinforcement.
- Skinner was also an social philosopher who wanted to change society, and wrote a eutopian novel.
- B.F Skinner died on 18th august, 1990 due to Leukemia (Vargas, 2005)

Erwin Chargaff

- Erwin was born on August 11, 1905, in Chernivtsi, Ukraine (Medawar, 1986)
- He was an Austrian biochemist and a professor of biochemistry at Columbia University medical school.
- During World War I his family emigrated to Vienna where he earned his doctorate from the Vienna University of Technology (TechnischeUniversitat Wien) in 1928.
- He returned to Germany in 1930 and accepted a post in chemistry in the department of bacteriology at the University of Berlin.
- In 1935 he immigrated to New York and worked as a research assistant at Columbia University and in 1940 he became an American citizen (Medawar, 1986)
- In 1952 he became a full professor at Columbia University and served as department chair from 1970 to 1974.
- He published many papers on using chromatographic techniques to study nucleic acids.
- In 1950 he discovered that the percentages of nucleotide pairs in DNA is roughly the same with 30.9% adenine, 29.4% thymine, 19.9% guanine and 19.8% cytosine.
- The second Chargaff rule states that the relative amounts of adenine, thymine, guanine and cytosine in DNA varies from one species to another.

- After his retirement as professor emeritus, Chargaff moved his lab to Roosevelt Hospital, where he continued to work until his retirement in 1992 (Medawar, 1986)
- In January 1933, the 27-year-old Chargaff saw Adolf Hitler become Chancellor of Germany.
- Chargaff believed Avery's experiment indicated that living species differed because of differences in their DNA. Now he sought evidence in support of this belief.
- In 1949, Chargaff discovered that the proportions of bases in DNA depend on the species the DNA comes from. This was a major break from what scientists had believed until then.
- Chargaff discovered that in DNA from any source the amount of T was equal to A. Also, the amount of C was equal to G.
- Chargaff's DNA work, like Oswald Avery's, was never recognized by the Nobel Prize Committee (Medawar, 1986)
- When Watson, Crick, and Maurice Wilkins were awarded the Nobel Prize for Medicine in 1962, Chargaff was beside himself with fury.
- He was elected to the National Academy of Sciences in 1965.
- These award were won by Chargaff Pasteur Medal in 1949, Carl Neuberg Medal in 1958, Charles Leopold Mayer Prize in 1963, Heineken Prize in 1964, Gregor Mendel Medal in 1974, and the National Medal of Science in 1975.
- Chargaff married Vera Broido in New York in September 1929.
- Erwin died on 20th June, 2002 (Medawar, 1986)

Grace Hopper

- Grace hopper was born on 9th December, 1906 (Marx, 2004)
- Grace Brewster Murray Hopper was an American computer scientist and United States Navy rear admiral.
- One of the first programmers of the Harvard Mark I computer.
- After graduating from Vassar College (B.A., 1928), Hopper attended Yale University (M.A., 1930; Ph.D., 1934).
- She taught mathematics at Vassar before joining the Naval Reserve in 1943 (Marx, 2004)
- She became a lieutenant and was assigned to the Bureau of Ordnance's Computation Project at Harvard University (1944).
- In 1949 Hopper joined the Eckert-Mauchly Computer Corp.
- She is credited with coining the terms "bug" and "de-bug" as related to computer errors.
- The Cray XE6 "Hopper" supercomputer at the National Energy Research Scientific Computing Center, or NERSC, was named after her.
- Hopper was elected a fellow of the Institute of Electrical and Electronic Engineers (1962), was named the first computer science Man of the Year (Marx, 2004)
- She was awarded the National Medal of Technology in 1991.
- She was posthumously awarded the Presidential Medal of Freedom in 2016.

- Using her master's degree in mathematics and her doctorate in mathematical physics, she helped the military project rocket trajectories and created range tables for anti-aircraft guns.
- In 1966, Hopper was 60 years old, she tried to retire from the service. However, she was called back to active duty, and the same thing happened in 1971.
- Hopper served as the technical consultant on a committee that sought to develop a universal computer language (Marx, 2004)
- At the age of 80, and as the oldest active-duty commissioned officer in the Navy at the time, she was finally able to retire as a rear admiral.
- After her military retirement, Hopper continued to work as a consultant to the Digital Equipment Corporation.
- She popularized the idea of machine-independent programming languages, which led to the development of COBOL, one of the first modern programming languages.
- She was married to New York University professor Vincent Foster Hopper (1906–76) from 1930 until their divorce in 1945. She never remarried, and she kept his surname.
- Grace hopper died a natural death on January 1st, 1992 (Marx, 2004)

Sergei Korolev

- Sergei Korolev was born on 12th January, 1907 (Harford, 1997)
- Sergei Pavlovich Korolev was the son of a teacher of Russian literature.
- Korolev received vocational training in carpentry and in various academics at the Odessa Building Trades School.
- In 1923 he joined the Society of Aviation and Aerial Navigation of Ukraine and the Crimea (OAVUK).
- In 1924 he personally designed an OAVUK construction project glider called the K-5 (Harford, 1997)
- Since 1927, four times in a row participated in the all-Union glider competitions in Koktebel.
- In 1931 he founded the Group for Investigation of Reactive Motion (GIRD), which developed the first Soviet liquid-fuelled rockets.
- Sergei Korolev headed the scientific and technical Council of the Moscow gird.
- Korolev creates the first KB of the members of the CSIR, which entered the history of rocketry.
- In September 1933, the 26-year-old Korolev was appointed Deputy Director of the Institute of Jet (Harford, 1997)
- In 1936, Korolev was appointed chief designer of Department at RNII, rocket develops aircraft.
- Sergei Korolev was not only a talented designer, but the organizer managed to coordinate the work of all departments.

- In 1948 created the missile R-2 with a range of 600 kilometers capable of reaching some U.S. bases.
- Sergei Korolev was twice married. First time he married in August 1931 on the classmate KseniyaVintsentini, in 1935, she bore him a daughter.
- Korolev was arrested by the NKVD on 22 June 1938 after being accused of deliberately slowing the work of the research institute (Harford, 1997)
- Korolev was commissioned into the Red Army with the rank of colonel in 1945.
- In the 1970s and 1980s Sergei Korolev was a legendary figure in the Russian space program.
- Korolev was made chief engineer responsible for designing a Soviet equivalent to the V2.
- Korolev also worked closely with other scientists to train the scientists and engineers who later formed the core of Russia's space program.
- The life of the chief designer was broken before, it occurred on 14 January 1966. Cause of death was a surgical operation during which his heart stopped (Harford, 1997)

Marguerite Perey

- She was born on 19th October 1909,Villemomble, France (Kauffman and Adloff, 1989)
- Marguerite Catherine Perey was a French physicist and a student of Marie Curie.
- After starting work at the Radium Institute, Perey was trained in the isolation and purification of radioactive elements.
- Perey spent a decade sifting out actinium from all the other components of uranium ore.
- In 1929 she qualified with a chemistry diploma from Paris's Technical School of Women's Education (Kauffman and Adloff, 1989)
- Five years after Perey started work, Marie Curie (two times noble prize winner) died of aplastic anemia; she was 66 years old.
- In 1935, age 26, Perey read a research paper from the USA. The American researchers had found beta particles being emitted by actinium.
- Marguerite Perey was given leave to study for a Ph.D. at Paris's prestigious Sorbonne.
- She was awarded her Ph.D. degree in 1946.
- Perey also served as a member of the Atomic Weights Commission between 1950 and 1963 (Kauffman and Adloff, 1989)
- In 1962 she became the first woman to be elected to the French Academy of Sciences.
- Perey discovered a new element which was added to the periodic table – francium.

- Perey won Lavoisier Prize of the French Chemical Society in 1964, Silver Medal of the City of Paris in 1964 and won Commander of the National Order of Merit in 1973.
- In 1939, she recognized that some of the purified actinium was emitting unusual levels of radiation.
- She worked closely with France's National Center of Scientific Research (CNRS), as well as with the International Union of Pure and Applied Chemistry (Kauffman and Adloff, 1989)
- In 1949, Perey was called to occupy a newly created professorial chair of nuclear chemistry at the University of Strasbourg.
- Perey became director of a significant research facility located at Strasbourg-Cronenbourg which had grown out of a small laboratory she established in the early 1950s.
- Marguerite Perey died at age 65 on May 13, 1975.
- She died of a radiation-linked illness.
- Her body was found to be unusually radioactive at the moment she died (Kauffman and Adloff, 1989)

Subrahmanyan Chandrasekhar

- Subrahmanyan Chandrasekhar was on born October 19th 1910, Lahore, Pakistan (Subramanian and Natarajan, 1981)
- Chandrasekhar was educated at Presidency College, at the University of Madras, and at Trinity College, Cambridge.
- Chandrasekhar was the nephew of Sir ChandrasekharaVenkata Raman, who won the Nobel Prize for Physics in 1930.
- Subrahmanyan Chandrasekhar FRS was an Indian American astrophysicist who spent his professional life in the United States.
- Chandrasekhar's most acclaimed achievement came from the get-go in his vocation, as a youthful Fellow at Trinity College, with the distribution of a progression of papers somewhere in the range of 1931 and 1935 on "as far as possible" (Subramanian and Natarajan, 1981)
- Albert Einstein declined to trust that Chandrasekhar's discoveries could result in a star crumbling down to a point.
- Amid World War II, he worked at the Ballistic Research Laboratories at the Aberdeen Proving Ground in Maryland.
- He turned into a naturalized native of the United States in 1953.
- He won the noble prize on 1983 for Physics for key discoveries that led to the currently accepted theory on the later evolutionary stages of massive stars.

- Chandrasekhar was awarded the Gold Medal of the Royal Astronomical Society in 1953, the Royal Medal of the Royal Society in 1962 (Subramanian and Natarajan, 1981)
- He received his Ph.D. only at the age of 22.
- Chandrasekhar discovered that a white dwarf can exist only if its mass is less than or equal to 1.4 times our sun's mass.
- Chandrashekhar was invited to work with Nobel Prize winning Physicist Max Born.
- Chandrasekhar was the Managing editor for Astrophysics Journal.
- NASA has named an X-Ray Space telescope after Chandrasekhar (Subramanian and Natarajan, 1981)
- Chandrasekhar also worked on enriching the pre-existing theories of mathematics.
- Chandrasekhar was also a Fellow of the Royal Society, England.
- Chandrasekhar worked to figure out the method of analyzing stellar objects and opacity.
- He was also admitted to the prestigious Born's Institute in Gottingen, Germany. Most celebrated physicists such as Niels Bohr, Heisenberg have studied there.
- Subrahmanyan Chandrasekhar died of a heart attack on August 21, 1995, aged 84 (Subramanian and Natarajan, 1981)

Glenn T. Seaborg

- Glenn Theodore Seaborg was conceived in Ishpeming, Michigan, on April 19, 1912 (Loveland, Morrissey and Seaborg, 2017)
- At 10 years old he moved with his family to California.
- In 1929 he graduated at David Starr Jordan High School in Los Angeles as valedictorian of his class.
- He entered the University of California, Los Angeles, in 1929, and got the level of Ph.D. in 1937.
- From 1937 to 1939 he was the individual research facility right hand of the late G. N. Lewis, with whom he distributed various logical papers (Loveland, Morrissey and Seaborg, 2017)
- In 1939, Dr. Seaborg was selected an educator in science at the University of California, Berkeley.
- From 1954 to 1961, he was Associate Director of LRL.
- In 1958, he was delegated Chancellor of the University of California at Berkeley
- From 1959 to 1961, he was likewise an individual from the President's Science Advisory Committee.
- Dr. Seaborg was given a time away from the University of California from 1942-1946, amid which period he headed the plutonium work of the Manhattan Project at the University of Chicago Metallurgical Laboratory (Loveland, Morrissey and Seaborg, 2017)
- He was co-pioneer of plutonium and all further trans-uranium components through component 102.

- He is additionally creator of the actinide idea of overwhelming component electronic structure.
- Glenn Seaborg subsequently identified additional heavy elements and their isotopes.
- He is also author and co-author of several books on chemistry and the elements.
- Dr. Seaborg is an Honorary Fellow of the Chemical Society of London and of the Royal Society of Edinburgh (Loveland, Morrissey and Seaborg, 2017)
- From 1961 to 1971 Seaborg chaired the Atomic Energy Commission.
- His work on the electronic structure of elements led to the periodic table being rewritten.
- Element 106 is named seaborgium in his honor.
- Seaborg was awarded the Nobel Prize in Chemistry in 1951, when he was just 39 years old.
- Glenn Seaborg died aged 86 on February 25, 1999, in Lafayette, California (Loveland, Morrissey and Seaborg, 2017)

Alan Turing

- Alan Mathison Turing was born on 23rd June 1912 in the city of London (Hodges, 2012).
- His father was a civil servant hence he had an opportunity to study in a top-notch private school.
- On the first day of his school, Turing rode his bike for 60 miles to get there.
- In 1931 he started his studies at King's college and later attained fellowship there in 1934.
- Turing is mainly famous for his paper on Computable Numbers, with an Application to the Entscheidungs problem.
- After the paper, he proposed a concept of a machine which was later called Turing Machine.
- The Turing machine could compute anything that was computable. It is the basis of modern-day computer.
- A movie called Imitation Game was made on Turing and his efforts for Turing machines.
- Turing also worked at the Britain's secret headquarters to break codes in the World War II, in 1939.
- The work at Britain's office leads to Turing playing a major part in ending Ward War II.
- In 1938, Turing received his Ph.D. from Princeton in New Jersey.
- Once, Turing broke all the rules, and wrote to Winston Churchill to get permission for his project.

- Alan Turing used to wear a gas mask while riding a bike, because he had allergies.
- Alan Turing also took part in the Olympics where he ran a marathon and came 5th.
- Alan Turing was a homosexual person, which caused him several difficulties in life (Hodges, 2012).
- In 1952, Alan Turing was arrested because he reported a burglary in his home.
- In an investigation, the police found out Turing was homosexual, and at that time it was illegal.
- Turing was prosecuted and found guilty, which made him go through chemical castration.
- Alan Turing was depressed and it is said that at the age of 41, he poisoned himself.
- Alan Turing died on 7th of June, 1954 and it was considered a suicide (Hodges, 2012).

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Joseph Carl Robnett Licklider

- Joseph Carl Robnett Licklider was born on 11th March 1915, in St. Louis, Missouri (Fano, 1998) .
- Joseph was the only child of his parents: Joseph Parron Licklider and Margaret Robnett Licklider.
- Joseph was born in a Christian family. He father was a Baptist minister but he wasn't a very religious person.
- For his early education, Joseph studied at Washing university where he did his B.A.
- In his B.A, in 1937, Joseph also did a triple major in Psychology, physics, and mathematics.
- Later in 1938, Joseph did his M.A in psychology from the same university.
- From 1943 to 1950 he worked at Harvard University as a lecturer and researcher.
- Later in 1950, he moved to MIT when he developed an interest in information technology.
- Joseph was a computer scientist and a psychologist and he is one of the most notable personalities in computer science (Fano, 1998).
- Joseph has provided his services in the field of interactive computing.
- Joseph Carl is considered as the pioneer of Intergalactic computing network, or the internet.

- Except Internet Joseph also worked in the field of Artificial Intelligence.
- For planting the seeds of digital computers, Joseph is also called computer's Johnny Appleseed.
- Some of his notable works are: project MAC, global computer network, man-computer symbiosis, etc.
- Joseph Carl Robnett Licklider married a woman named Alberta Louise Carpenter Licklider (Fano, 1998).
- Joseph Carl and Alberta Louise Carpenter Licklider had two children together.
- Joseph, for his services and efforts, received many awards, one of them is: Commonwealth Award for distinguished service (1990).
- Joseph Carl Robnett Licklider was also nominated by the Sigma Xi, for the honor.
- He also wrote many journals and articles like: "The Computer as a Communication Device"
- He died on 26th of June, 199, in Arlington, Massachusetts, due to Asthma.

Francis Crick

- Francis Harry Compton Crick was conceived on June 8th 1916, at Northampton, England (Holton, 1972)
- He has one sibling, A. F. Cramp, who is a specialist in New Zealand.
- He considered material science at University College, London, got a B.Sc. in 1937, and began inquire about for a Ph.D.
- Amid the war he filled in as a researcher for the British Admiralty, for the most part regarding attractive and acoustic mines.
- He left the Admiralty in 1947 to ponder science (Holton, 1972)
- A basic impact in Crick's vocation was his kinship, starting in 1951, with J. D. Watson.
- He helped develop radar and magnetic mines during World War II.
- After the war, he began researching the structure of DNA for the University of Cambridge Medical Research Council at its Cavendish Laboratory with James D. Watson.
- In 1949 he joined the Medical Research Council Unit headed by M. F. Perutz.
- He became a research student for the second time in 1950 (Holton, 1972)
- During the academic year 1953-1954 Crick was on leave of absence at the Protein Structure Project of the Brooklyn Polytechnic in Brooklyn, New York.

- Crick in collaboration with A. Rich has proposed structures for polyglycine II and collagen and (with A. Rich, D. R. Davies, and J. D.Watson) a structure for polyadenylic acid.
- He was awarded the Prix Charles Leopold Meyer of the French Academy of Sciences in 1961.
- In 1962 he was elected a foreign honorary member of the American academy of arts and sciences, and a fellow of university college, London.
- In 1940 Crick married Ruth Doreen Dodd (Holton, 1972)
- Crick continued to study DNA, and in 1962, he became director of Cambridge University.
- Beyond winning the Nobel Prize he awarded Merit of Gairdner Foundation in 1962.
- Watson and Crick published a paper outlining their DNA double-helical structure in the scientific journal Nature in April 1953.
- He was presented a Lasker Foundation Award in 1960.
- Francis Crick died in La Jolla, California, on July 28, 2004 (Holton, 1972)

Richard Feynman

- Richard P. Feynman was conceived in New York City on the 11th May 1918 (Gleick, 1993)
- He learned at the Massachusetts Institute of Technology where he acquired his B.Sc. in 1939.
- Princeton University was the place where he got his Ph.D. in 1942.
- He was Research Assistant at Princeton (1940-1941), Professor of Theoretical Physics at Cornell University (1945-1950).
- He was Richard ChaceTolman Professor of Theoretical Physics at the California Institute of Technology (Gleick, 1993)
- In 1965 he was chosen an outside individual from the Royal Society, London (Great Britain).
- He holds the accompanying honors: Albert Einstein Award (1954, Princeton); Einstein Award (Albert Einstein Award College of Medicine) and Lawrence Award (1962).
- Feynman remade quantum electrodynamics, the theory of the interaction between light and matter.
- He was co-awarded the Nobel Prize for Physics in 1965 for this work.
- Feynman was the descendant of Russian and Polish Jews who had immigrated to the United States late in the 19th century (Gleick, 1993)
- During World War II Feynman was recruited to serve as a staff member of the U.S. atomic bomb project at Princeton University (1941–42).
- He and Hans Bethe developed the formula for calculating the yield of a fission bomb.

- He pioneered the field of quantum computing and developed the concept of nanotechnology.
- In 1980 he was a member of the Rogers Commission which was formed to investigate the Space Shuttle Challenger disaster.
- Feynman had a great reputation as a prankster and his autobiography is entitled Surely You're Joking, Mr. Feynman (Gleick, 1993)
- Feynman had a minor role in a movie called Anti-Clock where he played a professor.
- Feynman said he had synaesthesia .In certain equations he would see certain letters in color.
- He married three times in his life but truly loved only his childhood sweetheart who died at very early age.
- He had an IQ of just 125 (just above average). Still, he changed the world.
- When Feynman died in 1988 after a long struggle with cancer, his reputation was still mainly confined to the scientific community; his was not a household name (Gleick, 1993)

Rosalind Franklin

- Rosalind Franklin was the famous English chemist and x-ray specialist from UK.
- She was born on 25th July in 1920 in Notting Hill, London, UK.
- Rosalind was a leading character of crystallography where she made efforts in order to study DNAs, RNAs, Viruses, etc.
- Rosalind graduated from the University of Cambridge in physical chemistry in the year 1942.
- She further intended to pursue her research in Coal and signed up for PhD in 1945.
- Rosalind Franklin had high skills on the interpretation of DNAs through X-ray reports.
- With due her Excellency at research, she was awarded with the research fellowship award t Newham College
- She was the discoverer of the pores and the coal relationship within the porous space through a study of coal through helium.
- Because of Franklin's DNA interest, she constantly looked at everyone through a persistent eye contact, which often made her colleagues feel shy.
- Following the research on DNA, Franklin continued her journey and discovered another molecule similar to DNA, the RNA.
- Her research spread to the extents of Tobacco Mosaic Virus and the RNA virus.

- In the year 1955, Franklin published her studies and work on TMV in nature.
- Franklin did not work alone and trained a personal assistant James Watt, who further gained sufficient experience and was made the leader of the ARC group.
- Her services gained much importance and she was granted the first ever huge sum loan of £10,000 for three years by the United States Public Health Service
- Franklin was also invited to develop a 5 ft tall model of TMV at the Expo 58, the very first trade fair after the World War II in the year 1958.
- Apart from being unfaithful from religion, Franklin was still referred as an agnostic.
- Rosalind Franklin had affection for travelling and she admired trekking the most.
- Her trip to France in 1958 was memorable for her for learning French language and further made several trip to US consecutively.
- Her Nick name within her family was Ros (called by mother and aunt) and Rosalind for everyone else.
- Rosalind died at an early age, being 37 years old, on 16th April 1958 in England, UK.

Chen-Ning Yang

- He was born on September 22, 1922, in Hofei, Anwhei, China (Lin, et al., 2003)
- After his higher education, he became professor in 1955 in Princeton, New Jersey, U.S.A.
- He worked on the subjects of physics but his major interest was in symmetry principles and statistical mechanics.
- His thesis and researches plays important role in the field of his subjects.
- He is a prolific author and his researches are significantly prominent in the physical review, reviews of modern physics, bulletin of American mathematical society, and the Chinese journal of physics (Lin, et al., 2003)
- He has been elected as a Fellow of American Physical Society and Academic Sinica.
- He also got the honor to get the award of Albert Einstein Commemorative in 1957.
- He got name of outstanding young men in 1957 by U.S. Chamber of Commerce.
- He also got honorary doctorate in 1958 of Princeton University.
- He is a person known for his quietness, affable physicist, and modest (Lin, et al., 2003)
- He met his wife while teaching in China.
- He was a very hard-working person and do not append much leisure time.

- In 1948, Yang was awarded a Ph.D. in physics for his work on nuclear reactions.
- Yang was married to Chi-Li Tu from 1950 until she died in 2003.
- Yang along with Tsung-dao Lee received the 1957 Nobel prize in physics. This was for their work on parity non-conservation of weak interaction (Lin, et al., 2003)
- In addition to his work on weak interactions, Yang, in collaboration with Lee and others, carried out important work in statistical.
- He became a U.S. citizen in 1964.
- From 1965 Yang was Albert Einstein professor at the Institute of Science, State University of New York at Stony Brook, Long Island.
- In 2012, Chen Ning Yang received a 90th birthday gift in the form of a black cube inscribed with his 13 most important contributions.
- Chen-Ning Yang discovered that the left-right symmetry law is violated for the weak nuclear interaction (Lin, et al., 2003)

Donald Davies

- Donald Watts Davies was born on 7th of June in Treorchy, Glamorgan, Wales.
- His father who was a clerk at a coalmine died months after his birth.
- After his father's death, his mother took him and his twin sister to Portsmouth.
- He received his school education from the school known as Southern Grammar School for Boys.
- In 1943, Donald Davies received is BSc degree from the college, Imperial College London.
- Then he started working on Nuclear weapons under the assistance of Klaus Fuchs.
- After that he returned to the college to get his First-Class degree in mathematics.
- Donald Davies was basically a Computer Scientist from wales, with some notable efforts in the field.
- Donald Davies is considered to be the pioneer of the concept of Packet Switching.
- The concept he developed of Packet switching the basis of communication of data in computer networks.
- In 1947, David Davies joined National Physical Laboratory, where Alan Turing was also working.
- He was married to a woman named Diana, with whom he had two sons and a daughter.

- In 1984, David Davies retired from the National Physical Laboratory.
- After retiring from NPL, David Davies developed interest in the field of security of computer network.
- He designed Message Authenticator Algorithm, with the help of David O. Clayden.
- For his services and work, David Davies many awards and honors like: Outstanding Mathematician of the year, in 1947.
- Some of his other awards and honors are: Fellow of the Royal Society, Fellow of British Computer Society, etc.
- He also wrote some books, for example: Computer network and their protocols, Communication networks for computers, etc.
- Some of his associates were: Alan Turing, Donald Watts, Paul Baran, etc.
- Donald Davies died on 28th May 2000 in Esher, United Kingdom.

Paul Baran

- Paul Baran was born on 29th of April 1926 in Grodno, Poland (Bronfenbrenner, 1966).
- He was born in a Jewish-Polish family, with “Pesach” as the Yiddish name.
- He was the youngest out of the three children of his parents.
- On 11th May 1928, his family moved to the United States of America.
- His family settled in Philadelphia where Paul’s Father Morris Baran opened a grocery story.
- In 1949, he got a degree of Bachelor’s in electrical engineering from Drexel University.
- Later, he started working at UNIVAC models at Eckert-Mauchly Computer Company.
- In 1955 he got married to a girl named Evelyn Murphy Baran, who was a Ph.D.
- In 1959, Paul Baran attained his Master’s degree from University of California at Los Angeles.
- Later that year, he joined the RAND corporation and started working on Packet switched network design (Bronfenbrenner, 1966).
- Paul Baran and David Davies did the same kind of work, just with different names.
- Paul Baran came short when the matter of packet was to be recognized, just because he chose the name “Message blocks”

- Paul was the founder of an institute which in networking technologies, called Institute of the Future.
- Baran founded another company called Metricom in the year 1985(Bronfenbrenner, 1966).
- The company Baran founded was the first wireless internet company in the world.
- Baran also a cable modem company which was called Com21.
- Paul Baran, for his services received many awards like: IEEE Alexander Graham Bell Medal in 1990.
- Other awards he received were: Fellow of Computer history Museum, Marconi Prize, etc.
- Paul Baran was diagnosed with Lung cancer, which was cause of his death.
- Paul Baran died on 26th March 2011, at the age of 84, in Palo Alto, California.

Gene Shoemaker

- Gene Shoemaker, originally named as Eugene Merle Shoemaker, was one of the renowned geologist and founder of the planetary science.
- He was born on 28th April 1928 in L.A, California, and USA.
- He conducted most of his comet based researches along with his wife, Carolyn S. Shoemaker.
- Gene Shoemaker was the one who predicted the comet shoemaker that hit Jupiter in the year 1994 and was aired on television.
- He also undertook various terrestrial studies which were inclusive of Barringer Meteor, Arizona (Levy, 2000)
- His studies enabled him to predict and explain the world of the meteor impacts which caused attacks in the space (planets).
- Gene started his early education at the Buffalo Museum of education which offered him variety of science courses.
- Gene shoemaker had a total of 3 children; 2 daughters and a son.
- In the year 1950, Gene Shoemaker was appointed by the United States Geological Survey in order to research over uranium deposits.
- He also laid studies on volcano eruptions and his linked findings of Uranium and Volcanoes became vividly popular (Levy, 2000)
- In the year 1960, Gene Shoemaker pursued with his PhD degree at Princeton University.
- He explained the collapse of meteors through atomic bomb explosion test, for the first time.

- Gene Shoemaker was the first person to create a geologic map of the moon through its photographs.
- Gene Shoemaker's experience in planetary science made him an instructor of American Astronauts.
- Gene Shoemaker was selected to be travelled by Apollo to the moon but was rejected because of his Addison disease (Levy, 2000)
- Gene Shoemaker also pursued his carrier as commenting on the Apollo missions at the CBS news channel.
- In the year 1965, Gene Shoemaker was awarded the medal of John Price Wetherill by the Franklin Institute.
- Much of Shoemaker's life was spent only for space related research, however that generated sufficient recognition for him.
- Gene Shoemaker finally embraced death on 18th July 1997 through a head on car collusion.
- His work is still practiced in the Apollo missions and his history is taught in planetarium institutes (Levy, 2000)

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Robert Taylor

- Robert William Taylor was born on 10th of February, 1932.
- He was born in the City of Dallas in Texas, US.
- Robert William Taylor is now known as Bob Taylor and the pioneer of internet.
- He had adoptive parents and both used to travel very much.
- Taylor skipped seven grades of his school because of the extensive travelling.
- At the age of 16 he started his higher education at Southern Methodist University.
- In Korean war, he served in the United States Naval Reserve.
- After serving the USNR, he returned back to his studies at University of Texas.
- He acquired an undergraduate degree from UT in experimental psychology, with minors in English, religion, mathematics and philosophy.
- In 1959, he got his master's degree in in psychology from UT. But did not pursue further education.
- From 1965 to 1969 he was the director of IPTO of ARPA (Naughton, 1999).
- Robert Taylor coached basketball team and taught maths at Howey Academy in Florida.
- Robert Taylor then worked at companies of aircrafts manufacturing, for better income.

- As a senior system engineer, Robert Taylor helped in designing the MGM-31 Pershing.
- Robert Taylor also worked at NASA when the projects like Apollo program were happening.
- Robert Taylor also founded Xerox PARC's and the later was the manager of it, from 1970 to 1983 (Smith & Alexander, 1999).
- He also founded and the managed the Systems Research Center of Digital Equipment Corporation in 1996 (Naughton, 1999).
- Robert Taylor had three children: Derek Taylor, Erik Taylor and Kurt Taylor.
- Robert Taylor died on 13th of April, 2017 in Woodside, California, US.
- Robert Taylor dies because of the complications of Parkinson's disease and other health problems.

Jane Goodall

- Valeria Jane Morris Goodall was born on 3rd April in the year 1934 in London.
- Jane's total family comprised of her siblings her spouse and her one child.
- She was an animal lover and her worked mostly pertained towards them.
- Valeria Jane Goodall was a British based ethologist who became well known for her detailed study on chimpanzees in Tanzania.
- She was not just a researcher on animal behavior, but also was a film maker by profession.
- Jane Goodall was also referred as the English primatologist and anthropologist.
- She left school at the age of 18 and joined the film industry to earn her living.
- With affection towards animal, in the year 1962, she married a wild life photographer with whom she later divorced after going to Tanzania to shoot her film.
- Jane Goodall was luckily amongst the few people to be awarded with a PhD degree in ethology from the University of Cambridge.
- Jane Goodall also founded the Jane Goodall institute for wildlife research in California in the year 1977.
- She was amongst the researchers who concluded that the animals are omnivores and not vegetarians.

- Jane Goodall also wrote a number of books, amongst which includes 'In the Shadow of Man' in the year 1971.
- However, Goodall continued to write books on behavioral patterns.
- Jane Goodall's total service for the chimpanzee research continued for a span of 55 long years.
- Her achievement of the 21st century was the award of being a messenger of peace by UN.
- Jane Goodall was also made the Dame Commander of the British Empire Order in 2003.
- A whole documentary on the exceptional life of Jane Goodall had been made and expressed in 2017.
- Jane Goodall is still alive and is aged 84 living in London, UK.
- Students at present have been working to award her with increased appreciation and learn more from her

Leonard Kleinrock

- Leonard Kleinrock was born on 23rd June 1934 in the New York City.
- Leonard was born in a Jewish family, and is known to be moderately religious.
- In 1957, he received his bachelor's degree in electrical engineering from the City College of New York.
- In 1959 he received a master's degree in electrical engineering from Massachusetts Institute of Technology
- And later in 1963 a doctoral degree in the same field and from the same institute.
- He has been at the University of California at Los Angeles since after his Ph.D.
- From 1991 to 1994 he served as the Chairman of department of Computer Science at UCLA.
- In 1998 he also chaired the National research council committee to produce a report for research network.
- He is famous for his work in computer field, as he is known to be a computer scientist.
- He achieved many things in life, like cofounding Nomadix Inc and other organizations.
- Later he sold his company Nomadix to Japan, and its named was changed to DOCOMO.
- Some of his achievements are: Packet switching, making of APRANET, etc.

- His works on the queueing theory are the most significant ones, as they are the basis of internet.
- He himself said that the Ph.D. he did was to produce the mathematical theory of Packet network.
- For his achievements, Leonard Kleinrock has received several awards in his lifetime.
- Some of the awards he received are: IEEE Alexander Graham Bell Medal in 2012 and Marconi Prize 1986.
- He also received the National Medal of Science and National Academy of Engineering's Charles Stark Draper Prize.
- He made a system that can help shoppers compare prices of anything online.
- Leonard is still working at the University of California at Los Angeles.
- He is alive and very fit at the age of 80, still working for the wellbeing of his field.

Lawrence G. Roberts

- Lawrence G Roberts was born on 21st of December 1937 in Connecticut, US
- Lawrence G Roberts' parents were Elliot Roberts and Elizabeth Roberts.
- Both of his parents were highly educated and had doctorates in the subject of Chemistry.
- In 1959, Roberts G Lawrence received his Bachelor's degree in electrical engineering from MIT.
- Later in the years 1960 and 1963, he got his Master's and Ph.D. degree in the same field, from the same institute.
- Robert G Lawrence then worked at Lincoln Laboratory at MIT, after his Ph.D.
- In 1967 he was recruited in ARPANET to work as the program manager.
- In 1973, he formed Telenet, after leaving ARPANET.
- He left ARPANET to commercialize the technology of packet switching.
- Robert G Lawrence is said to be the founding father of the Internet.
- In 1983, he became the President and CEO of DHL corporation.
- From 1983 to 1993, Robert served as the chief executive officer of a company called NetExpress.
- In 2011, he founded the company Anagran Inc. Anagran Inc is for the IP flow management, and internet.
- He has been the CEO of Netmax in California since September of 2012.
- He received several awards for his work, for example: IEEE Harry M. Goode Memorial Award.

- He received several other awards like: L.M Ericsson Prize in 1982, Computer design Hall of Fame Award (1982) etc.
- Some of Lawrence's known associates are: Donald Davies, Paul Baran, etc.
- Robert G Lawrence's influences are J.C.R Licklider and Ivan Sutherland.
- Robert is now 80 years old and has been working at the Netmax for the past 6 years.
- In 2001, He also received the Draper Prize for the development of internet.

Ivan Sutherland

- (Burton, 1988) Ivan Sutherland was born on 16th of May 1938 in Nebraska, US.
- Ivan Sutherland's parents were Dean Sutherland and Juliet Sutherland.
- Ivan Sutherland earned his Bachelor's degree from Carnegie institute of technology in electrical engineering.
- In 1960, Ivan Sutherland got his master's degree in the same field from Caltech
- And In 1963, Ivan Sutherland got done with Ph.D. again in electrical engineering from MIT.
- In1963, Ivan Sutherland invented a revolutionary computer called Sketchpad.
- Ivan Sutherland is called the "father of the computer graphics" (Burton, 1988).
- In 1964, When Licklider returned to MIT, Sutherland replaced as the head of US defense department.
- He worked as an Associate professor at Harvard University from 1965 to 1968.
- He created the first virtual reality system in 1968 with the help of his students.
- From 1968 to 1974. He worked at University of Utah as a professor
- With his friend David. C. Evans, he founded an institute called Evans and Sutherland, in 1968.

- Evans and Sutherland, was firm that worked in 3D computer graphics, printer languages and real-time hardware.
- He worked at California Institute of Technology as the head of department of Computer Science from 1974-78
- Ivan Sutherland married Marly Roncken on 28th May 2006.
- Ivan and his wife are heading the researches at Portland State University in Asynchronous Systems
- Ivan Sutherland has a family of two children and he has 4 grandchildren.
- He received several awards for his work, for example: IEEE Emanuel R. priore Award in 1986.
- Other awards and honors he received are: Fellow of Computer History Museum, IEEE John von Neumann Medal in 1998, etc.
- Bert Sutherland, his elder brother is also a notable computer science researcher.

Stephen Hawking

- In the modern world, Stephen Hawking was a great name in the world of science, till the year 2018.
- Stephen Hawking was born on 8th January 1942, in England.
- Before any other scientific achievements of Stephen Hawking, his own life was revived by himself.
- Stephen Hawking had a rare early-onset slow-progressing form of motor neuron disease, also referred as ALS.
- However, Hawking never gave up and despite of permanent disability, he managed to develop a computer system controlling his brain and carrying out regular as well as critical responsibilities.
- Hawking ranked the second in the IQ test, after Lydia, with a score of 160, similar to that of Newton's and Einstein's.
- Hawking was a renowned British scientist who had made record breaking discoveries within his work.
- He had excelled his research and studies in the field of physics and cosmology.
- The life of Stephen Hawking has, after his ALS disease diagnosis while he was 21, was explained through a film.
- Stephen Hawking being a British National, he attained his higher education at the Cambridge University.
- His primary aim was to study mathematics, but as the Cambridge University failed to offer the course, he was enrolled in Physics, and his efforts are outrageous.

- Graduated in the year 1962, Stephen Hawking was offered the role of teaching at the Oxford University.
- In 1974, Stephen Hawking researched over the theory of black hole and evaluated that they were not the only source required for a scientist.
- At the age of 32, Hawking coupled up with Roger Penrose in order to develop the gravitational singularity theorem frameworks.
- Later in the year 1979, Stephen Hawking was appointed as the Mathematics teacher at the Oxford University where he served as the leading professor for 40 years.
- The quantum mechanics within the world were highly encouraged and supported by Stephen Hawking and he was the one to develop a theory based on Cosmology.
- Stephen Hawking was also a writer and had published many books amongst which some famous included 'A Brief History of Time', 'Black Holes and Baby Universe', etc.
- Stephen Hawking died at the age of 76 on 14th March 2018 in UK.
- Hawking was referred as 'unmatchable warrior of science' on his demise.

Michio Kaku

- American theoretical physicist, futurist, and popularizer of science (science communicator).
- He is a professor of theoretical physics in the City College of New York and CUNY Graduate Center.

Julian Assange

- Julian Assange was born on 3rd of July 1971, in Townsville, Queensland, Australia (Radermecker & Guichaoua, 2011).
- His father, John Shipton was an anti-war activist and his mother, Christine Ann Hawkins was a visual artist.
- When he was a year old, his mother married Richard Brett Assange, who Julian thinks of as his father.
- Assange lived in over 30 different towns in Australia when he reached his teenage.
- Julian Assange studied at several school, but he studied physics, programming and mathematics from Central Queens University.
- He also studied from University of Melbourne but he did not complete his degree.
- During his teens he fell in love and married a woman named Teresa, with whom he has a son named Daniel Assange.
- Under the name Mendax, Julian Assange started hacking in 1987. He had two associated: Prime suspect and Trax (Radermecker & Guichaoua, 2011).
- He formed a group called International Subversives, and in this time, he hacked major organizations of the world.
- Some organizations the International Subversives hacked are: The pentagon, US Navy, Panasonic, Motorola, etc.
- Julian Assange is famous for founding a non-profit organization called Wikileaks.

- When he was a teenager, he wrote the Underground: Tales of hacking with one of his partners.
- Throughout his life, Julian Assange has been threatened by almost everyone, including Pentagon and President of Kenya, etc (Radermecker & Guichaoua, 2011).
- Julian Assange is considered as a good father, as he was a single father for over 10 years.
- It is said that Julian Assange carries his money in the form of cash.
- Julian Assange is on Interpol's most wanted list, as he was accused of molesting two Swedish women.
- He travels under false names, and different identities to cover up his tracks.
- He has a movie made on him called The Fifth estate, where his character is played by Benedict Cumberbatch.
- He earned the title of "Person of the year" in 2010, for his efforts as an internet activist.
- In 2016, Assange through Wikileaks published thousands of emails of US presidential candidate Hillary Clinton.

Edward Snowden

- Edward Joseph Snowden was born on 21st June 1983 in Elizabeth city, North Carolina, US.
- Edward Joseph's father Lonnie was a coast guard officer, and his mother Elizabeth was a clerk.
- Due to moving to another place, Edward left school, but he passed the GED test.
- Edward Snowden scored over 140 points in two different IQ tests (Madison 2014).
- He took classes at Anne Arundel Community College, but did not have a bachelor's degree.
- Later, in 2011, he pursued Master's degree online at the University of Liverpool.
- He was interested in the Japanese culture and language. He worked for an anime company.
- He had an understanding of the Chinese language Mandarin and was interested in martial arts.
- Edward Snowden listed Buddhism as his religion in the military recruitment form.
- On May 7, 2004, he became a part of Special forces after enlisting in US army reserves.
- He broke both of his legs in a training accident and was discharged from there on 28th September 2004.

- He was recruited by CIA and was posted undercover in Geneva, Switzerland.
- Edward Snowden started working at Dell in 2009. He was to manage the computer department of NSA.
- In 2013, Snowden went to Hong Kong after leaving his Hawaii Job.
- In the month of June of the same year, he released classified files of NSA (Madison 2014).
- Edward Snowden was charged with theft of government property by the US department of Justice.
- Russian gave Edward Snowden asylum, in which is due till 2020.
- In 2013 the Guardian announced Edward Snowden as the person of the year, with a huge margin (Madison 2014).
- In 2014, Edward Snowden made into the list of 100 most influential people by Time Magazine.
- He earned over two hundred thousand dollars by digital speaking in US.
- People saying they don't care about rights to privacy because they 'have nothing to hide' are no different than people saying 'I don't care about freedom of speech because I have nothing to say'.

Chelsea Manning

- Bradley Edward Manning was born on 17th December 1987, in Crescent Oklahoma, US.
- Chelsea's Father, Brian used to travel for work, and her mother Susan was an alcoholic.
- Chelsea had a hard upbringing as her parents got divorced when she was 13 and her mother attempted suicide.
- At the age of 17, she started living with her father but soon was forced out of the home.
- In 2007, Chelsea enlisted in the US Army to prove herself to her father, and get out of the confusion regarding her gender identity (Maxwell 2015).
- Chelsea knew she was different since her early age. She was a boy, but she wanted to be a girl.
- She was sent to Iraq which affected her mental health very severely.
- In 2010, Chelsea came in contact with the founder of Wikileaks: Julian Assange.
- She wanted to expose the government and hence she leaked all the classified documents to WikiLeaks.
- Chelsea was charge with several allegations, one of them was aiding the enemy.
- Chelsea was not accepted as a transgender woman, and was sentenced some years of imprisonment on this (Maxwell 2015).

- She was imprisoned was over 7 years for all the charges that were on her.
- She was kept in detention in several places like Kuwait, Quantico, etc.
- She was supported by the people, as for her release and as a transgender woman.
- Transgender community thinks of her as an inspiration for all she has faced.
- Chelsea Manning was also mistreated at the places she had been for her detention.
- In 2013, she pleaded guilty and apologized for the acts she did.
- She was sentenced for 21 to 35 years after the reduction in sentence.
- She filed a release appeal in September 2013 in the time of Barrack Obama.
- On 17th of May 2017, Manning was released from the Fort Leavenworth's detention.