

Chapter 1 : Riding the Transcontinental Rails: Overland Travel on the Pacific Railroad - Introduction.

The First Transcontinental Railroad (also called the Great Transcontinental Railroad, known originally as the "Pacific Railroad" and later as the "Overland Route") was a 1,912-mile (3,077 km) continuous railroad line constructed between and that connected the existing eastern U.S. rail network at Omaha, Nebraska/Council Bluffs, Iowa with the Pacific coast at the Oakland Long Wharf on San Francisco Bay.

Iconic photographs capture the laying of the last rail. Countless movies and books set their adventures aboard railroad cars. Despite the advent of airplanes and automobiles, the romance of trains remains. The railroad linked East and West Coasts, making a truly national market and national culture possible. It opened land west of the Mississippi to settlers—and in the process, did great damage to the Native American peoples already living there. It employed thousands of Chinese and European laborers, made use of technologies never used on such a large scale, and led to a collaboration of private capital and government resources. When the golden spike was struck, America was changed forever. This issue of History Now is devoted to the impact of this most famous moment in American rail history: In his overview essay, Richard White introduces us to both the myths and the realities of the process by which "East shook hands with West. White offers a few surprises, including the fact that the land grants of the famous checkerboard pattern were probably unnecessary for the financing of the railroads. In "American Indians and the Transcontinental Railroad," Elliott West provides valuable insight into the role of the railroad in Indian removal from and white settlement of the West. He introduces us to photographers Alfred Hart and Andrew Russell, employed by the two rail companies to document their achievements. For the general public, these photographs provided a visual record of this critical moment in railroad history; for the financiers of the projects, they were advertisements aimed at potential settlers and a means of attracting investors. Huntington raised the funds—and garnered what profits there were to be made—to finance their undertakings. Finally, Amy Richter provides a vital social history perspective in "Home Adrift: Women and Domesticated Rail Travel. These "flying drawing-rooms" made rail travel both pleasant and acceptable for genteel female passengers. Rail travel provided women the pleasures of sociability, the experience of participating in a unique example of American progress, and a means to integrate themselves into public life. But Richter, in recounting the experiences of African American women, shows that this mode of travel recreated and confirmed class and racial divisions. Wishing you all a happy and healthy new year!

Chapter 2 : Transcontinental railroad - Wikipedia

In , the Pacific Railroad Act chartered the Central Pacific and the Union Pacific Railroad Companies, and tasked them with building a transcontinental railroad that would link the United.

July 17, A pile of American bison skulls in the mids. The last rail is laid; the last spike driven; the Pacific Railroad is completed. The point of junction is miles west of the Missouri river and miles east of Sacramento City. After more than six years of backbreaking labor, east officially met west with the driving of a ceremonial golden spike. In City Hall Park in Manhattan, the announcement was greeted with the firing of guns. Bells were rung across the country, from Washington, D. Business was suspended in Chicago as people rushed to the streets, celebrating to the sounding of steam whistles and cannons booming. Back in Utah, railroad officials and politicians posed for pictures aboard locomotives, shaking hands and breaking bottles of champagne on the engines as Chinese laborers from the West and Irish, German and Italian laborers from the East were budged from view. Celebration of the completion of the Transcontinental Railroad, May 10, Ten millions of emigrants will settle in this golden land in twenty years. For in its wake, the lives of countless Native Americans were destroyed, and tens of millions of buffalo, which had roamed freely upon the Great Plains since the last ice age 10, years ago, were nearly driven to extinction in a massive slaughter made possible by the railroad. Following the Civil War, after deadly European diseases and hundreds of wars with the white man had already wiped out untold numbers of Native Americans, the U. But as the Gold Rush, the pressures of Manifest Destiny , and land grants for railroad construction led to greater expansion in the West, the majority of these treaties were broken. In , he wrote to Gen. On the ground in the West, Gen. Early on, Sheridan bemoaned a lack of troops: The consequence was that every engagement was a forlorn hope. As the railways expanded, they allowed the rapid transport of troops and supplies to areas where battles were being waged. Sheridan was soon able to mount the kind of offensive he desired. Custer later reported more than Indian deaths, including that of Chief Black Kettle and his wife, Medicine Woman Later, shot in the back as they attempted to ride away on a pony. Philip Sheridan photographed by Matthew Brady. In the midth century, it was estimated that 30 milion to 60 million buffalo roamed the plains. In mid-century, trappers who had depleted the beaver populations of the Midwest began trading in buffalo robes and tongues; an estimated , buffalo were killed annually. Then the completion of the Transcontinental Railroad accelerated the decimation of the species. Massive hunting parties began to arrive in the West by train, with thousands of men packing. Unlike the Native Americans or Buffalo Bill, who killed for food, clothing and shelter, the hunters from the East killed mostly for sport. Native Americans looked on with horror as landscapes and prairies were littered with rotting buffalo carcasses. Hundreds of men aboard the trains climbed to the roofs and took aim, or fired from their windows, leaving countless 1,pound animals where they died. Nearly every railroad train which leaves or arrives at Fort Hays on the Kansas Pacific Railroad has its race with these herds of buffalo; and a most interesting and exciting scene is the result. Frequently a young bull will turn at bay for a moment. His exhibition of courage is generally his death-warrant, for the whole fire of the train is turned upon him, either killing him or some member of the herd in his immediate vicinity. Hunters began killing buffalo by the hundreds of thousands in the winter months. One hunter, Orlando Brown brought down nearly 6, buffalo by himself and lost hearing in one ear from the constant firing of his. The Texas legislature, sensing the buffalo were in danger of being wiped out, proposed a bill to protect the species. And it is a well known fact that an army losing its base of supplies is placed at a great disadvantage. Then your prairies can be covered with speckled cattle. Wikipedia The devastation of the buffalo population signaled the end of the Indian Wars, and Native Americans were pushed into reservations. By the end of the 19th century, only buffalo were left in the wild. Congress finally took action, outlawing the killing of any birds or animals in Yellowstone National Park, where the only surviving buffalo herd could be protected. Conservationists established more wildlife preserves, and the species slowly rebounded. Today, there are more than , bison in North America. Sheridan acknowledged the role of the railroad in changing the face of the American West, and in his Annual Report of the General of the U. Army in , he acknowledged that the Native Americans were scuttled to reservations with

no compensation beyond the promise of religious instruction and basic supplies of food and clothingâ€”promises, he wrote, which were never fulfilled. Could any one expect less? Then, why wonder at Indian difficulties? Annual Report of the General of the U. Angevine, The Railroad and the State: A People and a Nation:

Chapter 3 : Transcontinental Railroad | HistoryNet

A transcontinental railroad is a contiguous network of railroad trackage that crosses a continental land mass with terminals at different oceans or continental borders.

No longer would people travel in long wagon trains that took months to reach California. They could now travel faster, safer, and cheaper by train. In addition to people, things like mail, supplies, and trade goods could now be shipped across the country in just a few days. The railroad was built between and Background The first talk of a transcontinental railroad started around One of the first promoters of the railroad was a merchant named Asa Whitney. Asa tried hard for many years to get Congress to pass an act to build the railroad, but failed. However, in the s Theodore Judah began to lobby for a railroad. He surveyed the Sierra Nevada Mountains and found a pass where the railroad could be built. The Route There were two main routes along which people wanted the first railroad to be built. One route was called the "central route". It followed much the same route as the Oregon Trail. It would begin in Omaha, Nebraska and end up in Sacramento, California. The other route was the "southern route". The central route was eventually chosen by Congress. The act said that there were two main railroad lines. The two railroads would meet somewhere in the middle. The act gave the railroad companies land where they could build the railroad. It also paid them for each mile that they built. They were paid more money for miles of track built in the mountains versus miles of track built on the flat plains. Weather conditions were especially tough in the mountains during the winter. A lot of times the only way to travel over the mountains was to go through the mountains by blasting a tunnel. The longest tunnel built was feet long. It took a long time to build the tunnels. They were able to blast around 1 foot per day on average. As the Native Americans came to realize the threat to their way of life that the "Iron Horse" was going to bring, they began to raid the railroad work sites. Also, a lot of the land that was "granted" to the railroad by the government was actually Native American land. The Workers The majority of the workers on the Union Pacific Railroad were Irish laborers, many who had served in both the Union and the Confederate armies. In Utah, a lot of the track was built by Mormon workers. Most of the Central Pacific Railroad was built by Chinese immigrants. Leland Stanford, governor of California and president of the Central Pacific Railroad, drove in the last spike. You can see it today at Stanford University in California. Driving the Golden Spike on 10th May, by American School Interesting Facts about the First Transcontinental Railroad The Pony Express traveled a similar route to the central route and helped to prove that the route was passable in winter. The transcontinental railroad was also called the Pacific Railroad and the Overland Route. The total length of the First Transcontinental Railroad was 1, miles. They were Leland Stanford, Collis P. Huntington, Mark Hopkins, and Charles Crocker. Activities Take a ten question quiz about this page. Listen to a recorded reading of this page: Your browser does not support the audio element.

Chapter 4 : Transcontinental Railroad

The coming of the Transcontinental Railroad (TCRR), the first communication revolution in the United States. The First Transcontinental Railroad in North America was built in the 1860s, linking the well developed railway network of the East coast with rapidly growing California.

The First Transcontinental Railroad was a hot topic for many years before construction began. It had been suggested as early as in an article by Dr. Hartwell Carver and in he submitted a proposal to Congress. Surveys were completed between and to determine a route, and in the project was authorized by the Pacific Railroad Acts. The railroad was miles long, and was constructed between and by three private companies. Interesting First Transcontinental Railroad Facts: Although there were two main routes determined for the railroad, only one could be chosen. The central route was chosen by Congress. The central route was almost the same as the Oregon Trail. The First Transcontinental Railroad was built to connect the East coast to California, a state that was rapidly developing at the time. The First Transcontinental Railroad replaced the Pony Express, wagon trains, and stagecoach lines that transported people and goods from the East to the West. These methods of transportation were much slower and much more dangerous than the railroad system. On May 10th, Governor Stanford drove the last spike, often called the Golden Spike, into the track. The spike was only gold plated as real gold would have been too soft a metal. The railroad made it possible to travel across the country in one week instead of in six months. This would get a passenger a third class ticket in a sleeping car. The Transcontinental Railroad did not actually connect the east coast to the west coast. It ran from California to Omaha. Mormon workers were common in Utah. This was a small fortune to them, as many came from extreme poverty in China. Many movies have been made that featured the railroad, and some consider it to be one of the most revolutionary creations of its time.

The Pacific Railway A Brief History of Building the Transcontinental Railroad Before the advent of the transcontinental railroad, a journey across the continent to the western states meant a dangerous six month trek over rivers, deserts, and mountains.

Mergers And Bankruptcies, The s And s With the country in turmoil the North now had the freedom to choose whichever route it wished and settled on the central option. As note, President Lincoln was a true believer in the Transcontinental Railroad, not only for its potential economic benefits but also its nationalistic importance. Lincoln was born on February 12, and first entered politics at a very young age when, at just 23, he tried to gain a seat within the Illinois state legislature. He had been fascinated by railroads since their introduction back east, believing they were the future in transportation. Naturally, Southern loyalists, including Davis, argued for the latter and were so stubborn they refused to have any part in the enterprise if it built above the Mason-Dixon Line. This left their Northern counterparts the easy decision of choosing the central option. It was Greenville Dodge, an excellent engineer and decorated U. Army officer of the Civil War, who fervently believed, and ultimately swayed Congress, to back the Omaha routing. From this community along the Missouri River it would follow the Platte River nearly all the way to the northeastern Colorado border. Once in Utah the line would aim for Salt Lake City, then the only noteworthy western settlement. In he began lobbying for it and on January 14, even opened what was the dubbed the "Pacific Railroad Museum" inside the Capitol building. So, he sailed back to California and obtained these by single-handedly surveying the entire route himself. As he had promised, Judah located a suitable grade over Donner Pass, running miles from Sacramento to the Nevada state line. On November 1, he wrote up a loose incorporation for the "Central Pacific Railroad Company of California" but could find no financial support in San Francisco. With no interested in San Francisco he traveled east to nearby Sacramento and located four businessmen eager and willing for just such a railroad; Charles Crocker, Collis P. Huntington, Mark Hopkins, and Leland Stanford. Sadly, despite all his hard work, the so-called "Big Four" eventually pushed their chief engineer out of the picture. It was directed to "construct a railroad and telegraph line from the Pacific coast, at or near San Francisco, or the navigable waters of the Sacramento River, to the eastern boundary of California. To actually build the railroad, however, would require a great deal of land grants. Thanks to Senators Stephen A. Douglas Illinois and William R. King Alabama there was legislation drawn up for this purpose in , which assisted in establishing new railroads west of the Mississippi River. During this time about million acres were actually used, which helped build 18, miles of new railroad. One of the first to utilize land grants was the Illinois Central, which completed its original main line in For the Union Pacific and Central Pacific, they would receive ten alternate sections of federal land for each mile of track laid or roughly 6, acres. According to the book, "Union Pacific Railroad," by historians Joe Welsh and Kevin Holland, an amended Pacific Railroad Act of increased this figure to twenty alternate sections or around 12, acres for every mile completed. For Central Pacific, there was a catch, however; it was required to complete 50 miles within its first two years, 50 miles each year afterwards and be finished entirely by July 1, or lose all rights to its land grants and forfeiture of federal loans. On January 8, the CP formally got underway during a ceremony held in Sacramento. It was slow in developing even after President Lincoln signed the act into law, which did not stipulate a meeting point aside from Central Pacific reaching the Nevada border and Union Pacific heading west of Omaha. The UP formally organized in May of was the only one actually created under the act; while Dodge fought for the Omaha routing, and later became a prominent figure in its construction, he was initially lured away to do his part in the Civil War. This left Thomas C. Durant As vice president and general manager, he was the most influential player at Union Pacific and was eventually successful in pulling Dodge away from the Army. Reed chief of construction , and the wealthy Ames brothers from Boston Oliver and Oakes who provided vital financial assistance. Unfortunately, UP encountered controversy before work even got underway. It would then purchase UP stocks and bonds at par and sell them for a profit. It became a major scandal that nearly bankrupted the railroad. The extra profits were then merely pocketed by Durant and his partners. Disgusted, he

resigned on December 7th and was later replaced by Greenville Dodge. It took Durant several years to finally persuade the noted engineer to leave the army. When the Transcontinental Railroad got underway, Dodge originally agreed to join UP once the war was over. When hostilities ended and he still failed to show, Durant became exasperated. At the time, Dodge was leading regiments west of the Missouri River as head of the Department of the Missouri to eliminate the Indian threat which stretched from the Plains to the Rocky Mountains. He finally signed on with Union Pacific in the spring of and was given complete authority. Like Judah at Central Pacific, no other individual was quite as important to Union Pacific as Greenville Dodge; he brought strong, militaristic leadership that got things done quickly and efficiently. He was further aided by an army of Irish veterans, who were already well-versed in taking orders. In his book, "Southern Pacific Railroad," author Brian Solomon points out that actual work commenced some ten months after the formal groundbreaking festivities. While the Chinese workers worked tirelessly and efficiently, it was Collis Huntington who kept the money flowing and things on schedule; the CP got underway from downtown Sacramento near the Sacramento River waterfront with an initial task of bridging the American River a few miles to the west. On October 26, the first rails were spiked down and soon, tracks reached nearby 21st Street. Located at Grizzly Hill, The bore was widened in to support double-tracking. Situated about 1 mile east of Emigrant Gap, this bore was feet in length; daylighted This bore is at Milepost When originally built it was feet in length. Very near Tunnel 3 at Milepost , it was originally 92 feet in length. The famous bore in the Sierras also known as "Summit Tunnel" it was 1, feet in length. The structure was bypassed in Situated at Milepost This structure sits at Milepost It is feet in length and is no longer in service. This bore is located at Milepost This tunnel is at Milepost Based at Milepost Located at Milepost it is feet in length and was bypassed following a line change in Located at milepost Quartz Spur ; originally 96 feet in length. The bore was daylighted in and the grade was abandoned in following a line change. By early the relatively gentle topography directly east of Sacramento allowed crews to complete 22 miles quite quickly. On March 25th, the very same Governor Stanford pulled a load of granite from nearby mines, which provided the Central Pacific its first revenue freight earnings. As its name implied, this bore was situated at the summit of Donner Pass and was the longest of the fifteen tunnels needed through the mountains excluding snow sheds ; it was 1, feet in length and feet deep. It was finished in August of a full year since it had all began August 27, It sat a 7, feet above sea-level and was blasted out of the mountain using nothing more than picks, shovels, black powder, nitroglycerin, and considerable sweat and blood. It had so delayed ongoing work that grading crews had pushed ahead into Nevada months earlier. Note how UP was much larger thanks to the easier topography it was able to navigate between Promontory Summit, Utah and Omaha, Nebraska. By then, Greenville Dodge was blazing his way across the Great Plains. In some cases, graders were some miles ahead of track-layers! The speed of construction led to the infamous "Hell On Wheels," a traveling town which followed the railroad. At first, UP had no trouble and the local Pawnee even assisted in the work. However, west of central Nebraska the Cheyenne and Sioux were not so friendly; these tribes regularly attacked survey parties and construction crews in an attempt to turn back the white man. Dodge initially felt his men could deal with the problem directly by remaining armed at all times. But with victims being horribly mutilated and the attacks continuing, federal troops were eventually required. As each railroad entered Utah the race took on a whole new meaning with both wanting to build just a little further than the other; CP had survey crews as far as east as Echo Canyon, Utah and UP as far west as Humboldt Wells, Nevada. It was more than just pride, however. Obviously, not only did more mileage mean more territory but also greater revenue. The issue came to head in early when Union Pacific and Central Pacific grading crews met between Ogden and Promontory where, in some cases, they were only a few feet apart! Neither side wanted to give in although it was obvious time, money, effort, and resources were being wasted. Today, these redundant grades can still be seen. Although an incredibly expensive endeavor, doing so would have offered easier grades and fewer miles. However, when the lake was sounded he discovered it to be 14 feet higher in than it had been nineteen years earlier. As a result, he deemed the project unfeasible. In the end, the great lake was crossed. Several decades later, in , plans commenced on a water level route that would directly span the lake to its north with Lucin as the western terminus of the old alignment. It was originally hoped the route would be a complete causeway, similar to

what was built later. As a result, engineers decided on a more conventional approach; long earthen approaches built of stone-fill with a wooden trestle in the center. The cutoff officially opened on January 1, Surprisingly, the old Promontory Branch remained in service for several years until it was finally abandoned during June of In June of a new causeway replaced the original structure. Grant put an end to public subsidies. Central Pacific required another month but by April 17th had finished to Monument Point, more than miles east of Sacramento and just 20 miles west of Promontory Summit. As a result, the festivities were pushed back to Monday, May 10th. When Dodge took command, he was given a job as transfer agent out of Omaha.

Chapter 6 : First Transcontinental Railroad Facts

Facts, information and articles about Transcontinental Railroad, an event of Westward Expansion from the Wild West
Transcontinental Railroad summary: The First Transcontinental Railroad was built crossing the western half of America and it was pieced together between and

The First Transcontinental Railroad in North America was built in the s, linking the well developed railway network of the East coast with rapidly growing California. The main line was officially completed on May 10, The vast number of people who traveled the line, and the complex web of connecting routes that followed, set the USA on the path to economic abundance. It also ended the centuries old way of life of the Native Americans and greatly altered the environment. The rail line was an important goal of President Abraham Lincoln, fostered during the early portion of his term and completed four years after his death. The building of the railroad was motivated in part to bind California to the Union during the American Civil War. The TCRR is considered by some to be the greatest technological feat of the 19th century. The transcontinental railroad replaced the slower and more dangerous wagon trains, Pony Express and stagecoach lines that crossed the country by land and the equally difficult sea journey around the southern tip of South America. The route largely followed the well established Oregon, Mormon and California Trails. The Central Pacific laid miles 1, km of track, starting in Sacramento, and the Union Pacific laid 1, miles 1, km of track, starting in Omaha. The two lines connected at Promontory Summit, Utah. Early Discussions Talk of a transcontinental railroad started in , shortly after railroads began large scale operation in the United States. At about the same time English-speaking settlers began settling in Mexican controlled California. Much of the early debate was not so much over whether it would be built, but what route it should follow: A "northern" option generally following the route explored by Lewis and Clark through Montana and Oregon was considered impractical because of snow. In June Asa Whitney led a team along the proposed central route to assess its capabilities. Whitney then traveled widely to solicit support for the rail line, printed maps and pamphlets, and submitted several proposals to Congress. Legislation to begin construction of the Pacific Railroad via the central route was introduced in Congress but not acted on. The very same year saw the beginnings of the California Gold Rush better known in which brought great numbers of people west, many of whom stayed. California became increasingly an important part of the United States and the idea of a rail connection to it gained support. Concerns lingered that snow would make the central route impractical. A survey indicated that the best southern path ran through territory still held by Mexico. Therefore in , only five years after taking California by force, the United States made the Gadsden Purchase from Mexico, acquiring the southern portions of what is now New Mexico and Arizona. This placed the southern transcontinental route entirely within the U. However, despite approving the Purchase, Congress did not fund construction of a rail line at that time. The route is generally followed by Interstate 10 today. The Central Route In early , Theodore Judah, a rail construction engineer and Daniel Strong, a local miner, surveyed what became the western portion of the route. Collis Huntington was inspired by a Theodore Judah lecture on the possibilities of a railroad. The partners included Leland Stanford, a grocer, the future governor of California, and founder of what became Stanford University. These investors became known as the Big Four and their venture was called the Central Pacific Railroad. The fabled Pony Express, which provided mail service from the East to California, only operated in and In that short time the riders learned that the central route was usable despite the winter snows. With the weather worries cleared away and Texas joining the Confederacy, the central route, always the more favorable economically, became the chosen route. Lincoln signed it into law on July 1. Two companies were hired -- the Central Pacific would build from the west and the Union Pacific from the east. These terms encouraged the companies to construct many extra miles of track, direct the line toward property they owned, and in many other ways exploit the poorly written law to their benefit. Route of the first Transcontinental Railroad. Original artwork by DanMS subject to the GNU Free Documentation License Once it was decided that the railroad would follow the central route, there was general agreement that the western terminus would be Sacramento. However, there was considerable competition for the eastern terminus. Abraham Lincoln

selected Council Bluffs, near Omaha, Nebraska, although the closest rail line was miles east. Lincoln had visited the site in while working for Thomas Durant as a private attorney. Durant was a central figure in the TCRR. Labor on the Transcontinental Railroad The majority of the Union Pacific track heading westward was built by Irish laborers, by Mormons who constructed much of the track in Utah, and after the war by veterans of the Union and Confederate armies. Chinese immigrants did most of the work on the Central Pacific track. Most White men received between one and three dollars per day, but workers from China received less and were supervised by Whites. Eventually, the Chinese went on strike and gained a small increase in salary. Track laying employed a quarter of the labor force. The operation also required a great number of blacksmiths, carpenters, engineers, masons, surveyors, teamsters, and cooks. Telegraph lines were built following the tracks, bringing near-instant communication. The Central Pacific made quick progress along the Sacramento Valley. However construction soon slowed, first by the Sierra Nevada mountains and then by winter snowstorms. The mountains required tunneling, a slow, expensive, and dangerous process. The holes were then filled with black powder explosive. The workers developed a method, perhaps based on Chinese technique, of placing explosives on the side of cliffs while working from large suspended baskets. The baskets were then rapidly pulled to safety after the fuses were lit. Durant used proxies to control about half the stock of the railroad. The law provided payment by the mile, so the railroad built many miles of track rambling around the countryside, mostly on land Durant owned, never venturing further than 40 miles from Omaha. With the end of the Civil War came increased government supervision. The Union Pacific began laying track west. It is ironic that Abraham Lincoln, known for ending Black slavery in the US, was also responsible for the railroad that destroyed much of Native American culture. Engraving by Vaningen Snyder. Westward construction proceeded very quickly over the open terrain of the Great Plains. Soon, however, they entered Indian-held lands. The Native Americans saw the railroad as a violation of their treaties with the United States. Some groups began to raid the labor camps along the line. Union Pacific responded by increasing security and by hiring marksmen to kill bison commonly known as American buffalo which were both a physical threat to trains and the primary food source for the Plains Indians. The pointed wedge of iron bars at the front of early train engines was called a "cow catcher". It served the same purpose for bison, lifting and pushing the errant beast to the side, preventing derailment of the train but usually killing the animal. As tourists began streaming west, some amused themselves during the long journey by shooting bison from the windows of their rail cars. Most killing of bison, though, was for the fine leather of their skins, useful both for clothing and as belts for industrial machines. The rail line gave the hunters convenient access to markets, and soon there was a widening gap in the bison herd as the hunt progressed outward from the rails. Estimates put the population of bison at the beginning of the 19th century at 30 to million over all of North America. From this tiny remnant a few conservationists were able, over time, to restore the species to stability. It was here on May 10, that Governor Stanford drove the Golden Spike or the Last Spike , that symbolized the completion of the transcontinental railroad. Few were aware that the spike was merely gold plated, gold being much too soft for the purpose, and probably not billable. Indeed, there were four spikes driven that afternoon. A message was then transmitted over the new telegraph lines that read: There was great celebration around the country, travel time from coast to coast had been reduced from six months to one week. It has been noted that no Chinese workers are present in this famous photograph of the Golden Spike ceremony, despite having done half the work. Such were the times. Photo by Andrew Russell, The First Transcontinental Railroad Journey Despite the publicity for the "last spike", the American rail network did not yet actually run to either coast. In August the final connection was made. The Union Pacific RR was in bankruptcy less than three years after the completion of the line as details surfaced about overcharges by Credit Mobilier for the building of the railroad. The scandal was one of the biggest of the 19th century. Remnants of the Line and Information for Travelers Promontory Summit was bypassed by a shorter route in , the rails there were pulled up in and recycled for the war effort. This began with a ceremonial "undriving" at the Golden Spike location. While the original rails and ties have long since been replaced, and the roadbed has been upgraded and repaired, the lines generally run on top of the original grade. In many areas where the original line has been bypassed and abandoned, primarily in Utah, the former route is still obvious. Amtrak runs the California Zephyr rail service using the original

Transcontinental Railroad route from Sacramento to Winnemucca, Nevada. The Zephyr often uses the original route on the westbound runs from Winnemucca to Wells, Nevada. The eastbound runs between these towns usually use more recent tracks. Today the rail line moves through a far different countryside. Wheat fields fill the plains instead of bison, condos have replaced the Indian Tipi. But people still ride the train to visit their family and children still wave as the train passes by. In another hundred years they probably still will. The Transcontinental Railroad Information extensively revised and edited from Wikipedia and other sources. Wikipedia material is subject to the terms of use of Wikipedia. How did this ancient culture build pyramids larger and more precise than we could build today?

Chapter 7 : Transcontinental railroad | Define Transcontinental railroad at calendrierdelascience.com

Travel was obviously one of the aspects of U.S. life most impacted by the completion of the transcontinental railroad. Before the railroad, it took almost six months and cost \$ to travel between California and New York. After the transcontinental railroad was completed, it cost \$ and took one week.

A transcontinental railroad in the United States is any continuous rail line connecting a location on the U. The first concrete plan for a transcontinental railroad in the United States was presented to Congress by Asa Whitney in 1826. Its construction was made possible by the US government under Pacific Railroad Acts of 1850, 1852, and 1854. Begun just before the American Civil War, its construction was considered to be one of the greatest American technological feats of the 19th century. Known as the "Pacific Railroad" when it opened, this served as a vital link for trade, commerce, and travel and opened up vast regions of the North American heartland for settlement. Shipping and commerce could thrive away from navigable watercourses for the first time since the beginning of the nation. It replaced most of the far slower and more hazardous stagecoach lines and wagon trains. The number of emigrants taking the Oregon and California Trails declined dramatically. The sale of the railroad land grant lands and the transport provided for timber and crops led to the rapid settling of the "Great American Desert". It recruited Cantonese laborers in China, who did prodigious work building the line over and through the Sierra Nevada mountains and then across Nevada to their meeting in northern Utah. One motive for the Gadsden Purchase of land from Mexico in 1853 was to obtain suitable terrain for a southern transcontinental railroad, as the southern portion of the Mexican Cession was too mountainous. The Southern Pacific Railroad was completed in 1881. The Pacific Railroad Act of 1862 based on an earlier bill in 1852 authorized land grants for new lines that would "aid in the construction of a railroad and telegraph line from the Missouri river to the Pacific ocean". This route connected to the eastern rail network via the Hannibal Bridge across the Missouri River at Kansas City completed June 30, 1858, passed through Denver, Colorado, and north to the Union Pacific Railroad at Cheyenne, Wyoming, making it theoretically possible for the first time to board a train at Jersey City, New Jersey, travel entirely by rail, and step down at the Alameda Wharf on San Francisco Bay in Oakland. Tracks were extended north through Salt Lake City, while simultaneously building south and eastward toward Grand Junction. The break of gauge made direct interchange of rolling stock with standard gauge railroads at both ends of this bridge line impossible for several years. Standard gauge operations linking Ogden and Denver were completed on November 15, 1868. The Completion Ceremony was held on September 8, 1869, with former U. Grant contributing to driving the Final Spike. Hill in 1869; it stretched from St. The two were connected on February 1, 1869, thus forming an additional link between the Midwest and southern California. Paul or Milwaukee Road completed a privately built Pacific extension to Seattle. On completion, the line was renamed the Chicago, Milwaukee, St. Although the Pacific Extension was privately funded, predecessor roads did benefit from the federal land grant act, so it cannot be said to have been built without federal aid. Spreckels completed his privately funded San Diego and Arizona Railway in 1875, thereby creating a direct link via connection with the Southern Pacific lines between San Diego, California and the Eastern United States. Hurricane Katrina cut this rail route in Louisiana in 2005. The train now runs from Los Angeles to New Orleans. The Gould System[edit].

Chapter 8 : Rail Cars - The Transcontinental Railroad

Transcontinental railroad completed On this day in , the presidents of the Union Pacific and Central Pacific railroads meet in Promontory, Utah, and drive a ceremonial last spike into a rail.

The Pacific Railway A Brief History of Building the Transcontinental Railroad Before the advent of the transcontinental railroad , a journey across the continent to the western states meant a dangerous six month trek over rivers, deserts, and mountains. Alternatively, a traveler could hazard a six week sea voyage around Cape Horn, or sail to Central America and cross the Isthmus of Panama by rail, risking exposure to any number of deadly diseases in the crossing. Interest in building a railroad uniting the continent began soon after the advent of the locomotive. The first trains began to run in America in the s along the East Coast. The annexation of the California territory following the Mexican-American War, the discovery of gold in the region in , and statehood for California in further spurred the interest to unite the country as thousands of immigrants and miners sought their fortune in the West. During the s, Congress sponsored numerous survey parties to investigate possible routes for a transcontinental railroad. No particular route became a clear favorite as political groups were split over whether the route should be a northern or southern one. Theodore Judah , a civil engineer who helped build the first railroad in California, promoted a route along the 41st parallel, running through Nebraska, Wyoming, Utah, Nevada, and California. He was so obsessed with the idea of a transcontinental railroad that he became known as "Crazy Judah. A rail line built along this route would require tunneling through granite mountains and crossing deep ravines, an engineering feat yet to be attempted in the U. In , Judah received a letter from Daniel Strong, a storekeeper in Dutch Flat, California, offering to show Judah the best route along the old emigrant road through the mountains near Donner Pass. The route had a gradual rise and required the line to cross the summit of only one mountain rather than two. Judah agreed and he and Strong drew up letters of incorporation for the Central Pacific Railroad Company. They began seeking investors and Judah was able to convince Sacramento businessmen that a railroad would bring much needed trade to the area. Several men decided to back him, including hardware wholesaler Collis P. Huntington and his partner, Mark Hopkins ; dry goods merchant, Charles Crocker ; and wholesale grocer, soon to be governor, Leland Stanford. These backers would later come to be known as the "Big Four. Judah used maps from his survey to bolster his presentation to Congress in October Many Congressmen were leery of beginning such an expensive venture, especially with the Civil War underway, but President Abraham Lincoln , who was a long time supporter of railroads, agreed with Judah. Pacific Railway Route Almost immediately, conflicts arose between Judah and his business partners over the construction of the Central Pacific line. In October , Judah sailed for New York to attempt to find investors who would buy out his Sacramento partners. Though he had made the voyage to Panama and across the Isthmus by train many times, he contracted yellow fever during this trip and died on November 2, one week after reaching New York City. Judah did not live to see the Central Pacific begin work; he departed Sacramento for New York a few weeks before the first rail was spiked on October 26, At the eastern end of the project, Grenville Dodge and his assistant, Peter Dey , surveyed the potential route the Union Pacific would follow. President Lincoln favored this route and made the decision that the eastern terminus of the Transcontinental Railroad would be Council Bluffs, Iowa, across the Missouri River from Omaha, Nebraska. Because the government paid by the mile of track built, Durant also insisted the original route be unnecessarily lengthened, further lining his pockets. The race between the two companies commenced when the Union Pacific finally began to lay tracks at Omaha, Nebraska, in July A bridge over the Missouri River would be built later to join Omaha to Council Bluffs, the official eastern terminus. With tens of thousands of Civil War veterans out of work, hiring for the Union Pacific was easy. The men, mostly Irishmen, worked hard and well, despite going on strike occasionally when Durant withheld their pay over petty labor disputes. Finding workers was a more difficult task for the Central Pacific. Laborers, mainly Irish immigrants, were hired in New York and Boston and shipped out west at great expense. But many of them abandoned railroad work, lured by the Nevada silver mines. In desperation, Crocker tried to hire newly freed African Americans, immigrants from Mexico, and even petitioned Congress

to send 5, Confederate Civil War prisoners, but to no avail. Frustrated at the lack of manpower necessary to support the railroad, Crocker suggested to his work boss, James Strobridge, that they hire Chinese laborers. Although Strobridge was initially against the idea, feeling that the Chinese were too slight in stature for the demanding job, he agreed to hire 50 men on a trial basis. After only one month, Strobridge grudgingly admitted that the Chinese were conscientious, sober, and hard workers. Within three years, 80 percent of the Central Pacific workforce was made up of Chinese workers, and they proved to be essential to the task of laying the line through the Sierra Nevadas. Once believed to be too frail to perform arduous manual labor, the Chinese workers accomplished amazing and dangerous feats no other workers would or could do. They blasted tunnels through the solid granite -- sometimes progressing only a foot a day. They often lived in the tunnels as they worked their way through the solid granite, saving precious time and energy from entering and exiting the worksite each day. They were routinely lowered down sheer cliff faces in makeshift baskets on ropes where they drilled holes, filled them with explosives, lit the fuse and then were yanked up as fast as possible to avoid the blast. While the Central Pacific fought punishing conditions moving eastward through mountains, across ravines, and through blizzards, the Union Pacific faced resistance from the Sioux, Cheyenne, and Arapaho tribes who were seeing their homelands invaded and irrevocably changed. The railroad workers were armed and oftentimes protected by U. Calvary and friendly Pawnee Indians, but the workforce routinely faced Native American raiding parties that attacked surveyors and workers, stole livestock and equipment, and pulled up track and derailed locomotives. Both railroad companies battled against their respective obstacles to lay the most miles of track, therefore gaining the most land and money. Although the Central Pacific had a two-year head start over the Union Pacific, the rough terrain of the Sierra Nevadas limited their construction to only miles by the end of 1868. But once through the Sierras, the Central Pacific rail lines moved at tremendous speed, crossing Nevada and reaching the Utah border in 1869. From the east, the Union Pacific completed its line through Wyoming and was moving at an equal tempo from the east. No end point had been set for the two rail lines when President Lincoln signed the Pacific Railway Act in 1862, but a decision had to be made soon. By early 1869, the Central Pacific and Union Pacific were closing in on each other across northern Utah, aided by a Mormon workforce under contract to both companies. Indeed, at one point the graders from both companies, working ahead of track layers, actually passed one another as they were unwilling to concede territory to their competitors. Less than one month later, on May 10, 1869, locomotives from the two railroads met nose-to-nose to signal the joining of the two lines. Canons boomed in San Francisco and Washington. Bells rang and fire whistles shrieked as people celebrated across the country. The nation was indeed united. Manifest Destiny was a reality. The six-month trip to California had been reduced to two weeks. And within only a few years, the transcontinental railroad turned the frontier wilderness of the western territories into regions populated by European-Americans, enabling business and commerce to proliferate and effectively ending the traditional Native American way of life.

Chapter 9 : How the Transcontinental Railroad Changed America

History >> Westward Expansion The First Transcontinental Railroad stretched from the East Coast of the United States to the West Coast. No longer would people travel in long wagon trains that took months to reach California.

The First Transcontinental Railroad was built crossing the western half of America and it was pieced together between and It was 1, miles long and served for the Atlantic and Pacific coasts of the United States to be connected by rail for the first time in history. The Transcontinental Railroad was also known as the Pacific Railroad for a while and later on as the Overland Route " after the main passenger transport service that operated the line. The idea of building such a line was present in America for decades before the construction was authorized by the Pacific Railroad Acts of and This was the time of the American Civil War and the southern Democrats who opposed the idea before were now absent from Congress so the Republicans used the opportunity to vote the construction of the transcontinental railroad without them. They chose two independent companies, the Union Pacific Railroad and Central Pacific Railroad and supported the project by issuing US government bonds. The land through which the railroad was supposed to pass was mainly worthless desert, although some portions of good farming land had to be crossed as well. The workers involved in the building operations were mainly army veterans from the Civil War and immigrants from Ireland. Engineers and supervisors were mostly Union Army veterans, experienced in operating and maintaining trains during the Civil War. The Transcontinental Railroad was finished and opened for traffic on May 10, The problem was that her quest for that West took place only in , a few decades too late, many Americans must have thought. That year the wildest encounter for most people would be grappling with economic gloom and doom. At this isolated airfield the passengers waited out the tempest. After a restless night of little sleep, the group flew east again the next day only to be forced by dense fog to make a second emergency landing, this time in Laramie. The Transformers Like a skilled magician, the railroads of the 19 th century had transformed America in ways that awed and dazzled onlookers. Consider, for example, how surveyors used precisely calibrated instruments to mathematically quantify the West as never before in terms of curvature, elevation and distance as they staked out prospective railroad lines. The process of transforming the West continued, and even accelerated, once actual railroad operations began. Approximation was no longer good enough in the West the railroads made. Something seemingly so simple as the space between the rails could not vary by more than a fraction of an inch, or the locomotives and cars would derail. Over time, and with occasional prodding from the federal and state regulators, everything from paper thickness to envelope sizes in company offices was standardized within the railroad industry. No railroad company tolerated a drunken employee endangering the safety of passengers or fellow employees. Conversely, loyal employees who avoided intoxicating beverages received preferential treatment in promotion. No ambitious railroader dared to spend a leisurely evening at a boisterous saloon, one of the institutions synonymous with the Wild West. A Matter of Time In the fall of a group of well dressed ladies and gentlemen gathered with much fanfare in the wilds of Montana Territory. In their stylishness and cool elegance they looked conspicuously out of place. Some had traveled from as far as England, the Netherlands, and Germany to this isolated patch of sagebrush and sand on the banks of the Clark Fork River, and they had done so willingly. Guests of the Northern Pacific Railroad had traveled to Gold Creek aboard five luxury trains to witness the driving of a last spike that mark ed the formal opening of the first transcontinental rails linking the Great Lakes and Mississippi Valley with Puget Sound and the Pacific Ocean. After the loud band music, the flowery oratory, and the last sledgehammer blows drove a golden spike into place, the Glittering Ones reboarded their special trains and left Gold Creek, most of them never to return to Montana. The day had been rich in symbolism. For one moment the old Wild West popularly associated with Indians, fur trappers and pioneer settlers stood face to face with the new West of high finance, nationwide mark ets and rapid advances in communication and transportation. A little more than two months later in , on another day rich in symbolism, North Americans collectively reset their clocks and watches to standard time, and like the symbolism of business moguls driving a golden spike in the wilds of Montana, the new system of timekeeping was an

unadorned statement of railroad power. Our present time system was invented to resolve the confusion caused for the railroads of North America by dozens of local time standards—hundreds, in fact. Time back in the days of trail travel to Oregon and California needed only be measured casually by noting the position of the sun or by marking off each passing day. Every spring in the s and s individuals and families traveled west by wagon train, leaving the familiar Missouri Valley and rolling slowly across the lush grasses of the Great Plains. Their collective goal was to reach Golden California or fertile Oregon by September or October before snowfalls blocked mountain passes. The Donner Party resorted to cannibalism because it lost the seasonal race to the West Coast and became trapped by deep snow in the Sierras during the winter of 1846. Before the fall of 1859 when the railroads created standard time, local variations prevailed throughout the West, and in most places approximate time was good enough to meet the demands of daily life. Minutes seldom seemed to matter. On June 17, 1864, to cite one example, a frontier newspaper, the Idaho World, chose to remind readers how communities of the West reckoned the passing hours during the era innocent of railroad regularity, an era in which idiosyncratic and imprecise timekeeping served as a metaphor for a simpler, preindustrial age: Failure to observe accurate time might well result in a bloody head-on collision between two speeding trains inadvertently attempting to defy physics by occupying the same section of track at the same time. That was the kind of headline-grabbing misfortune every railroad engineer feared most. A growing number of long-distance travelers grew concerned about accurate timekeeping, too, because the numerous local time standards caused confusion that resulted in impossibly tight connections and missed trains. However, across the nation there were pockets of resistance. To the critics, the unilateral action by railroad managers was highhanded and thus all too typical of railroad power to shape and dominate all phases of human existence. The diehards kept their clocks and watches set on local time, but they were fighting a losing battle and they knew it. Symbolically, the railroad companies of the United States and Canada had collectively taken upon themselves a form of power that for millennia had belonged solely to God, or so their critics complained. What was the brave new world defined by railroad power coming to? The railroads new role as the self-appointed guardians of time epitomized as nothing else their seemingly limitless power to transform the Wild West through the practical application of science and engineering. Imposition of standard time was only the most successful and far-reaching triumph of railroads over local and pre-modern ways governed by the rhythms of nature such as seasonal changes, extremes of weather, and even the contrast between the hours of daylight and darkness. The image illustrates a common method railroads used at the time to field-test the strength and safety of bridges before the first passenger and freight trains chugged across them. Less obvious was that the bridge at Bismarck towered above the water corridor that Lewis and Clark followed eight decades earlier and steamboats based in St. Louis had used in more recent years for fur trade commerce and gold-camp traffic. Feats of railroad engineering triumphed literally as well as symbolically over familiar steamboat technology and the seasonal variations that could impede or halt steamboat travel on the rivers of the northern West for months at a time. One reason that the Lewis and Clark Expedition spent the winter of 1804-05 at Fort Mandan, an historic site about 50 miles north of the new bridge, was that the Missouri River froze solid and impeded water travel until the spring thaw six months later. In later years, the Missouri River commerce based in St. Louis shut down each winter. During the s and s, when steamboats and stagecoaches dominated long-distance travel across the West, their schedules varied according to the season. Not only did cold weather and ice halt river travel for months at a time, but ice and drifting snow in high mountain passes greatly slowed the pace of overland stagecoaches and their vital cargoes of mail, or stopped them literally in their tracks. In the new railroad era, steam locomotives and their passenger and freight trains would roll with impunity across frozen waterways and through the icy mountain passes of the West to reach their destinations regardless of the weather, and generally they would do so according to the printed schedule. Railroads used a combination of technology and muscle to triumph over nature. They dispatched snowplows of various types and armies of shovel-wielding workers to clear the tracks and keep trains moving. Only infrequently did their best efforts fail. On the rare occasion when railroads of the West lost a battle with Old Man Winter, their temporary plight gladdened the hearts of local journalists eager to write maudlin human-interest stories about snowbound trains and passengers marooned in the high Sierras, Rockies or Cascades. With proper equipment on the job and hard

work, there was no reason why winter passenger train schedules should be significantly different from summer. Further, with steady and consistent service no previous mode of transportation had been able to provide, railroads transformed or eliminated many seasonal variations once ingrained in Americans since birth. Fresh oranges and grapefruit, for instance, were once unimaginable luxuries on the breakfast table, and especially for residents of the High Plains and mountain West during winter months. Yet, beginning with the widespread use of refrigerated cars beginning in the 1850s, all kinds of fruit—from apples and cherries to lemons and peaches—sped east from the newly planted orchards in southern California and the Pacific Northwest to help provide wholesome and nutritious meals for families in places as distant as Iowa and New Hampshire. Perishable cargoes traveled inside insulated cars that protected them from the ill effects of winter chill and summer heat. In time, seasonal variations meant no more to the railroads of the West than differences between night and day, which the carriers had early resolved by adding massive headlights to their locomotives. Wherever railroads chose to run their tracks, they transformed the West by naming or renaming what they perceived to be boundless and undefined space. Some of the names recall the supremacy of a generation of western railroad builders, promoters, financiers and executives, all working tirelessly to transform the landscape of the Wild West. For example, Billings, Mont. Railroads claiming the right to inscribe names of their own choosing across the West made sense only because many parts of the region appeared far younger historically to the Euro-Americans doing the naming or renaming from an Indian perspective than comparable lands in the Great Lakes or Mississippi River country. Vast portions of the modern American West were, in effect, the children of railroad parents who did so much to shape and transform them, and in many cases that included naming the land and its distinctive features. When railroads first appeared in states such as Pennsylvania, Maryland, New York, and Massachusetts during the 1830s, the builders wedged their tracks and support structures into an existing landscape composed of farms and towns, some of them already generations old. Montana, by contrast, was the last of the lower 48 states and territories to hear the whistle of a steam locomotive, that ubiquitous sound of modernity. That auditory milestone did not occur until 1881, the year the first tracks entered the still sparsely settled territory. By then half a century had passed since the first steam locomotives thrilled residents of the East Coast. There are but few Indians in Washington Territory, and these have been for many years on reservations, living by fishing and agriculture. Now the buffalo and other game are replaced by cattle, sheep and horses; the Indians and their tepees by white settlers and their comfortable homes. In a word, the country has been transformed by Immigration and Irrigation. Even the Indians now have their farms and irrigation works. At that time, what perhaps most impressed and sobered transcontinental train travelers was what was missing among the Great Plains wildflowers. Keen observers of the transformation of the American West fretted aloud over the rapid disappearance of wild animals. Where were the immense herds of bison that had so recently roamed freely across the prairies? Only a generation or two earlier, travelers by stagecoach had marveled at a spectacle of nature as they paused for minutes and even hours as innumerable bison crossed the overland trail ahead of them. It had been easy for early travelers to imagine that western wildlife was abundant beyond belief, and that the trigger-happy man who relieved the boredom of an overland stage journey by using bison, antelope, prairie dogs, grouse and other wild creatures for target practice could never diminish their numbers. Bailey estimated that nearly 100 shots were fired into the herd. Hunting for sport—if that is what one called randomly targeting wildlife from a slow-moving stagecoach or the deck of a Missouri River steamboat—was common on the long journeys that required weeks of hard traveling. The popular sport continued into the early railroad era in the West. Elizabeth Cutler, wife of Lt. By the early 1850s, train passengers were crossing the Great Plains without seeing a single buffalo. The northern transcontinental had come to realize almost too late that for many of its long-distance passengers the fish and game of the region served by the railroad was an important attraction. All across the West, railroads made it possible for pioneer settlers to grow grain, fruit and vegetables and to raise sheep and cattle in areas once located beyond the limits of human perception and to ship even the most perishable commodities by train to once impossibly distant markets. And they were right. Also suggested for further reading: *Nothing Like It in the World*: Ambrose; and *The Transportation Frontier*: