DOWNLOAD PDF IMPORTANT DISCOVERIES

Chapter 1 : List of Indian inventions and discoveries - Wikipedia

Among his many discoveries, the most important is probably his law of universal gravitation. In , Newton figured out that gravity is the force that draws objects toward each other. It explained why things fall down and why the planets orbit around the Sun.

Modified on May 26, by Kaitlin Goodrich Biology studies every living thing in the universe, from the simplest and smallest single-celled organisms to the complexity of the human brain. For this reason, breakthroughs in biology have a huge impact on our world. The science of biology shapes everything from agriculture to psychology. And like most sciences, biology is rapidly advancing due to advances in technology, which are changing the field forever. The following five biology breakthroughs are some of the most groundbreaking from the past few decades. RNA Interference Discovered In the early s, biologists started getting some odd results when trying to manipulate gene expression. The most striking example of this was in a study about petunias. Plant biologists were trying to intensify the red color on the flower petals by introducing a gene that induced the formation of a red pigment, but were surprised to discover that their efforts turned the flower entirely white. These confusing results were popping up in many fields of biology. Andrew Fire and Craig Mello were investigating how gene expression is regulated in the nematode worm Caenorhabditis elegans by injecting mRNA into the genes of the worms, but with no impact on their behavior. The genetic code in mRNA has two parts: Injecting either one had no impact, but when Fire and Mello injected sense and antisense RNA together, the worms reacted by losing muscle control entirely. This result led the researchers to wonder if the different types of RNA may be interfering with each other. A series of experiments published by the pair in revealed that gene expression is controlled by a phenomenon called RNA interference. This process defends against viruses that try to insert themselves into DNA, and controls gene expression. Dolly the Sheep Becomes the First Adult Mammal Cloned In , scientists cloned a female domestic sheep using adult somatic cells from the mammary glands through the process of nuclear transfer. The resulting sheep, Dolly, matured and reproduced naturally. Dolly was a significant biological breakthrough, because she demonstrated not only that a full, separate embryo with properly expressed cells of all types could be cloned from a cell taken from a specific part of the body, but also that the cell could come from a fully developed adult. Since Dolly, other animals have been cloned, including pigs, deer, horses, and bulls. Scientists have even been able to attempt cloning recently extinct animals in an attempt to save endangered and newly extinct species by resurrecting them from frozen tissue. Most notably, researchers in Spain cloned a Pyrenean ibex, a form of wild mountain goat, which was officially declared extinct in Dolly and cloning in general have been a controversial branch of science since the s and its ethics are debated by some to this day. Human Genome Mapped In , scientists from across the world finished a rough draft of the map of the human genome. The final version was realized in This biological breakthrough was a difficult accomplishment to reach. It took more than 10 years and contributions from hundreds of scientists. The Human Genome Project reveals in intricate detail exactly what it is that makes us human, showing the placement of every chromosome that contains all the genetic material that makes us who we are. Stem Cells Created from Mature Skin Cells In , two separate teams of scientists from Kyoto University and the University of Wisconsin-Madison reverted adult skin cells, so that they could act like pluripotent stem cells. Pluripotent stem cells can differentiate into nearly all cells and were previously only found in embryonic stem cells. Embryonic stem cells had been one of the most promising areas of medical research with the potential to cure diseases from diabetes to cancer to genetic disorders, but ethical concerns had largely curtailed their use. This discovery allows such research to continue without the ethical concerns or legal restrictions. Also, it allows for biologists to possibly grow replacement organs for people using cells with their own DNA, reducing the probability of organ rejection. This is the culmination of almost two decades of biomedical research. By , a noninvasive method of picking up brainwaves was developed and being used to control biomedical devices. In , amputee Pierpaolo Petruzziello became the first person to make complex movements with a robotic limb, including wiggling a finger, grabbing objects, and making a fist, using just his thoughts through a biomechanical hand connected to his arm nerves with electrodes. This

technology has developed since and become more widely used by amputees. While more research is still being done to improve the devices, this breakthrough in biology has even greater implications for the biomedical field in the future. More, Greater Breakthroughs in Biology to Come As science and technologies continue to advance, more breakthroughs in biology become possible every day. Some are experiments made possible by new technologies, while others are totally new ideas being explored for the first time. The possibilities with biology are endless. Who knows what we will discover next? Biology will only grow in importance in the next few decades. In fact, biomedical engineering and similar areas of study are some of the fastest growing fields today. It is important to know the basics in order to keep up. You will learn a ton and retain it! Let us know in the comments what other bio breakthroughs fascinate you! Join the millions of students, teachers, language learners, test-takers, and corporate trainees who are doubling their learning results.

Chapter 2 : Johannes Kepler | Biography, Discoveries, & Facts | racedaydvl.com

The timeline below shows the date of publication of possible major scientific theories and discoveries, along with the discoverer. In many cases, the discoveries spanned several years.

From medical milestones to archaeological digs to new secrets of the solar system, has seen a myriad of miracles and the fruits of tireless research. Led by Shoukhrat Mitalipov, of Oregon Health and Science University, the findings broke scientific ground this year, demonstrating the ability to correct defective genes that cause disease. Because of its proximity to Earth, the exoplanet, initially dubbed a potential Venus twin due to its rocky surface and high temperature, can be examined through telescopes. Fetal lambs were placed in the artificial wombs, sacks filled with amniotic fluid, while their umbilical cords were connected to a machine that oxygenated their blood. According to the report, published in Nature Communications last spring, the lambs showed normal development, and their lung capacity increased to match that of a mature lamb. The at least metre-long foot-long chamber is located above the grand gallery, in the middle of the pyramid, though researchers and scientists are unsure whether it had any purpose besides structural. The different areas of rock making up the pyramid absorbed muons; the denser areas absorb more muons, whereas empty space does not absorb any. This technique did not damage the structure at all. In turn, this method produced three-dimensional images of the pyramid, showing the large void. After a surface is found, the pili stop moving, and an adhesive substance is produced to attach to the surface and produce biofilms. This led to the conclusion that bacteria use pili as a sort of fishing line, sensing tension when the pili stick to a surface. Ultimately, the presence of this gene variant creates a decreased desire for social alcohol consumption. The study examined the genomes of those who were considered heavy drinkers more than 14 drinks a week for women and 21 for men and light drinkers less than seven drinks a week for women and 14 drinks for men. This could lead to medication used to regulate alcohol consumption. The tiny creatures are said to have co-existed with dinosaurs, million years ago, subsisting on plants and insects. The findings were published in November in Acta Palaeontologica Polonica and the rat-like animals have been named Durlstotherium newmani and Dulstodon ensomi. The remains of the ancient village, three times older than the pyramids of Giza , included fish hooks, spears, charcoal flakes, and tools used for lighting fires. As the electromagnetic waves and gravitational waves were simultaneously emitted by the event, scientists were able to determine that the difference between the speed of light and the speed of gravity is between -3 x and 7 x times the speed of light. According to the U. Centers for Disease Control and Prevention , overdose deaths related to fentanyl and its analogs increased more than with any other drugs in Phillip Britz-McKibbin , a researcher at McMaster University, mentioned that the present method used in drug tests can only tell which group of drugs was used, such as opioids, but not the precise type. A second test would be needed to have a more precise answer, which takes time. He and a team of researchers at the university have come up with their own, quick method of screening. The new methods might also mean savings for hospitals, as the number of tests needed would go down. The survey used both ground and aerial documentation over a number of breeding seasons, finding that most estimates had failed to include non-breeding penguins. The new global estimate is between 14 and 16 million birds, with almost six million living in East Antarctica. At first glance, the frog appears ordinary, but when swathed in ultraviolet light, the creature shines bright blue-green. It is not yet known what its purpose is in this case. It dates back to 70 million years ago, in the Late Cretaceous. The pieces found painted a picture of a predatory carnivore who could walk on all fours and most likely stalked baby dinosaurs on foot, reported National Geographic in October. Though no scrolls were discovered, the researchers found broken storage jars, a leather strap and cloth, the latter of which are believed to have been used to contain the scrolls, according to a press release published by the university. The Dead Sea Scrolls are believed to be some of the most ancient Judeo-Christian texts available to this day. It was part of Gondwanaland, a super-continent that was present over million years ago. The research team, led by the University of the Witwatersrand, analyzed the mineral zircon, found in volcanic rock, which they found too old to belong to Mauritius. The land mass covers an area of five million square kilometres almost two million square miles , with 94 per cent of the

region submerged beneath the Pacific Ocean. The Harvard University study , published this past May, examined more than 50, people in Denmark and found that men who consumed gram 1-ounce bars of chocolate two to six times a week had a 23 per cent lower risk of experiencing atrial fibrillation. Among women, those who consumed just one gram 1-ounce bar of chocolate were found to have a 21 per cent lower risk of experiencing the heart issue, but were less healthy in other areas. The region includes 91 volcanoes, one of which is reported to be nearly 4, metres 13, feet high. An eruption could possibly melt the ice from beneath, researchers said, destabilizing the ice sheets. Researchers at the Massachusetts Institute of Technology and University of California, Berkeley, have created a water harvester , a solar-powered device that pulls water from the air at a humidity level as low as 20 per cent. The framework acts to bind water vapour, and when sunlight heats up the MOF, the vapour is pushed through the condenser to create liquid. The device is still in its prototype phase and requires improvement. While testing, the device pulled nearly three litres three quarts of water over a hour period.

Chapter 3 : Most Amazing Hubble Space Telescope Discoveries

One of the most important discoveries in medicine, the discovery of blood circulation is credited to the English physician William Harvey who, in , was the first person to completely describe the systemic circulation and properties of blood being pumped to the brain and body by the heart.

This transcript comes courtesy of Nerdfighteria Wiki. Sometimes it was a case of searching for one thing and finding another, and other times it was as simple as forgetting to wash your hands. But first, I want to start where all serious scientific list shows shouldâ€”with Viagra. The company was hoping the drug would relax the blood vessels. Mm, it failed in that regard, but test subjects reported some fascinating developments below the belt, and so became the little blue pill known as Viagra, a side effect of which isâ€”wait for itâ€”heart attacks. By combining formaldehyde with phenol, which is a waste product of coal tar, and mixing in other materials, Baekeland accidentally created a non-conductive and heat-resistant polymer that is used in pretty much everything you see around me right now. A paragon of modesty, he named the plastic "Bakelite" in honor of himself. You know what else is a derivative of coal tar? In , after a day spent reacting coal tar with phosphorous, ammonia, and other chemicals, he realized at home that his hands tasted sweet. Then, he realized that the chocolate bar in his pants was melting. He celebrated his discovery with pocket fondue. But, not on purpose. He was experimenting with cathode ray tubes when he noticed a strange glow in his dark lab some distance away from the tube. Now upon seeing the image, she said "I have seen my own death! Now, X-rays caused such a stir in the scientific community that another accidental radiation discovery soon followed. In , none other than Charles Goodyear accidentally dropped a mixture of rubber, sulfur, and lead onto a hot stove. The mixture hardened, but was still usable, and the world finally had a durable rubber resistant to both heat and cold. He even ate a spoonful of the stuff every day. Next up is the pacemaker, invented by Wilson Greatbatch, who was working on an oscillator to record heart sounds in the late s. In , English pharmacist John Walker was stirring a pot of chemicals that included antimony sulfide and potassium chlorate, and then he noticed this dried lump at the end of his mixing stick. Now, he modeled the Velcro after the tiny hooks in the bur that so easily catch onto clothing and fur. DuPont chemist Roy Plunkett was at work on a new chlorofluorocarbon refrigerant in when he changed the lives of cooks everywhere. Testing different chemical reactions, he accidentally discovered a new polymer called polytetrafluoroethylene, but you know it better as Teflon. Ninth-century Chinese alchemists made an explosive discovery in their quest to find an elixir for eternal life. They found out the hard way that mixing salt peter, sulfur, and charcoal is not a recipe for immortality; it makes gunpowder. A can broke open and leaked, but the liquid was absorbed by a rock mixture called kieselguhrâ€”sounds like it could be a chair at IKEA. He was trying to make super heavy atoms by bombarding uranium with neutrons. Now, he was successful at creating elements 93 and 94, but was at a loss to identify some of the other products that he produced. It was only later that scientists realized these daughter elements were not heavier than uranium, but actually had about half the mass. Fermi had unwittingly split the nucleus in half, discovering nuclear fission. In , a teenage Chemistry student named William Perkins was attempting to create an artificial quinine to treat malaria. Now it was unsuccessful, but over the course of his experimenting with tree bark and coal tar, he discovered a new color in the residue and it was called Mauve. This is due to Safety Glass, accidentally discovered by French chemist Edouard Benedictus in the early 20th century. While experimenting with cereal recipes in , Will Keith Kellogg forgot about some boiled wheat he left sitting out. The wheat became flaky, but Kellogg and his brother cooked it anyway. The resulting crunchy and flaky material became a cereal you may have heard of, called Corn Flakes. Three decades later, it showed up in grocery stores with some unfortunate side effects. But thankfully, we now have the handy phrase "anal leakage. Kodak engineer Harry Coover was working with chemicals known as cyanoacrylates during World War II in an attempt to make clear plastic for gun sights, when his team instead discovered what today is known as super glue. Speaking of sticky stuff, in while Dr. Spencer Silver was trying to develop a strong adhesive, he accidentally ended up creating a weak, re-positionable adhesive instead. That became the post-it note. In , naval engineer Richard James was working with tension springs to create a meter for the horsepower

of naval vessels. When he accidentally knocked one of these springs over, he noticed that it kept moving after it hit the ground. And the idea for a new toy was bornâ€”the Slinky. But I doubt he would have guessed how a stretched slinky would fall. How about we end with the most famous accidental discovery of all time, one that also now comes in pill form? Sir Alexander Fleming was experimenting with the influenza virus in when he left for a two-week vacation. He returned to find that a mold had contaminated his staphylococcus cultures. But more importantly, he found that the bacteria was unable to grow anywhere near the mold, and that moment of sloppiness, which resulted in the invention of penicillin, would change medicine forever. It was created with the help of these fine people and, of course, myself, Derek from Veritasium. If you want to check out my channel, click on this link. This video originally appeared in

Chapter 4 : 5 Important Breakthroughs in Biology from the Last 25 Years | Brainscape Blog

Hey, I'm Derek Muller, this is mental_floss, and today, I'm going to tell you about all sorts of important scientific discoveries and inventions that happened by accident. Sometimes it was a case.

I do not know what I may appear to the world, but to myself I seem to have been only like a boy playing on the sea-shore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me. An inherent curiosity about the world, an appreciation of beauty, the excitement of exploring a mystery and a relentless pursuit of truth are the prime driving forces of a creative mind. His co-discovery of calculus provided a potent mathematical tool, aiding the precise analytical treatment of the physical world. In this book, fondly referred to as the Principia by scientists , he synthesized what was known, into a logically whole and consistent theoretical framework, through his laws of motion and theory of gravitation. Creating the great generalizations which bind all the loose threads of clues into a coherent whole, is an art that has been mastered by only a few till date. Sir Isaac Newton was one of them. Like Newton, another theoretical physics giant, Albert Einstein was also guided by simplicity and elegance in his thinking about physical laws. An object will continue moving or staying still unless acted upon by an external force Second Law of Motion: When one body exerts a force on a second body, the second body simultaneously exerts a force equal in magnitude and opposite in direction to that of the first body. They are stated as follows: Every object stays in its state of rest or uniform motion, unless disturbed by an external force. Law of Inertia The force acting on a body is defined as the rate of change of its linear momentum, with time. Force Law Every action has an equal and opposite reaction. Action-Reaction Law These laws define the effect that the absence or presence of a force has on objects. This troika of axioms defined the framework of mechanics, through which the dynamics of forces and their effects can be analyzed. With these laws, physics made the transition from an empirical field to a science with sound theoretical foundations. Every particle of matter attracts every other particle with a force along the straight line joining them and is directly proportional to their masses, while inversely proportional to the square of the distance between them. Many people may have observed apples and all kinds of other things falling down, before Newton, but none of them followed the broad generalization that it represented. Even moon falls towards the Earth and Earth towards the Sun, in the same way! That is what Newton figured out. For the first time, man could understand the motion of planets and satellites and give it a rational explanation. A gravitational force acts between two particles even though they are not in contact with each other. That is, it manifests as an action at a distance. Discoveries in Optics Inquiry into the nature of light â€" Opticks Newton was fascinated with the field of optics and not surprisingly, made some major discoveries. His prime focus was unraveling the nature of light and its properties. Using prisms and lenses, he studied the refraction and diffraction of light. The description of these experiments and his discoveries detailing light associated phenomena were published in , through the book â€" Opticks. What the principia did for mechanics, this book did for the field of optics, fundamentally revolutionizing it. Here are some of his most important findings. He demonstrated this with the use of a prism which dispersed a beam of white light into wavelengths of different hues. Through this finding, he overturned the prevalent notion since Aristotelian times which stated that light was inherently white and colorless. His experiments revealed that color arose from reflection and transmission of light and primarily from selective absorption of light by materials. From observation of the different angles at which individual wavelengths of light dispersed from a prism, he concluded that color arises from a fundamental property of light itself, though revealed only through interaction with matter. He also stated the fact which most neuroscientists will agree with today, that human perception of color is essentially a mental phenomenon or subjective experience. In the process, he invented a new kind of telescope. Newton promoted the concept of a universal ether through which light propagates. This was later proved wrong by experimental tests of the special theory of relativity. Newton showed white light to be made of component colors. However, the idea got a sort of new life when Einstein introduced light to be made of photons which are energy corpuscles. However, photons are far different from the corpuscles that Newton imagined. Nevertheless, he provided the impetus to new lines of thought. The law

discovered by him states that the rate of cooling in a body is directly proportional to temperature difference between the body and its surroundings. Mathematically, it can be stated as follows: His first original contribution to mathematics was the advancement of binomial theorem. Through the usage of algebra of finite quantities in an infinite series, he included negative and fractional exponents in the binomial theorem. Calculus Isolated during the plague years at Woolsthorpe Manor, Newton came up with his greatest breakthroughs in physics and mathematics. Through invention of Infinitesimal Calculus, credit for which also belongs to Leibniz , Newton provided a mathematical framework which enabled the study of continuous changes. He called it the Science of Fluxions. The invention of calculus ranks right up there with invention of fire or the building of the first steam engine. His approach to calculus was geometrical, in contrast to Leibniz, who was inclined more towards the analytical side. Newton-Raphson Method He also made contributions to numerical analysis in the form of the Newton-Raphson method. In the book, De analysi per aequationes numero terminorum infinitas Latin for On analysis by infinite series , published in , Newton described this iterative method of approximation to calculate roots of real-valued functions. The method is described by the following formula. Here are some of his widely and lesser known inventions, besides his lofty theoretical physics triumphs. What is now known as the Newtonian telescope is designed with a paraboloid mirror at the base which reflects the incoming light onto a slanted flat secondary mirror. This flat mirror ultimately reflects the collected light to an eyepiece for observation. Besides solving the problem of chromatic aberration â€" the bane of refracting telescopes, it is also comparatively cheaper to build. Check out those fancy milled edges The Perfect Coin Working as Warden at the Royal Mint, Newton recalled all English coins and had them melted down and remade into a higher-quality, harder-to-counterfeit design. It was a bold move, considering that the entire country had to make do without a currency for an entire year. You know those ridges on the edge of a U. Those are milled edges, a feature introduced by Newton on English coins to prevent clipping. Cat Doors The invention of the pet door, now a common feature in many American or European homes is often attributed to Newton, who supposedly came up with the idea, to allow his pet cats to travel in and out without disturbing him. It is amazing to think of what he was able to accomplish, most of which before the age of 26 and all of which by 40 when we moved his focus from science to religion. No great discovery was ever made without a bold guess.

Chapter 5 : Timeline of scientific discoveries - Wikipedia

10 Important Scientific Discoveries and Achievements of In , private companies flew to space, NASA landed on Mars, and driverless cars hit the roads.

History of science and technology in the Indian subcontinent , List of inventions and discoveries of the Indus Valley Civilization , and Timeline of Indian innovation Construction, Civil engineering and Architecture[edit] Iron pillar of Delhi: The origin of the stupa can be traced to 3rd-century BCE India. Ancient bricks found throughout the region have dimensions that correspond to these units. The earliest evidence for the existence of weighing scale dates to BC BC in the Indus valley civilization prior to which no banking was performed due to lack of scales. The crescograph, a device for measuring growth in plants, was invented in the early 20th century by the Bengali scientist Sir Jagadish Chandra Bose. The incense clock is a timekeeping device used to measure minutes, hours, or days, incense clocks were commonly used at homes and temples in dynastic times. Although popularly associated with China the incense clock is believed to have originated in India, at least in its fundamental form if not function. Wootz steel is an ultra-high carbon steel and the first form of crucible steel manufactured by the applications and use of nanomaterials in its microstructure and is characterised by its ultra-high carbon content exhibiting properties such as superplasticity,high impact hardness and held sway for over a millennium in three continents - a feat unlikely to be surpassed by advanced materials of the current era. Oleg Sherby and Dr. Jeff Wadsworth and Lawrence Livermore National Laboratory have all done research, attempting to create steels with characteristics similar to Wootz, but without success J. D Verhoeven and Al Pendray attained some success in the reconstruction methods of production, proved the role of impurities of ore in the pattern creation, and reproduced Wootz steel with patterns microscopically and visually identical to one of the ancient blade patterns. Considered one of the most remarkable feats in metallurgy , it was invented in India in between and CE. Kojo is a programming language and integrated development environment IDE for computer programming and learning. Kojo is an open-source software. It was created, and is actively developed, by Lalit Pant, a computer programmer and teacher living in Dehradun , India. The earliest known instance of a ploughed field was found at Kalibangan [32] India ink: In , the Bengali physicist Sir Jagdish Chandra Bose announced the development of an "iron-mercury-iron coherer with telephone detector" in a paper presented at the Royal Society, London. Patent , , "Detector for electrical disturbances" , for a specific electromagnetic receiver. Murty, a type of Lateral Shearing Interferometer utilizes a laser source for measuring refractive index. The first iron-cased and metal-cylinder rockets were developed by Tipu Sultan , ruler of the South Indian Kingdom of Mysore , and his father Haither Ali , in the s. He successfully used these iron-cased rockets against the larger forces of the British East India Company during the Anglo-Mysore Wars. The dome shaped stupa was used in India as a commemorative monument associated with storing sacred relics. Reversible inhibition of sperm under guidance: Phase III clinical trials are underway in India, slowed by insufficient volunteers. A very effective early shampoo was made by boiling Sapindus with dried Indian gooseberry aamla and a few other herbs, using the strained extract. Sapindus, also known as soapberries or soapnuts, is called Ksuna Sanskrit: The extract of Ksuna, creates a lather which Indian texts identify as phenaka Sanskrit: Other products used for hair cleansing were shikakai Acacia concinna , soapnuts Sapindus , hibiscus flowers, [52] [53] ritha Sapindus mukorossi and arappu Albizzia amara. When they returned to Europe, they introduced their newly learnt habits, including the hair treatment they called shampoo. Indian Bengali inventor and microbiologist Ananda Mohan Chakrabarty created a species of man made micro organism to break down crude oil. Chakrabarty Games[edit] Chaturanga: The precursor of chess originated in India during the Gupta dynasty c. The game of kabaddi originated in India during prehistory. Pachisi originated in India by the 6th century. Vaikunta pali Snakes and ladders originated in India as a game based on morality. Kridapatram is an early suits game, made of painted rags, invented in Ancient India. The term kridapatram literally means "painted rags for playing. It is made of a curved shell and about years old. Calico had originated in the subcontinent by the 11th century and found mention in Indian literature, by the 12th-century writer Hemachandra. He has mentioned calico fabric prints done in a lotus

design. Historian of science Joseph Needham ascribes the invention of bow-instruments used in textile technology to India. The origin of Chintz is from the printed all cotton fabric of calico in India. The fabric was named after the city where Europeans first encountered it, Mosul , in what is now Iraq , but the fabric actually originated from Dhaka in what is now Bangladesh. The Ajanta caves of India yield evidence of a single roller cotton gin in use by the 5th century. This mechanical device was, in some parts of India, driven by water power. Yoga as a physical, mental, and spiritual practice originated in ancient India. Indigo, a blue pigment and a dye, was used in India, which was also the earliest major center for its production and processing. Jute has been cultivated in India since ancient times. Sugarcane was originally from tropical South Asia and Southeast Asia , [] with different species originating in India, and S.

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Chapter 6 : Isaac Newton's Discoveries and Inventions - Sir Isaac Newton Online

The year may not quite be over, but there has been a vast and important array of discoveries made over the past months. From medical milestones to archaeological digs to new secrets of the solar.

But in the 19th century, the infrastructure was put in place for homegrown American science and engineering. Follow along as msnbc. Benjamin Franklin experiments with electricity Henry S. Some accounts claim that Franklin actually went out with a kite and a key in the early s to verify that lighting was electrical in nature. Others say that part of the story is apocryphal. Joseph Henry keeps electric buzz alive NOAA Joseph Henry was a 19th-century scientist whose life parallels that of the English physicist Michael Faraday, who is often credited for discoveries that Henry made too. Faraday made the same discovery at the same time, published, and generally gets the credit for the feat. Rothenberg noted that Henry also invented the first electric motor and became the first secretary of the Smithsonian Institution in , a role in which he fostered the communication of science to the public. Othniel Charles Marsh digs a course for U. He published widely on everything from fossil horses and toothed birds to a gaggle of dinosaurs. He and his students, working on fruit flies in what was known as the "Fly Room," mapped the first genes and linked heredity with chromosomes. Hunt received the Nobel Prize for his work in Edwin Hubble observes that the universe is expanding NASA Starting in the s, some of the largest telescopes in the world were constructed in the U. Some of the greatest discoveries belong to Edwin Hubble, who spent his time observing the stars at the Mount Wilson Observatory in California. In the s, for example, Hubble discovered that the Milky Way is just one of many, many galaxies, an observation that forever changed how astronomers view our place in the universe. Then, in , Hubble announced that the universe is expanding, based on observations of starlight from distant galaxies. The finding formed the basis of inflationary big-bang theory. Key players beginning in the s include the U. The Internet is "transformative in a way that nothing else, perhaps, has ever been," Rothenberg noted. Today, anyone can walk into a library like the one shown here and access the global network. The discovery of a 4. Ardi lived in woodlands and climbed on all fours in the trees, but was also capable walking on two feet â€” suggesting that this hallmark of human evolution occurred in the forest, not grasslands as previously believed. Such findings have brought scientists closer to identifying the common ancestors of chimpanzees and humans.

Chapter 7 : 20 important discoveries of

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Chapter 8 : 10 Discoveries that have Changed History

science inventions and discoveries Important Discoveries in Physics list racedaydvl.comant inventions and discoveries in physics,list of important discoveries in physics,three most important discoveries in physics, scientific inventions,some important discoveries in physics.

Chapter 9 : Top 10 scientific discoveries in South Africa

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