

Chapter 1 : American History Collection | Old Time Radio

Title: thomas edison the man Air Date: (May 19,) Plot: + Every American knows something of the life and work of Thomas Alva Edison he is properly called the complete genius. Before the dawn of the twentieth century he had established himsel.

Patents and 2, patents worldwide are responsible for every item that uses electricity as well as the concrete in commercial buildings. He created the motion picture industry , the recording industry, the X-ray machine, and he even created the tattoo pen. His recently restored factory of invention is a national park, which can still be seen today in Orange, New Jersey. I assure you it is worth the trip. According to the Edison Innovation Foundation , he operated on four simple principles, taught to him by his loving mother: Never get discouraged if you fail. Learn with both your head and hands. Not everything of value in life comes from books-experience the world. Read the entire panorama of literature. I hope they inspire you to greatness. The most certain way to succeed is always to try just one more time. Hard work, Stick-to-itiveness, and Common sense. It was all fun. The object of all work is production or accomplishment and to either of these ends there must be forethought, system, planning, intelligence, and honest purpose, as well as perspiration. Seeming to do is not doing. The time is coming when every person who lays claim to ability will keep the question of waste before him constantly. The scope of thrift is limitless. Show me a thoroughly satisfied man and I will show you a failure. I have seen many depressions in business. Always America has emerged from these stronger and more prosperous. Be brave as your fathers before you. The worst has been done in turmoil. Why, man, I have gotten a lot of results. I continue to find my greatest pleasure, and so my reward, in the work that precedes what the world calls success. Its sale is proof of utility, and utility is success. Feb 11, Like this column?

Chapter 2 : Travel DVD Video History of Motion Pictures Thomas Alva Edison

Thomas Edison, seen late in life in this video, was the most famous inventor in American history. Though he is best known for his invention of the phonograph and incandescent electric light, Edison took out 1, patents in a variety of fields, including electric light and power, telephony and telegraphy, and sound recording.

October photograph of original "Edison Pioneers" who worked with Edison early-on. Two Edison chandeliers with original first form " Wire Terminal Base" sockets and incandescent light bulbs are seen behind group. Francis Jehl, Frank Wardlaw and C. Howell and John W. Stock Ticker Photo credit: First form " Wire Terminal Base" socket and bulb as used on the S. Columbia - first commercial installation of Edison electric lighting system; Second form " Wire Terminal Base" socket and bulb; " Original Screw Base" socket and bulb and the " Improved Screw Base" socket and light bulb. Table card obverse reads: Event occurred as Tesla Polyphase A. Table card verso bearing printed inscription reading: Provenance is estate of Thomas A. His inventions, coupled with a business vision focused on commercial development, gave rise to three major industries: Edison was born on 11 February in Milan, Ohio, the last of seven children. Like many children during that era, Edison had little formal education. During his early youth his mother taught him at home. As he grew older he became more self-directed in his reading and sought out scientific books and technical journals. Born to modest means, Edison began his working life early. At age thirteen he took a job as a newsboy on the local railroad. At the age of sixteen, acting on his interest in telegraphy, he found full-time work as a telegraph operator. In Edison settled in Boston and began his transformation from itinerant telegrapher to world-class inventor. In that year Edison received his first patent—“an electric vote recorder intended for use by elected bodies to speed the voting process. For the rest of his career Edison focused on inventions that had strong commercial appeal, and therefore the potential of financial reward. In , Edison moved to New York City, and it was there that he made an improved stock ticker. At Menlo Park , Edison created the first industrial research laboratory, which contained equipment and materials necessary to work on any idea that might pique his interest. This complex consisted of five buildings which housed, among other things, a power plant, machine shops, a physics lab, a chemistry lab, and a metallurgy lab. Over the years, factories to manufacture Edison inventions were built around the laboratory. At its peak during World War I, the complex covered more than twenty acres and employed 10, people. His invention found a receptive public and Edison became internationally famous. His companies manufactured both the phonograph as well as the wax cylinders and, later, the disks, that the phonograph played. In one of the rare cases of Edison shortsightedness, he refused to acknowledge the growing popularity of disc records in the early s. While other companies, such as Columbia, made both discs and cylinders and let consumers make the choice, Edison stuck with the cylinder far too long. Eventually, his declining market share forced him to introduce a disc record in . The second of the Edison-created industries was that of electric power generation and distribution. Edison developed practical electrical lighting and, in essence, ushered in the electrical age. Pearl Street Station , which opened in lower Manhattan in September featured safe and reliable central power generation, efficient distribution, and a successful end use i. The one-square mile lit up by the Pearl Street station demonstrated the potential of electric power. Edison Movie Projector Black Maria Movie Studio In the s, Edison began working on motion picture technology, and in the process created a third industry. Like the electric light and phonograph before it, Edison developed a complete system that encompassed everything needed to both film and show motion pictures. A savvy publicist, Edison carefully cultivated a public image of eccentric genius combined with common man. By the dawn of the twentieth century Edison had become an icon of American ingenuity. The spiritual benefits of his contributions to humanity continue to live. His genius, vision, patience, persistence, industry, and widely diversified talents, which brought to fruition many of his conceptions, have contributed greatly to the comfort, convenience, and happiness of mankind, and his achievements constitute a great incentive and inspiration to those who follow. In particular, his invention of the incandescent electric lamp and his conception, more than 50 years ago, of the combination of a central generating station with a suitable distributing system for electrical energy, firmly establish him as the founder of the electric lighting

industry of the world. He was the outstanding world leader in the group of inventors, scientists, and engineers whose achievements in technology have produced great social and economic benefits, including the employment, in useful occupations throughout the civilized world, of tens of thousands of men and women. He was respected and admired by his associates who cherish their memory of his ability, simplicity, and other personal characteristics. Edison was, in , one of the signers of the call for the organization meeting of the American Institute of Electrical Engineers, and he was elected a vice-president at the first election of officers; later he was elected an Honorary Member. His achievements caused a group of his associates and friends to establish the Edison Medal, which is now awarded annually by this Institute. Westinghouse Corporation Tesla based Polyphase A.

Chapter 3 : Thomas Edison Facts for Kids

Thomas Alva Edison (February 11, - October 18,) was an American inventor and businessman, who has been described as America's greatest inventor. He is credited with developing many devices in fields such as electric power generation, mass communication, sound recording, and motion pictures.

He was the seventh and last child of Samuel Ogden Edison Jr. By contrast, Samuel Jr. Once across the border, he found his way to Milan, Ohio. His patrilineal family line was Dutch by way of New Jersey; the surname had originally been "Edeson. The cause of his deafness has been attributed to a bout of scarlet fever during childhood and recurring untreated middle-ear infections. Around the middle of his career, Edison attributed the hearing impairment to being struck on the ears by a train conductor when his chemical laboratory in a boxcar caught fire and he was thrown off the train in Smiths Creek, Michigan , along with his apparatus and chemicals. In his later years, he modified the story to say the injury occurred when the conductor, in helping him onto a moving train, lifted him by the ears. He became a telegraph operator after he saved three-year-old Jimmie MacKenzie from being struck by a runaway train. MacKenzie of Mount Clemens, Michigan , was so grateful that he trained Edison as a telegraph operator. He also studied qualitative analysis and conducted chemical experiments on the train until he left the job. These talents eventually led him to found 14 companies, including General Electric , still one of the largest publicly traded companies in the world. Edison requested the night shift, which allowed him plenty of time to spend at his two favorite pastimes—reading and experimenting. Eventually, the latter pre-occupation cost him his job. One night in , he was working with a lead-acid battery when he spilled sulfuric acid onto the floor. The next morning Edison was fired. His first patent was for the electric vote recorder, U. Patent 90, , which was granted on June 1, Edison was legally attributed with most of the inventions produced there, though many employees carried out research and development under his direction. His staff was generally told to carry out his directions in conducting research, and he drove them hard to produce results. William Joseph Hammer , a consulting electrical engineer, started working for Edison and began his duties as a laboratory assistant in December He assisted in experiments on the telephone, phonograph, electric railway, iron ore separator , electric lighting , and other developing inventions. However, Hammer worked primarily on the incandescent electric lamp and was put in charge of tests and records on that device see Hammer Historical Collection of Incandescent Electric Lamps. In , he was appointed chief engineer of the Edison Lamp Works. According to Edison, Hammer was "a pioneer of incandescent electric lighting". Sprague , a competent mathematician and former naval officer , was recruited by Edward H. Johnson and joined the Edison organization in About a dozen were design patents , which protect an ornamental design for up to a year period. As in most patents, the inventions he described were improvements over prior art. The phonograph patent, in contrast, was unprecedented as describing the first device to record and reproduce sounds. Edison said he wanted the lab to have "a stock of almost every conceivable material". With Menlo Park, Edison had created the first industrial laboratory concerned with creating knowledge and then controlling its application. Problems playing this file? Edison began his career as an inventor in Newark, New Jersey , with the automatic repeater and his other improved telegraphic devices, but the invention that first gained him wider notice was the phonograph in Despite its limited sound quality and that the recordings could be played only a few times, the phonograph made Edison a celebrity. Joseph Henry , president of the National Academy of Sciences and one of the most renowned electrical scientists in the US, described Edison as "the most ingenious inventor in this country Carbon telephone transmitter In , Edison began work to improve the microphone for telephones at that time called a "transmitter" by developing a carbon microphone , which consists of two metal plates separated by granules of carbon that would change resistance with the pressure of sound waves. A steady direct current is passed between the plates through the granules and the varying resistance results in a modulation of the current, creating a varying electric current that reproduces the varying pressure of the sound wave. Up to that point, microphones, such as the ones developed by Johann Philipp Reis and Alexander Graham Bell , worked by generating a weak current. The carbon microphone works by modulating a direct current and, subsequently, using a transformer to transfer the

signal so generated to the telephone line. Edison was one of many inventors working on the problem of creating a usable microphone for telephony by having it modulate an electrical current passed through it. This type was put in use in [39] and was used in all telephones along with the Bell receiver until the s. Electric light Main article: Others who developed early and commercially impractical incandescent electric lamps included Humphry Davy , James Bowman Lindsay , Moses G. Farmer , [42] William E. Some of these early bulbs had such flaws as an extremely short life, high expense to produce, and high electric current drawn, making them difficult to apply on a large scale commercially. This lamp must have high resistance and use relatively low voltage around volts. Issued January 27, Morgan , Spencer Trask , [52] and the members of the Vanderbilt family. Edison made the first public demonstration of his incandescent light bulb on December 31, , in Menlo Park. It was during this time that he said: The Edison equipment was removed from Columbia in Latimer had received a patent in January for the "Process of Manufacturing Carbons", an improved method for the production of carbon filaments for light bulbs. Latimer worked as an engineer, a draftsman and an expert witness in patent litigation on electric lights. Sawyer and was, therefore, invalid. The DC supply system provided electricity supplies to street lamps and several private dwellings within a short distance of the station. On January 19, , the first standardized incandescent electric lighting system employing overhead wires began service in Roselle, New Jersey. War of currents Main article: War of Currents Extravagant displays of electric lights quickly became a feature of public events, as in this picture from the Tennessee Centennial Exposition. As Edison expanded his direct current DC power delivery system, he received stiff competition from companies installing alternating current AC systems. From the early s AC arc lighting systems for streets and large spaces had been an expanding business in the US. With the development of transformers in Europe and by Westinghouse Electric in the US in "â€", it became possible to transmit AC long distances over thinner and cheaper wires, and "step down" the voltage at the destination for distribution to users. Small cities and rural areas could not afford an Edison style system at all, leaving a large part of the market without electrical service. AC companies expanded into this gap. Edison expressed views that AC was unworkable and the high voltages used were dangerous. As George Westinghouse installed his first AC systems in , Thomas Edison struck out personally against his chief rival stating, "Just as certain as death, Westinghouse will kill a customer within six months after he puts in a system of any size. He has got a new thing and it will require a great deal of experimenting to get it working practically. One notion is that the inventor could not grasp the more abstract theories behind AC and was trying to avoid developing a system he did not understand. Edison also appeared to have been worried about the high voltage from misinstalled AC systems killing customers and hurting the sales of electric power systems in general. This turned into a media frenzy against high voltage alternating current and the seemingly greedy and callous lighting companies that used it. Brown in a propaganda campaign, aiding Brown in the public electrocution of animals with AC, and supported legislation to control and severely limit AC installations and voltages to the point of making it an ineffective power delivery system in what was now being referred to as a "battle of currents". That year, the financier J. General Electric now controlled three-quarters of the US electrical business and would compete with Westinghouse for the AC market. Edison and Mina spent many winters at their home in Fort Myers, and Edison tried to find a domestic source of natural rubber. Initially, only Ford and Firestone were to contribute funds to the project while Edison did all the research. Dally made himself an enthusiastic human guinea pig for the fluoroscopy project and was exposed to a poisonous dose of radiation. He later died of injuries related to the exposure. In , a shaken Edison said: His impetus for its creation was the desire to measure the heat from the solar corona during the total Solar eclipse of July 29, Telegraph improvements This section possibly contains original research. Please improve it by verifying the claims made and adding inline citations. Statements consisting only of original research should be removed. With knowledge gained from years of working as a telegraph operator, he learned the basics of electricity. This allowed him to make his early fortune with the stock ticker , the first electricity-based broadcast system. On August 9, , Edison received a patent for a two-way telegraph. Edison was also granted a patent for the motion picture camera or "Kinetograph". He did the electromechanical design while his employee W. Dickson , a photographer, worked on the photographic and optical development. Much of the credit for the invention belongs to Dickson. This device was installed in

penny arcades, where people could watch short, simple films. The kinetograph and kinetoscope were both first publicly exhibited May 20, 1891. Later, he exhibited motion pictures with voice soundtrack on cylinder recordings, mechanically synchronized with the film. Maguire and Joseph D. Baucus a dozen machines. Bush placed from October 17, 1891, the first kinetoscopes in London. In the last three months of 1891, the Continental Commerce Company sold hundreds of kinetoscopes in Europe. The first kinetoscopes arrived in Belgium at the Fairs in early 1892. The main investors in this company were Belgian industrialists. The businessman Ladislas-Victor Lewitzki, living in London but active in Belgium and France, took the initiative in starting this business. In 1892, he also became a shareholder of the Biograph and Mutoscope Company for France.

Chapter 4 : Thomas Edison and Hollywood's Sordid Start | Flashback | OZY

by Kamalakannan (India) Thomas Alva Edison. Another famous deaf person is Thomas Alva Edison who was born on February 11, He was an American scientist, inventor, and businessman.

Thomas Alva Edison invented the phonograph in 1877, and it quickly became the most popular home-entertainment device of the century. Seeking to provide a visual accompaniment to the phonograph, Edison commissioned Dickson, a young laboratory assistant, to invent a motion-picture camera. Early years In Samuel Edison became the lighthouse keeper and carpenter on the Fort Gratiot military post near Port Huron, Michigan, where the family lived in a substantial home. Alva, as the inventor was known until his second marriage, entered school there and attended sporadically for five years. He was imaginative and inquisitive, but because much instruction was by rote and he had difficulty hearing, he was bored and was labeled a misfit. To compensate, he became an avid and omnivorous reader. In 1862 Edison quit school and began working as a trainboy on the railroad between Detroit and Port Huron. Four years earlier, the Michigan Central had initiated the commercial application of the telegraph by using it to control the movement of its trains, and the Civil War brought a vast expansion of transportation and communication. Edison took advantage of the opportunity to learn telegraphy and in 1866 became an apprentice telegrapher. The transformation of telegraphy to an auditory art left Edison more and more disadvantaged during his six-year career as an itinerant telegrapher in the Midwest, the South, Canada, and New England. Amply supplied with ingenuity and insight, he devoted much of his energy toward improving the telegraph equipment and inventing devices to facilitate some of the tasks that his physical limitations made difficult. By January 1868 he had made enough progress with a duplex telegraph, a device capable of transmitting two messages simultaneously on one wire and a printer, which converted electrical signals to letters, that he abandoned telegraphy for full-time invention and entrepreneurship. Pope, a noted electrical expert, to produce the Edison Universal Stock Printer and other printing telegraphs. Between 1868 and he worked out of Newark, New Jersey, and was involved in a variety of partnerships and complex transactions in the fiercely competitive and convoluted telegraph industry, which was dominated by the Western Union Telegraph Company. As an independent entrepreneur he was available to the highest bidder and played both sides against the middle. Years of litigation followed. Menlo Park Although Edison was a sharp bargainer, he was a poor financial manager, often spending and giving away money more rapidly than he earned it. In 1871 he married year-old Mary Stilwell, who was as improvident in household matters as he was in business, and before the end of they were in financial difficulties. Accompanying him were two key associates, Charles Batchelor and John Kruesi. He was also responsible for fashioning the drawings that Kruesi, a Swiss-born machinist, translated into models. Edison experienced his finest hours at Menlo Park. While experimenting on an underwater cable for the automatic telegraph, he found that the electrical resistance and conductivity of carbon then called plumbago varied according to the pressure it was under. In February Edison began experiments designed to produce a pressure relay that would amplify and improve the audibility of the telephone, a device that Edison and others had studied but which Alexander Graham Bell was the first to patent, in 1876. By the end of 1876 Edison had developed the carbon-button transmitter that is still used in telephone speakers and microphones. The phonograph Edison invented many items, including the carbon transmitter, in response to specific demands for new products or improvements. But he also had the gift of serendipity: This was how, in 1877, he achieved his most original discovery, the phonograph. Because the telephone was considered a variation of acoustic telegraphy, Edison during the summer of 1877 was attempting to devise for it, as he had for the automatic telegraph, a machine that would transcribe signals as they were received, in this instance in the form of the human voice, so that they could then be delivered as telegraph messages. The telephone was not yet conceived as a general, person-to-person means of communication. Edison hoped to reify this concept by employing a stylus-tipped carbon transmitter to make impressions on a strip of paraffined paper. To his astonishment, the scarcely visible indentations generated a vague reproduction of sound when the paper was pulled back beneath the stylus. Thomas Alva Edison demonstrating his tinfoil phonograph, c. 1877. LC-DIG-cwpbh Edison unveiled the tinfoil phonograph, which replaced the strip of paper with a cylinder wrapped in tinfoil, in

December It was greeted with incredulity. Indeed, a leading French scientist declared it to be the trick device of a clever ventriloquist. Edison was projected into worldwide prominence and was dubbed the Wizard of Menlo Park , although a decade passed before the phonograph was transformed from a laboratory curiosity into a commercial product. Edison, ThomasThomas Edison listening to a phonograph. Edison thought he would be able to solve this by fashioning a microtasmeter-like device to control the current. He boldly announced that he would invent a safe, mild, and inexpensive electric light that would replace the gaslight. Edison, , holding a replica of the first electric lightbulb. Thus, a syndicate of leading financiers, including J. Edison proposed to connect his lights in a parallel circuit by subdividing the current, so that, unlike arc lights, which were connected in a series circuit , the failure of one lightbulb would not cause a whole circuit to fail. Some eminent scientists predicted that such a circuit could never be feasible , but their findings were based on systems of lamps with low resistanceâ€”the only successful type of electric light at the time. Edison, however, determined that a bulb with high resistance would serve his purpose, and he began searching for a suitable one. Upton, who joined the laboratory force in December , provided the mathematical and theoretical expertise that Edison himself lacked. I try an experiment and reason out the result, somehow, by methods which I could not explain. By October Edison and his staff had achieved encouraging results with a complex, regulator-controlled vacuum bulb with a platinum filament, but the cost of the platinum would have made the incandescent light impractical. While experimenting with an insulator for the platinum wire, they discovered that, in the greatly improved vacuum they were now obtaining through advances made in the vacuum pump, carbon could be maintained for some time without elaborate regulatory apparatus. Advancing on the work of Joseph Wilson Swan , an English physicist, Edison found that a carbon filament provided a good light with the concomitant high resistance required for subdivision. Steady progress ensued from the first breakthrough in mid-October until the initial demonstration for the backers of the Edison Electric Light Company on December 3. In the fall a temporary, demonstration central power system was installed at the Holborn Viaduct in London , in conjunction with an exhibition at the Crystal Palace. Edison, ThomasThomas Edison with a model for a concrete house, c. Library of Congress, Washington, D. One of the accidental discoveries made in the Menlo Park laboratory during the development of the incandescent light anticipated the British physicist J. In â€”82 William J. Hammer, a young engineer in charge of testing the light globes, noted a blue glow around the positive pole in a vacuum bulb and a blackening of the wire and the bulb at the negative pole. Increasingly, the Menlo Park property was used only as a summer home. The Edison laboratory A widower with three young children, Edison, on February 24, , married year-old Mina Miller, the daughter of a prosperous Ohio manufacturer. There, he produced the commercial phonograph , founded the motion-picture industry, and developed the alkaline storage battery. Nevertheless, Edison was past the peak of his productive period. A poor manager and organizer, he worked best in intimate , relatively unstructured surroundings with a handful of close associates and assistants; the West Orange laboratory was too sprawling and diversified for his talents. In fact, it was not until the late s, after Edison had established production and recording facilities adjacent to the laboratory, that all the mechanical problems were overcome and the phonograph became a profitable proposition. In the meantime, Edison conceived the idea of popularizing the phonograph by linking to it in synchronization a zoetrope, a device that gave the illusion of motion to photographs shot in sequence. He assigned the project to William K. Dickson , an employee interested in photography , in After studying the work of various European photographers who also were trying to record motion, Edison and Dickson succeeded in constructing a working camera and a viewing instrument, which were called, respectively, the Kinetograph and the Kinetoscope. Synchronizing sound and motion proved of such insuperable difficulty, however, that the concept of linking the two was abandoned, and the silent movie was born. LC-DIG-ppmsca Another derivative of the phonograph was the alkaline storage battery , which Edison began developing as a power source for the phonograph at a time when most homes still lacked electricity. Although it was 20 years before all the difficulties with the battery were solved, by Edison was a principal supplier of batteries for submarines and electric vehicles and had even formed a company for the manufacture of electric automobiles. Edison had first worked on the separator when he was searching for platinum for use in the experimental incandescent lamp. The device was supposed to cull platinum from iron -bearing sand. During the s iron ore

prices rose to unprecedented heights, so that it appeared that, if the separator could extract the iron from unusable low-grade ores, then abandoned mines might profitably be placed back in production. Edison purchased or acquired rights to old mines in the east and established a large pilot plant at the Ogden mine, near Ogdensburg, New Jersey. He was never able to surmount the engineering problems or work the bugs out of the system, however, and when ore prices plummeted in the mid-1880s he gave up on the idea. By then he had liquidated all but a small part of his holdings in the General Electric Company, sometimes at very low prices, and had become more and more separated from the electric lighting field. Although none of his later projects were as successful as his earlier ones, he continued to work even in his 80s. His life and achievements epitomize the ideal of applied research. He always invented for necessity, with the object of devising something new that he could manufacture. The basic principles he discovered were derived from practical experiments, invariably by chance, thus reversing the orthodox concept of pure research leading to applied research. Unlike other scientists and inventors of the time, who had limited means and lacked a support organization, Edison ran an inventive establishment. He was the antithesis of the lone inventive genius, although his deafness enforced on him an isolation conducive to conception. His lack of managerial ability was, in an odd way, also a stimulant. As his own boss, he plunged ahead on projects more prudent men would have shunned, then tended to dissipate the fruits of his inventiveness, so that he was both free and forced to develop new ideas. Few men have matched him in the positiveness of his thinking. Edison never questioned whether something might be done, only how. In temperament he was an uninhibited egotist, at once a tyrant to his employees and their most entertaining companion, so that there was never a dull moment with him. He was charismatic and courted publicity, but he had difficulty socializing and neglected his family. The contradictory nature of his forceful personality, as well as such eccentricities as his ability to catnap anywhere, contributed to his legendary status. By the time he was in his middle 30s Edison was said to be the best-known American in the world. When he died he was venerated and mourned as the man who, more than any other, had laid the basis for the technological and social revolution of the modern electric world. Thomas Alva Edison,

Chapter 5 : Thomas Alva Edison - Engineering and Technology History Wiki

*Thomas Alva Edison (American Cavalcade) [Christopher Lampton] on calendrierdelascience.com *FREE* shipping on qualifying offers. Traces the life and contributions of the famous inventor whose inventions such as the electric light bulb and phonograph helped change the world.*

He was having greater laboratories Menlo Park and West Orange in New Jersey, but for business over companies carried Edison, also illuminating companies. Thomas Edison was the youngest of seven children of Samuel and Nancy Edison. Mother Nancy, had been a school teacher; his father, Samuel, was a Canadian political firebrand who was exiled from his country. And also some says Edison injured his ears cause of train incident. At his childhood his family moved to Port Huron, Michigan. He joined in an public school for 12 weeks. His Teacher write an letter, give it to Edison and saying, give this to your mother. Now, His mother quickly pulled him from school and taught him at home. At his age 11 , he also uses his fathers library for wide knowledge, reading books on a wide range of subjects. In this wide-open curriculum Edison developed a process for self-education and learning independently that would serve him throughout his life. Story Of Jack Ma: The up-to-date articles were a hit with passengers. This was the first of what would become a long string of entrepreneurial ventures where he saw a need and capitalized on the opportunity. Edison also used his access to the railroad to conduct chemical experiments in a small laboratory he set up in a train baggage car. During one of his experiments, a chemical fire started and the car caught fire. The conductor rushed in and struck Thomas on the side of the head, probably furthering some of his hearing loss. He was kicked off the train and forced to sell his newspapers at various stations along the route. He leaned telegraph for an operator job advancement in telegraph kicked him out. And also he was makes an inventions continuously without stooping for any cause. He was invented more and more. At his life he invented numerous inventions and owns numerous patents on him. Edison received 1, U. He executed his first patent for his Electrographic Vote-Recorder on October 13, , at the age of His last patent was for an apparatus for holding objects during the electroplating process. A total still untouched by any other inventor. Even more important, he created a model for modern industrial research.

Chapter 6 : Thomas Edison - Wikipedia

An extraordinary working laboratory note on phonograph recordings by iconic American inventor Thomas Edison, revealing his meticulous attention to procedure and business managerial efficiency. Description: "Edison" [Thomas Alva Edison ()].

When Edison was seven his family moved to Port Huron, Michigan. Edison lived here until he struck out on his own at the age of sixteen. Edison had very little formal education as a child, attending school only for a few months. He was taught reading, writing, and arithmetic by his mother, but was always a very curious child and taught himself much by reading on his own. This belief in self-improvement remained throughout his life. Edison began working at an early age, as most boys did at the time. At thirteen he took a job as a newsboy, selling newspapers and candy on the local railroad that ran through Port Huron to Detroit. He seems to have spent much of his free time reading scientific, and technical books, and also had the opportunity at this time to learn how to operate a telegraph. By the time he was sixteen, Edison was proficient enough to work as a telegrapher full time. The development of the telegraph was the first step in the communication revolution, and the telegraph industry expanded rapidly in the second half of the 19th century. This rapid growth gave Edison and others like him a chance to travel, see the country, and gain experience. Edison worked in a number of cities throughout the United States before arriving in Boston in Here Edison began to change his profession from telegrapher to inventor. He received his first patent on an electric vote recorder, a device intended for use by elected bodies such as Congress to speed the voting process. This invention was a commercial failure. Edison resolved that in the future he would only invent things that he was certain the public would want. Edison moved to New York City in He continued to work on inventions related to the telegraph, and developed his first successful invention, an improved stock ticker called the "Universal Stock Printer". This gave Edison the money he needed to set up his first small laboratory and manufacturing facility in Newark, New Jersey in During the next five years, Edison worked in Newark inventing and manufacturing devices that greatly improved the speed and efficiency of the telegraph. He also found to time to get married to Mary Stilwell and start a family. In Edison sold all his Newark manufacturing concerns and moved his family and staff of assistants to the small village of Menlo Park, twenty-five miles southwest of New York City. Edison established a new facility containing all the equipment necessary to work on any invention. Here Edison began to change the world. The first machine that could record and reproduce sound created a sensation and brought Edison international fame. Edison toured the country with the tin foil phonograph, and was invited to the White House to demonstrate it to President Rutherford B. Hayes in April Edison next undertook his greatest challenge, the development of a practical incandescent, electric light. The idea of electric lighting was not new, and a number of people had worked on, and even developed forms of electric lighting. But up to that time, nothing had been developed that was remotely practical for home use. After one and a half years of work, success was achieved when an incandescent lamp with a filament of carbonized sewing thread burned for thirteen and a half hours. Edison spent the next several years creating the electric industry. In September , the first commercial power station, located on Pearl Street in lower Manhattan, went into operation providing light and power to customers in a one square mile area; the electric age had begun. An early sketch from a laboratory notebook of an electric lightbulb. NPS Photo The success of his electric light brought Edison to new heights of fame and wealth, as electricity spread around the world. Despite the use of Edison in the company title however, Edison never controlled this company. The tremendous amount of capital needed to develop the incandescent lighting industry had necessitated the involvement of investment bankers such as J. When Edison General Electric merged with its leading competitor Thompson-Houston in , Edison was dropped from the name, and the company became simply General Electric. A year later, while vacationing at a friends house in New England, Edison met Mina Miller and fell in love. The couple was married in February and moved to West Orange, New Jersey where Edison had purchased an estate, Glenmont, for his bride. Thomas Edison lived here with Mina until his death. When Edison moved to West Orange, he was doing experimental work in makeshift facilities in his electric lamp factory in nearby Harrison,

New Jersey. A few months after his marriage, however, Edison decided to build a new laboratory in West Orange itself, less than a mile from his home. Edison possessed both the resources and experience by this time to build, "the best equipped and largest laboratory extant and the facilities superior to any other for rapid and cheap development of an invention". The new laboratory complex consisting of five buildings opened in November. A three story main laboratory building contained a power plant, machine shops, stock rooms, experimental rooms and a large library. Four smaller one story buildings built perpendicular to the main building contained a physics lab, chemistry lab, metallurgy lab, pattern shop, and chemical storage. The large size of the laboratory not only allowed Edison to work on any sort of project, but also allowed him to work on as many as ten or twenty projects at once. Over the years, factories to manufacture Edison inventions were built around the laboratory. The entire laboratory and factory complex eventually covered more than twenty acres and employed 10, people at its peak during World War One. After opening the new laboratory, Edison began to work on the phonograph again, having set the project aside to develop the electric light in the late s. By the s, Edison began to manufacture phonographs for both home, and business use. Like the electric light, Edison developed everything needed to have a phonograph work, including records to play, equipment to record the records, and equipment to manufacture the records and the machines. In the process of making the phonograph practical, Edison created the recording industry. While working on the phonograph, Edison began working on a device that, "does for the eye what the phonograph does for the ear", this was to become motion pictures. Edison first demonstrated motion pictures in , and began commercial production of "movies" two years later in a peculiar looking structure, built on the laboratory grounds, known as the Black Maria. Like the electric light and phonograph before it, Edison developed a complete system, developing everything needed to both film and show motion pictures. There were therefore many contributors to the swift development of motion pictures beyond the early work of Edison. By the late s, a thriving new industry was firmly established, and by the industry had become so competitive that Edison got out of the movie business all together. Throughout the decade Edison worked in his laboratory and in the old iron mines of northwestern New Jersey to develop methods of mining iron ore to feed the insatiable demand of the Pennsylvania steel mills. To finance this work, Edison sold all his stock in General Electric. Despite ten years of work and millions of dollars spent on research and development, Edison was never able to make the process commercially practical, and lost all the money he had invested. This would have meant financial ruin had not Edison continued to develop the phonograph and motion pictures at the same time. As it was, Edison entered the new century still financially secure and ready to take on another challenge. Edison very much enjoyed automobiles and owned a number of different types during his life, powered by gasoline, electricity, and steam. Edison thought that electric propulsion was clearly the best method of powering cars, but realized that conventional lead-acid storage batteries were inadequate for the job. Edison began to develop an alkaline battery in . By the time Edison introduced his new alkaline battery, the gasoline powered car had so improved that electric vehicles were becoming increasingly less common, being used mainly as delivery vehicles in cities. However, the Edison alkaline battery proved useful for lighting railway cars and signals, maritime buoys, and miners lamps. By , Thomas Edison had built a vast industrial operation in West Orange. Numerous factories had been built through the years around the original laboratory, and the staff of the entire complex had grown into the thousands. To better manage operations, Edison brought all the companies he had started to make his inventions together into one corporation, Thomas A. Edison Incorporated, with Edison as president and chairman. Edison was sixty-four by this time and his role with his company and in life began to change. Edison left more of the daily operations of both the laboratory and the factories to others. The laboratory itself did less original experimental work and instead worked more on refining existing Edison products such as the phonograph. Although Edison continued to file for and receive patents for new inventions, the days of developing new products that changed lives and created industries were behind him. In the , Edison was asked to head the Naval Consulting Board. With the United States inching closer towards the involvement in World War One, the Naval Consulting Board was an attempt to organize the talents of the leading scientists and inventors in the United States for the benefit of the American armed forces. Edison favored preparedness, and accepted the appointment. The Board did not make a notable contribution to the final allied victory, but did

serve as a precedent for future successful cooperation between scientists, inventors and the United States military. During the war, at age seventy, Edison spent several months on Long Island Sound in a borrowed navy vessel experimenting on techniques for detecting submarines. In , in recognition of a lifetime of achievement, the United States Congress voted Edison a special Medal of Honor. In the nation celebrated the golden jubilee of the incandescent light. Attendees included President Herbert Hoover and many of the leading American scientists and inventors. They asked Edison to find an alternative source of rubber for use in automobile tires. The natural rubber used for tires up to that time came from the rubber tree, which does not grow in the United States. Crude rubber had to be imported and was becoming increasingly expensive. With his customary energy and thoroughness, Edison tested thousands of different plants to find a suitable substitute, eventually finding a type of Goldenrod weed that could produce enough rubber to be feasible. Edison was still working on this at the time of his death. During the last two years of his life Edison was in increasingly poor health. Edison spent more time away from the laboratory, working instead at Glenmont. Trips to the family vacation home in Fort Myers, Florida became longer. Edison was past eighty and suffering from a number of ailments. In August Edison collapsed at Glenmont. Essentially house bound from that point, Edison steadily declined until at 3:

Chapter 7 : Thomas Edison - HISTORY

Get this from a library! Thomas Alva Edison. [Christopher Lampton] -- Traces the life and contributions of the famous inventor whose inventions such as the electric light bulb and phonograph helped change the world.

When Edison was seven years old, he moved with his family to Port Huron , Michigan. Edison started school late because of an illness. Three months later, Edison was removed from school, because he could not pay attention to his teacher. His mother, who was a teacher in Canada , taught Edison at home. When Edison was twelve years old, he contracted scarlet fever. The effects of the fever, as well as getting picked up by the ears by a train conductor, caused Edison to become completely deaf in his left ear, and 80 percent deaf in the other. He learned Morse code of the telegraph , and began a job as a "brass pounder" telegraph operator. At age sixteen, Edison invented his first invention, which was called an "automatic repeater. He worked twelve hours a day, six days a week, and continued to "moonlight" on his own projects. Within six months, he had applied for and received his first patent for an electric vote recorder. It made the voting process faster but he could not find buyers. Then, Edison moved to New York and began to work for a company fixing their machines. At night, he continued to work on his projects. In Edison used the money from his inventions to start his own laboratory in New Jersey. In , Edison invented the phonograph , the first machine that could record and play sound. The phonograph made him internationally famous. In , Edison made a light bulb that lasted longer. Another invention, the electric power distribution network, lasted even longer. Personal life He married Mary Stilwell in He had three children in that marriage: Mary Stilwell died in Thomas Edison bought some land in Florida and built a house. When he was thirty-nine, Edison married his second wife, Mina Miller, who was He had 3 children in that marriage: Issued January 27, Extravagant displays of electric lights quickly became a feature of public events, as in this picture from the Tennessee Centennial Exposition. Share of the Edison Storage Battery Company, issued October From Left to Right: Edison in All content from Kiddle encyclopedia articles including the article images and facts can be freely used under Attribution-ShareAlike license, unless stated otherwise.

Chapter 8 : Thomas Edison The Man | The Cavalcade Of America | Drama | Old Time Radio Downloads

Thomas Alva Edison was born on February 11, 1847, in Milan, Ohio. He was the seventh and last child born to Samuel Edison Jr. and Nancy Elliott Edison, and would be one of four to survive to.

In mid-October, 1896, a film crew arrived in the small town of West Orange, New Jersey, to spend some time with the most famous man in the world -- the phenomenally prolific American inventor, Thomas Edison. Over the course of a few days, the cameras captured the great man at work: Nathan Myhrvold, Inventor and Entrepreneur: The things that Edison invented are so omnipresent in our society. We live in a world Edison invented. Incandescent light, sound recording, motion pictures -- for these and scores of other inventions, Edison had justly earned acclaim as the "Inventor of the Age. This is the replica of the first lamp. But no mere machine could account for his metamorphosis from inventor to icon. Well we think we are moving very, very fast today. The impact of his native genius made infinitely more powerful by his timing, his canny knack for self-promotion, and his compulsive need to win. Edison was very competitive. The more people who tried to find the answer, the more tempting it was for him to take it on. He was maniacally focused on maintaining control. Robert Rosenberg, *Thomas Edison Papers*: There were other great inventors. Then there was Edison. He understood that inventing is not just having an idea, and so he made Edison a name to be reckoned with. In the late winter of 1876, the scattered residents of Menlo Park, New Jersey eyed a curious new building, just up the hill from the train station. It could easily have been mistaken for a school, or a Quaker meeting house. In fact, it was a laboratory -- a 5,000-square-foot facility entirely dedicated to nurturing the ideas of one man, an up-and-coming entrepreneur by the name of Thomas Alva Edison. No private laboratory in the country was so well-equipped. From the apothecary jars filled with all manner of chemicals and organic materials, to the scientific instruments and shop tools, Edison had everything he could possibly need to make the natural world bend to his will. Most successful inventors throughout history were largely people trying to accomplish a task. They had a day job, effectively, and invention was a way of furthering that. Edison decided that invention was his day job. His was a classic American story: Born in and raised in Port Huron, Michigan -- near the edge of a small country then on the verge of becoming great -- Thomas Edison was all pluck and initiative from the start. By his own account, he was curious to the point of mischief: Money was tight, so to finance his dabbling, he went to work at the age of 12, taking a job as a newsboy on the train that ran daily between Port Huron and Detroit. Along the way, in the stations up and down the line, he became fascinated with the telegraph, which was beginning to knit the growing nation together as the rails were -- only with lengths of copper wire. Is there a more leading edge thing going on in his world than telegraphy, moving real information at the speed of light, with very sophisticated technologies to make it happen. He was amazed by it. He was that kind of kid. He taught himself Morse Code and practiced sending and receiving telegraph messages for up to 18 hours a day, before finally landing his first job as an operator in 1858, when he was just 16. But with telegraphy, he found that deafness gave him an edge. This condition made him feel like he could think more and he could concentrate more. He became very introspective. He often felt like he was alone even when there were other people around. For five years, Edison worked as a press operator, deciphering the dots and dashes of the news reports as they came in over the wires. But the task, once mastered, ceased to inspire him. Given his druthers, he took the night shift, which gave him plenty of free time to read and experiment. Before long, he was tinkering with the telegraphic equipment. Paul Israel, *Thomas Edison Papers*: Most of his technical education came from the practice of telegraphy. The telegraph offices were schools of electricity. The nature of electricity itself was something he studied and learned how to think about how that system operated, how he might improve it. Edison slowly began to think of himself as an inventor. Edison starts, at the core, the mother lode of the technological transformation in America. In early 1870, Edison resigned his post as a telegraph operator, and, at the age of 22, moved to New York with a few borrowed dollars in the pocket of his threadbare suit to pursue his career as an inventor. He spent the next several years bouncing from one short-lived partnership to another, mainly developing and manufacturing small lots of telegraphic devices on contract. But he was meticulous and tenacious -- and no technical challenge could cow him. The booming

industry rewarded him with confidence -- and also with cash. As one associate put it: Edison took a real risk in going to Menlo Park. You had to be pretty bold to build this new thing -- invention laboratory. And you were going to become a professional inventor who was constantly cranking out new technology. But it was because he had this vision of how to become a great inventor. This was astoundingly revolutionary, you know, "I want to invent. It was May of -- and Edison was anxious to get down to work. His staff was already in place: All that remained was to move in his family: From the very beginning, Menlo Park thrummed like a hive. In the long, open rooms of the laboratory, as many as a dozen men were at work at once -- conducting experiments, cutting patterns, banging together crude machines. Edison loved the chase. He wanted to break open very interesting and challenging problems with a lot of promise in them. The drive had something to do with technical inquiry. A kind of ambition to know where to figure out things that nobody had thought of yet. Though telegraphic equipment was still his primary focus, the plan at Menlo Park, as Edison put it to a friend, was to bring out "a minor invention every 10 days and a big thing every month or so. And nobody had the kind resources that Edison had. He could say, "You work on this kind of carbon, and you work on this kind of carbon, and you work on this kind of carbon. He would keep track of how many hours he spent in a row on something and try to beat his last record. He was very into living above the store, if you will, and he really implicitly thought that everybody else should be like that. It was a rowdy group of guys. It was an age of marvels, as any of the nearly nine million visitors to the Centennial Exposition could attest. Here was a steam engine so massive that it could run hundreds of machines simultaneously; an elevator that enabled a man to make an eight-story climb while standing still; and a battery-operated pen that produced multiple copies of a document at one time. For Edison, there were few more powerful catalysts than competition. Thomas Edison had no real deep abiding collegial respect for Alexander Graham Bell. Alexander Graham Bell existed as someone to be competed with and overcome and transcended and bettered. Edison saw competition as sort of a crucial spur to the inventive enterprise. He said an inventor needs an enemy. You know, he thought he was the best inventive brain around. And also he had his laboratory which could outdo anybody else. In the process, Edison stumbled upon the invention that would change his life forever. It was the summer of , and the Menlo Park team was testing various materials for their acoustic properties. Edison, though unable to hear the birds outside, was nevertheless obsessed with sound -- its transmission constantly cycling through what one colleague described as his "kaleidoscopic mind. You can see these sort of patterns. Edison had worked on a telegraph technology that made marks on a paper. So Edison was trying to figure out a way to do that for the telephone. How can I record this thing? And as you speak it will make impressions in this paper. And then you can pull it back through later and listen to it. Initial experiments quickly gave rise to sketches for a crude machine Edison called a phonograph -- from the ancient Greek, meaning "writer of sound. Finally, they settled on a design in which a sheet of foil was mounted on a hand-cranked cylinder. When the machine was finished, the men in the shop gathered round, breathless as Edison recited into the diaphragm the classic nursery rhyme, Mary Had a Little Lamb. Mary had a little lamb, its fleece was white as snow. Then, he moved the needle to the beginning to see if the rhyme would play back. And everywhere that Mary went, the lamb was sure to go. Nobody had ever recorded anything before. And it just changes the way you think about the world, if you can play something back again.

Chapter 9 : Thomas A. Edison: The Wizard Of Menlo Park DVD, Download, USB Drive

Thomas Alva Edison was born on February 11, in Milan, Ohio; the seventh and last child of Samuel and Nancy Edison. When Edison was seven his family moved to Port Huron, Michigan. Edison lived here until he struck out on his own at the age of sixteen.

He answered, "Genius is hard work, stick-to-it-iveness, and common sense. In , when he was seven, the family moved to Michigan, where Edison spent the rest of his childhood. He did so poorly that his mother, a former teacher, taught her son at home. Al learned to love reading, a habit he kept for the rest of his life. He also liked to make experiments in the basement. Al not only played hard, but also worked hard. At the age of 12 he sold fruit, snacks and newspapers on a train as a "news butcher. He even printed his own newspaper, the Grand Trunk Herald, on a moving train. At 15, Al roamed the country as a "tramp telegrapher. Even though he was already losing his hearing, he could still hear the clicks of the telegraph. In the next seven years he moved over a dozen times, often working all night, taking messages for trains and even for the Union Army during the Civil War. In his spare time, he took things apart to see how they worked. Finally, he decided to invent things himself. After the failure of his first invention, the electric vote recorder, Edison moved to New York City. There he improved the way the stock ticker worked. This was his big break. By his company was manufacturing his stock ticker in Newark, New Jersey. He also improved the telegraph, making it send up to four messages at once. During this time he married his first wife, Mary Stilwell, on Christmas Day, They had three children -- Marion, Thomas, Jr. There he built his most famous laboratory. He was not alone in Menlo Park. Edison hired "muckers" to help him out. These "muckers" came from all over the world to make their fortune in America. They often stayed up all night working with the "chief mucker," Edison himself. He is sometime called the "Wizard of Menlo Park" because he created two of his three greatest works there. In , Edison recorded the first words on a piece of tin foil. He recited the nursery rhyme "Mary Had a Little Lamb," and the phonograph played the words back to him. This was invented by a man whose hearing was so poor that he thought of himself as "deaf"! Starting in , Edison and the muckers worked on one of his greatest achievements. The electric light system was more than just the incandescent lamp, or "light bulb. Imagine all the things you "plug in. In , one year after his first wife died, Edison met a year-old woman named Mina Miller. Edison taught her Morse Code. Even when others were around, the couple could "talk" to each other secretly. One day he tapped a question into her hand: She tapped back the word "yes. They married on February 24, and had three children: Madeleine, Charles and Theodore. A year later, Edison built a laboratory in West Orange that was ten times larger than the one in Menlo Park. In fact, it was one of the largest laboratories in the world, almost as famous as Edison himself. Once, the "chief mucker" worked for three days straight, taking only short naps. Edison earned half of his 1, patents in West Orange. But Edison did more than invent. Here Edison could think of ways to make a better phonograph, for example, build it with his muckers, have them test it and make it work, then manufacture it in the factories that surrounded his laboratory. This improved phonograph could then be sold throughout the world. Not only did Edison improve the phonograph several times, but he also worked on X-rays, storage batteries, and the first talking doll. At West Orange he also worked on one of his greatest ideas: He worked here until his death on October 18, , at the age of By that time, everyone had heard of the "Wizard" and looked up to him. The whole world called him a genius. But he knew that having a good idea was not enough. It takes hard work to make dreams into reality.