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| **Grade Level:**  Elementary /4 - 5 |

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| **Essential Question:**  How did tuberculosis contribute to establishing the Denver community?  **Supporting Questions:**  1. What is tuberculosis (also known as TB)?  2. Why did people sick with tuberculosis come to Denver?  3. Where did sick people go when they arrived in Denver?  4. What happened to patients after they got better?  5. What did patients’ families do when a sick family member came to Denver? |

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| **Source 1: Heliotherapy**  Patients undergoing Heliotherapy at the Jewish Consumptive Relief Society (JCRS), circa 1930.  [Patients undergoing Heliotherapy at the Jewish Consumptive Relief Society (JCRS), circa 1930](http://hdl.handle.net/10176/88d0a09b-999b-48c4-bbf6-e9ae418d52ec). | **Source 2: National Jewish Hospital**  The First Hospital, 1907  [The “First Hospital”, 1907](http://hdl.handle.net/10176/a56990f4-9a69-4bf2-a363-e0adda821b4d). |

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| **Background Knowledge/Contextual Paragraph for Teachers:**  This set of primary source documents helps students understand how tuberculosis contributed to the growing population of Denver and Colorado. It is well known that the Colorado territory saw a population boom with the gold rush of the mid-late 1800s. As a byproduct of that settlement, early pioneers told their families and friends of the abundant sunshine and fresh air they found in Colorado and the accompanying health benefits it offered. Medical opinion at the time mandated fresh air for respiratory illness.  Tuberculosis ran rampant in the densely populated housing developments and sweatshops prevalent in the Northeastern United States. Although an exact number is not known, it is believed that as much of 60% of Colorado’s population around the turn of the 20th century came here as a result of tuberculosis, either directly or indirectly. Discussion of this source set can help students learn about a later wave of immigration to our state and how the Denver area population dealt with this epidemic.  The discovery of antibiotics to treat tuberculosis brought the disease under control by the mid-1950s, requiring the Jewish Consumptives’ Relief Society (JCRS) and National Jewish Hospital (NJH) to shift their focus. NJH was already heavily involved with asthma research and continues to this day to be a leader in the treatment of asthmatic patients as well as specializing in treating drug resistant tuberculosis. The NJH campus sits on Colfax and Colorado Blvd. The JCRS shifted its focus to cancer research becoming the American Medical Center. The organization continued to operate until it could no longer financially do so. The remainder of the organization merged with the University of Colorado Health Sciences Center in 2014. Some of the buildings from the original JCRS campus remain and are now the campus of the Rocky Mountain College of Art and Design. The campus is off of Pierce Street north of West Colfax. |

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| **Building Background Knowledge for the Student**  When Denver was first founded in 1858, it was a mining town full of people searching for fortune in gold and silver. Even if they didn’t find wealth, they all found Colorado offered bountiful sunshine and fresh air, and that made people feel good. Many settlers found Colorado to be a healthier place to live than where they migrated from. News of the health benefits of Denver spread across the country and even across the world. People suffering from respiratory diseases longed to be in an environment where they might feel better. This led to a new wave of immigration to Denver beginning in the late 1880s.  These health seekers were looking for relief from tuberculosis. Tuberculosis, also called the white plague or consumption, was fatal for many people who contracted the disease. With no cure, tuberculosis was the leading cause of death at this time. While wealthy people sought treatment in the luxury sanatoriums of the Swiss Alps (a mountain range in the country of Switzerland) believing the abundant sunshine and thin air would cure them, poorer sufferers of the disease flocked to Denver. At first there was nowhere for the sick to find help, but people kept coming anyway. Knowing something had to be done to care for the growing population of tuberculosis sufferers, members of the Denver Jewish community took up the cause building hospitals and raising money to care for the sick.  **Glossary**   1. Circa   A Latin word for around or about. Used when the exact date of something, in this case photographs, is unknown.   1. Consumptive   A person suffering from tuberculosis   1. Heliotherapy   The therapeutic use of sunlight   1. Kosher   Dietary laws observed by some Jews based on Torah commandment   1. Sanatorium   A medical facility that provides treatments and therapies for patients with long-term illnesses   1. Tuberculosis   A highly infectious bacterial disease that mainly affects the lungs and spreads to other people through the air when those infected cough, sneeze, or talk |

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| **Strategy Instruction:**  Students will engage in 7 learning stations as they learn about how TB fueled Colorado's growth in the late 1800s and early 1900s.  Create a folder for each learning station that includes the primary sources for each station and develop guiding questions for each station that will help students to gather evidence from the sources to aid them in answering the essential question(s).  Explain to students that TB patients came to Colorado get cured. It was believed that the sunshine and healthy dry air could cure TB. By one estimate, 60 percent of the state’s population in 1925 came to Colorado because of TB. It wasn’t until the 1940’s when antibiotics were discovered that people no longer needed to come to Colorado to be cured. |

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| **Strategy Instruction Differentiation:**  Teachers may develop graphic organizers to provide students with support while rotating through the learning stations. |

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| **Discussion:**   * Why was Denver such an important destination for those diagnosed with tuberculosis? * How did tuberculosis contribute to the growth of the city of Denver? * What inventions were [direct results of the tuberculosis](https://www.pbs.org/wgbh/americanexperience/features/plague-know/) disease? (HINT: Kleenex, the ice cream cone, reclining chairs, etc. * How can primary sources help us learn about the past or create more questions about our state's history? |

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| **Assessment:**  Have students investigate the various types of inventions that were direct results of the tuberculosis disease. Students can create a museum exhibit illustrating the impact of TB on Denver’s growth and the inventions that came about as a result of the disease. |

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| **Colorado Academic Standards: Social Studies**   * Standard 1 – History: 4.1.1.b. Identify cause-and-effect relationships using primary sources to understand the history of Colorado’s development. * Standard 1 – History: 4.1.2.b. Explain the relationship between major events in Colorado history and events in United States history during the same era. Including but not limited to: Colorado statehood, the Ludlow and Sand Creek Massacres, creation of national parks in Colorado, the Great Depression, the Dust Bowl, Amaché, Chicano movement, and busing in Denver. * Standard 1 – History: 4.1.2.d. Describe the impact of various technological developments. For example: Changes in mining technologies, agricultural technology (center pivot irrigation), transportation, early 20th century industrial developments, and 20th century nuclear and computer technologies. |

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| **Colorado Academic Standards: Reading, Writing, and Communicating:**   * Standard 2 - Reading for All Purposes: 4.4.2.a. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text. * Standard 2 - Reading for All Purposes: 4.4.2.a. Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text. * Standard 4 – Research Inquiry and Design: 4.10.1.a. Conduct short research projects that build knowledge through investigation of different aspects of a topic. |

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| **Learning Stations:**  **Station 1: What is Tuberculosis**?  By 1896, Denver had earned the nickname of the “Worlds Sanatorium.” Denver was flooded with people sick from tuberculosis contracted in Europe or the densely populated factories and tenement housing of the east coast United States. Tuberculosis sufferers had nowhere to go for care and were literally dying in the streets. Frances Wisebart Jacobs spearheaded the fundraising effort to build a hospital and advocated for the sick for many years. The hospital was eventually built in 1899. Originally named the Frances Jacobs Hospital, this hospital later became known as the National Jewish Hospital for Consumptives.  **1A. National Jewish Hospital**  The First Hospital, 1907  [The “First Hospital”, 1907](http://hdl.handle.net/10176/a56990f4-9a69-4bf2-a363-e0adda821b4d).  **1B. Jewish Consumptives’ Relief Society (JCRS)**  Gate to the entrance of the Sanatorium, 1904-1917  It wasn’t long before it was clear one tuberculosis hospital wasn’t enough. Due to limited capacity, National Jewish Hospital took only incipient tuberculosis cases, meaning patients in the early stages of the disease. The Jewish Consumptives’ Relief Society was established by a group of working-class Jewish immigrants to offer care to patients in all stages of the disease and provide a more Jewish environment, including a kosher kitchen.  [Gate to The Sanatorium of the Jewish Consumptives’ Relief Society](https://specialcollections.du.edu/object/3d1bcf38-85cd-4660-80d4-4beb65090c6a) (JCRS), between 1904-1917.  **1C. Chest X-rays**  Chest x-rays of an unidentified patient, 1945  X-rays of tuberculosis patients’ chests were taken to monitor damage to the lungs. Damage shows up in the x-ray as a cloudy white area. People suffering from tuberculosis would experience cough, weight loss, fever, chills, and fatigue.  [Chest x-rays of an unidentified patient at the JCRS, August 1945.](http://hdl.handle.net/10176/54156da8-5855-4afd-8d26-267cace4473b) |
| **Station 2: Activities at the JCRS**  **2A. Citizenship Class**  **Patients taking a citizenship class, 1942**  People who came to Denver to seek treatment for tuberculosis often stayed for extended periods of time in the hospitals. They made friends and became part of the community. Many people wished to stay in Colorado after they had been released from the sanatorium becoming residents, and in the case of this photograph, becoming citizens as well.  [Patients taking citizenship classes at the JCRS, circa 1942.](https://specialcollections.du.edu/datastream/21f8ec90-341f-4731-a1af-fd9d2008c5d9/jpg/null/21f8ec90-341f-4731-a1af-fd9d2008c5d9.jpg)  **2B. Art Class**  Patients in an art class, 1942  Part of rehabilitation at the JCRS included recreational activities including drawing, painting, and ceramics. Keeping patients active and providing a sense of normal, everyday life was an important part of recovery.  [Patients drawing at the JCRS, circa 1942](http://hdl.handle.net/10176/6c30d702-bd99-4ebc-81b0-fc308ba77ef0).  **2C. JCRS Farm**  **The Dairy Farm at the JCRS, 1940**  Feeding an entire hospital took a lot of food. Since the JCRS treated patients for free, the hospital needed to use resources wisely. With land donated by local dairy farmer Louis Robinson, the JCRS was able to run a farm producing fresh vegetables, meat and eggs for the patients. Patients could also work the farm if they were approved by the medical staff.  [Dairy Farm of the Jewish Consumptives' Relief Society, circa 1940.](https://specialcollections.du.edu/datastream/e7f02440-0d36-4a13-9006-fdf3dce975b4/jpg/null/e7f02440-0d36-4a13-9006-fdf3dce975b4.jpg)  **2D. JCRS Farm Production**  A report from the JCRS farm, 1917  Everything the JCRS farm produced could be consumed right at the hospital; some by the patients and some by the livestock.  Farm Production Statistics from 1916, published in 1917. |
| **Station 3: Different Treatments for Tuberculosis**  **3A. Heliotherapy**  **Patients at the JCRS, 1930**  Tuberculosis was the leading cause of death in late nineteenth and early twentieth century America. With no cure for the disease, fresh air and sunshine were seen as treatment options. Colorado’s 300 plus days of sunshine, moderate climate, and ample pollution free air offered tuberculosis sufferers the best chance at recovery. Hospitals offered heliotherapy treatment on large balconies lined with patient beds.  [Patients undergoing Heliotherapy at the Jewish Consumptive Relief Society (JCRS), circa 1930](http://hdl.handle.net/10176/88d0a09b-999b-48c4-bbf6-e9ae418d52ec).  **3B. Diet & Menu**  **Patients getting weighed at the JCRS, 1940s**  Tuberculosis was called a consumptive or wasting disease because it consumes the body causing patients to lose weight. Part of the treatment plan for tuberculosis was trying to get patients to gain back weight through high fat diets heavy in milk and eggs from the JCRS farm.  [Patients getting weighed, 1940s](http://hdl.handle.net/10176/d698bcf1-017e-43ea-80a0-6052eb71c3f7)  Weekly menu, 1917  Average Weekly Menu, 1917.  **3C. Fresh Air**  To maximize exposure to healing, fresh mountain air the original hospital campus was a small colony of tents which came to be known as the “Tent City”. Early patients and staff were housed in Tucker Tents, which were shelters that helped contain the highly contagious tuberculosis while allowing air to pass through at all times. The tent pictured here is identical to the tents patients would room in but this was the laboratory and where medication would be dispensed to patients.  **Patient tents, 1905**  [Patient tents, 1905](http://hdl.handle.net/10176/f8779f1e-4a5f-42e1-b29e-39cfa557dc2b). |
| **Station 4: Patient Publications**  **4A. Printing Press**  **Bookbinding and print shop at the JCRS, 1930s**  As well as keeping patients busy, some of the patient’s recreational activities were also meant to give them work experience to help them find a job when they were well enough to leave the Sanatorium. Patients could learn to bind books and use a printing press at the JCRS as part of the Industrial Rehabilitation Department.  [Bookbinding and Print Shop of the Jewish Consumptives' Relief Society, 1930s.](http://hdl.handle.net/10176/2c14ff40-2599-4166-8965-dc283016caf9)  **4B. Tales from the Tent, October 1916**  **A publication written by patients of the JCRS**  At the Jewish Consumptives’ Relief Society patients could also express their talent as authors. It served to both keep the patients busy writing publications but also amused by having something to read. They would print short stories, poems and jokes, as well as news from the Sanatorium like what new books had been added to the library, upcoming events and reports from nurses and doctors.  [Publication written by patients of JCRS.](http://hdl.handle.net/10176/df40319c-cf16-4a5d-b4f0-34d890dece53)  **4C. Hatikvah, April 1927**  **Hatikvah, a monthly publication from the patients of the JCRS.**  Hatikvah, a monthly publication from the patients of the JCRS, had a readership outside the sanatorium walls with subscribers from the Denver are. It also contained many poems, jokes and stories from the patients and medical staff at the JCRS. Hatikvah is a Hebrew word meaning “the hope” and is also the name of the national anthem of Israel.  [Hatikvah, a monthly publication from the patients of the JCRS.](http://hdl.handle.net/10176/df40319c-cf16-4a5d-b4f0-34d890dece53) |
| **Station 5: Children’s Experience**  **5A. Tuberculosis Orphans**  Tubercular patients who came to Denver seeking treatment often did not come alone but brought their families as well. Unfortunately, this led to a population of “tuberculosis orphans” in Denver. Children whose parents had been admitted to the sanatoriums were often left to fend for themselves. A group of women saw the need to build a home for these children and the Denver Sheltering Home, with its motto “For a Child’s Sake”, was opened in 1908 as a place to care for the TB orphans.  **Children standing in front of the Denver Sheltering Home, 1908**  [Children in front of the Denver Sheltering Home, circa 1908.](http://hdl.handle.net/10176/2fb1699e-3ad4-4ef2-b62f-3b4053324fbf)  **5B. The Preventorium**  **Children building an igloo, 1929**  The Preventorium was opened in 1920 by National Jewish Hospital as a place where children at high risk for contracting tuberculosis could receive medically supervised food and exercise. The healing rays of the sun were thought to kill the tuberculum bacteria so maximum sun exposure was maintained through the children’s attire.  [Children from the Preventorium building an igloo, 1929.](https://exhibits.library.du.edu/librariespresents/files/fullsize/9d9f3993891d49d981414d4317280855.jpg) |
| **Station 6: Geography**  This map shows where patients of the JCRS came from. The larger numbers are in areas where there were larger metropolitan areas and tuberculosis spread easier. The most patients (3,473) came from New York where Elis Island was the gateway to America for many European immigrants. You can track the numbers East to West across the map through where large cities had developed: Philadelphia, Pittsburg, Cincinnati, Chicago and St. Louis. Texas also has a sizeable patient number (209) compared to many states. Though not densely populated, Texas was home to the Port of Galveston which filtered in immigrants as well.  **6A. Patient Distribution**  **JCRS patient map, 1937**  [JCRS Patient Map, circa 1937.](http://hdl.handle.net/10176/0826c42f-f009-402e-a128-ae18a007d5fe)  This aerial picture of the JCRS campus was taken from a plane flying over the campus. In the picture you can see how the sanatorium was originally surrounded by farmland and not city buildings. This provided a more healthful environment that kept patients away from the main population of Denver. The 148-acre campus also allowed for the JCRS to run a dairy, poultry, and produce farm to feed the patients.  **6B. Sprawling Farmland**  **Ariel view of the JCRS, 1940**  [An Aerial View of the Jewish Consumptives' Relief Society, circa 1940.](https://specialcollections.du.edu/datastream/4addc3bb-9f6e-45d0-9e20-b33432cc4704/jpg/null/4addc3bb-9f6e-45d0-9e20-b33432cc4704.jpg) |
| **6C. High Altitude**  The entrance gates to the JCRS boasts an elevation of 5450, just over a mile high. It was believed that a higher altitude was good for the body when trying to fight the effects of the disease. This led to Colorado and the Swiss Alps as being premier destinations for TB sufferers. The sign also says “Spivak, Colo.” since at this time the blossoming suburb of Lakewood had not yet enveloped the area. The JCRS campus earned its own designation as Sanatorium, Colorado with the addition of a post office in 1923; later it was known as Spivak, Colorado.  **Entrance gate to the JCRS, 1950**  [Entrance Gate to the Jewish Consumptives’ Relief Society, circa 1950.](https://specialcollections.du.edu/datastream/57638898-ecd8-4fae-b974-cda183de9258/jpg/null/57638898-ecd8-4fae-b974-cda183de9258.jpg) |
| **Station 7: Patient File Study**  **7A. JCRS Patient Harry Battock, ID 343**  A letter  Denver was flooded with tuberculosis sufferers and the family members that came with them. Even with the addition of the JCRS hospital there were still not enough beds for patients. Some sufferers who were in earlier stages of the disease might not have required a hospital stay but still came to reap the benefits of sunshine and fresh, thin air.  [Letter about Harry Battock from October 30, 1906](http://hdl.handle.net/10176/01b5a1ba-09a7-4abe-b627-9cc5195491c8)  **7B. JCRS Patient Sam Dworkin, ID 344**  **A letter**  Charity organizations, doctors, and desperate family members regularly wrote to the overcrowded sanatoriums trying to secure a spot for those suffering with tuberculosis. Letters like this offer a firsthand account of how dire the situation in Denver was.  [Letter about Sam Dworkin from October 30, 1906,](http://hdl.handle.net/10176/bece3525-f0f3-4bf9-9f84-4eb2bb0548aa) |
| **7C. JCRS Patient Ida Malbin, ID 3704**  **A letter**  Children were not frequently admitted to the sanatoriums. The Denver Sheltering Home took in children who were exposed to or orphaned by the disease. Later, in 1920 the National Jewish Hospital opened the Preventorium specifically for children.  [Letter to Denver Sheltering Home from JCRS about the Malbin children, October 23, 1916](http://hdl.handle.net/10176/fea36e65-2981-402f-9572-2ee3492979b1) |