

## Teacher Resource Set

Title	Tuberculosis
Developed by	Sally Purath, Instructor, Osher Lifelong Learning Institute
Grade Level	4-12
Essential Question	<p>What health issue caused a third of Colorado’s early settlers to move to Colorado beginning in the 1860s? What were the reasons for relocating to Colorado and not somewhere else?</p> <p>What did doctors know about tuberculosis before they knew about germs?</p> <p>How did Colorado’s economy benefit from the belief that climate could cure TB?</p> <p>What were the attitudes and beliefs about the thousands of sick and dying tuberculosis patients who had migrated to Colorado?</p> <p>How did Colorado’s economy continue to benefit from tuberculosis after it was known that climate did not cure the disease?</p> <p>How does Colorado’s built environment in many of its cities reflect the influence of tuberculosis?</p>
Contextual Paragraph	<p>In the 19<sup>th</sup> century, the top killer of people in the U.S. was tuberculosis. By 1900, about a third of Colorado’s early settlers had moved to the state in search of a cure. Not knowing about germs, doctors believed that Colorado’s dry air, clean mountain water, and year-round sunshine would enable people’s immune systems to cast off the deadly disease and cure them of the malady.</p> <p>Those who arrived prior to 1880 were housed in a variety of facilities ranging from tents to boarding houses to private abodes. After 1880, TB became big business and with the influx of tuberculars numerous sanatoria were built to provide them care. In the period between 1880 and 1920 eighty sanatoria were established along the front range. Countless other facilities existed throughout the state as well as numerous small privately-owned accommodations such as Mrs. Lare’s Tent Sanatorium in Englewood, CO housed those in search of the cure.</p>

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Contextual Paragraph  
(continued)

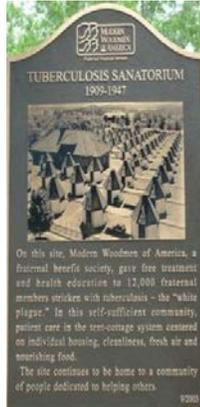
After 1890, the germ theory became widely accepted in medical communities. The attitudes toward tuberculars changed when it was realized that they could carry the contagion to those who came in contact with them. Efforts were made to educate the general population about tuberculosis and the steps that could be taken to prevent the spread of the disease. Local governments passed statutes against such things as spitting on the streets, for example. In Colorado Springs, the city government discussed the idea of requiring tuberculars to wear bells around their necks as a means of identification. The idea never came to fruition.

Advancements in medicine in the 1950s resulted in drugs that could “cure” tuberculosis. Sanatoria were no longer necessary and they began to close down. In an effort to eradicate the disease, mobile TB clinic vans were sent to rural areas to locate and treat victims. Children were given “tine” tests in schools as a routine part of their K-12 educational experience. People employed in the public sector who had close contact with large numbers of people were required to have chest x-rays in order to detect the disease. These efforts resulted in the near elimination of tuberculosis by the 1970s.

In Denver, as in Colorado Springs, many of the larger sanatoria became the foundation for many of today’s hospitals. Among those that remain today along the front range are National Jewish, Swedish, Lutheran, St. Luke’s, St. Joseph’s, Denver General, Fitzsimons, Glockner, St. Francis and Penrose Hospitals. Other sanatoria remain, but are used for different purposes such as the Agnes Phipps Memorial Sanatorium which became Lowry Air Force Base in Denver and Cragmor, home of the University of Colorado – Colorado Springs. The preservation of these structures established and designed specifically for the treatment of tuberculosis pays tribute to this time period in Colorado history.

Although tuberculosis could now be treated in a patient’s home environment, Colorado continued to draw people to visit from around the globe. The appeal to move to Colorado’s climate changed from curing TB to being a healthy and vigorous place to live. Even today, the population continues to grow, attracting people who love yearly outdoor activities such as skiing in the snow and hiking and biking in the sunshine.

<b>Resource Set</b>					
<b>“Colorado Climate” <i>Colorado Springs Gazette</i>, May 12, 1888</b>	<b>Modern Woodmen of America Sanatorium in Colorado Springs, CO</b>	<b>Miramont Castle, Manitou Springs, CO c. 1907</b>	<b>Miramont Sanatorium – photo from the National Register Nomination April 11, 1977</b>	<b>“Free Clinic Opened for Tuberculars” in the <i>Colorado Springs Gazette</i>, March 29, 1919</b>	<b>“M.W.A. Has 10,000 Tubercular Cases” in <i>Colorado Springs Gazette</i>, June 25, 1919</b>
Transcript of a paper given by Dr. Frederick I. Knight a well-known specialist in lung diseases. It resulted in the migration of many tuberculars to Colorado.	Illustrated article about tuberculosis and the history of the Modern Woodmen of America Sanatoria.	Illustrated article about the history of Miramont Castle Sanatorium. Highlights the work of founder Father Jean Francolon and the Sisters of Mercy.	The entire nomination is currently not digitized. This photo is all that is available in digital format at this time.	The article discusses the need for free or inexpensive clinics for the care of tuberculars. It reflects the understanding of TB as a contagious disease.	Report on the efforts of the Modern Woodmen of America Organization to greatly increase the number of patients being treated at this TB Tent Sanatorium.
“The best article on the climate of Colorado and on the class of individuals who should come here, that has appeared in any medical journal.”	Dr. Charles Fox Gardiner invented the TB hut for single patients, allowing many more to live more inexpensively.	Periods of particular significance include 1875-1899, 1900-1927. Article also contains a discussion of the 9 architectural styles found in the castle.	The building is significant because of its engineering and architectural aspects. Example of Tudor Revival, Queen Anne, and Romanesque styles.	Among the many individuals identified that were involved in this project was Dr. Gerald B. Webb, an internationally known leader in the fight against TB.	Located north of Colorado Springs in what is now known as Woodman Valley, this was one of the largest “tent colonies” developed to house tuberculars.



**FREE CLINIC OPENED FOR CONSUMPTIVES**  
**DR. MARY R. NOBLE MADE MEDICAL DIRECTOR**  
**Indigent Sufferers Are Offered Relief Thru Public Health Association**

A tubercular clinic established for the benefit of sufferers from the white plague who should receive free treatment from the best available physicians will be opened at the headquarters of the Visiting Nurse association, 302 South Wabash avenue, within the next few days. The clinic will be in direct charge of Dr. Mary Riggs Noble as medical field director.

Plans for the clinic have been under way for some time, but it was not until yesterday that arrangements were completed. The clinic will be opened under the auspices of the Colorado Springs Branch of the Colorado Public Health association, which was recently formed here, and in addition to the handling of tubercular cases will cooperate in the baby welfare movement.

**M. W. A. HAS 10,000 TUBERCULAR CASES**  
**SANITARIUM WORK ONLY IN FANCY.**

Enterprise Will Grow Until Accommodation May Be Furnished to All Patients.

Spurred on by the spirit of fraternalism and humanitarianism, the head camp officers of the Modern Woodmen of America, representing the 150,000 members of that order, are putting forth every effort to increase the capacity of the sanitarium north of this city, so that in the course of a few years instead of accommodating eighty patients as at present, it will be able to afford treatment for every one of the 10,000 Woodmen who are now stricken with the great white plague.

Confidence in the successful outcome of the fight against tuberculosis and pride in the tent colonies which mark the beginning of the sanitarium project, these were the features of the ad-

<http://more.ppld.org:80/specialcollections/index/ArticleOrders/522516.pdf>

<https://southerncoloradohistory.wikispaces.com/Modern+Woodmen+Sanatorium>

<http://www.miramontcastle.org/index.php/the-sisters-of-mercy>

<https://npgallery.nps.gov/NRHP/AssetDetail?assetID=e90df132-6265-4d28-a615-f33b9576e5f3>

<http://more.ppld.org:80/SpecialCollections/Index/ArticleOrders/388890.pdf>

<http://more.ppld.org:80/SpecialCollections/index/ArticleOrders/336247.pdf>

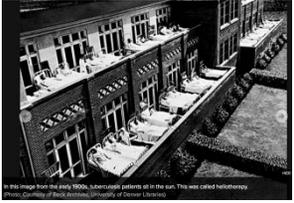
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<p><b>“Aged Negro Couple Give Land for New National Sanatorium”</b> <i>Colorado Springs Gazette</i>, November 22, 1910</p>	<p><b>“Cragmor Reorganized as Non-Profit Tuberculosis Sanatorium”</b> <i>Gazette and Telegraph</i>, February 16, 1936</p>	<p><b>National Register of Historic Places Nomination form for Lowry Air Force Base</b> September 3, 1998</p>	<p><b>Phipps Sanatorium c. 1911</b> <b>Aka Agnes Memorial Sanatorium</b></p>	<p><b>TB Hut on display at the Pioneer Museum in Colorado Springs, CO</b></p>	<p><b>Fitzsimons General Hospital c. 1921</b></p>
<p>Article about the donation of 480 acres to build a new sanatorium for African Americans suffering from TB.</p>	<p>“The new organization...is a non-profit, non-sectarian body created for benevolent, charitable and humanitarian purposes and for the treatment of tuberculosis...”</p>	<p>Originally built as the Agnes Phipps Memorial Sanatorium in 1904 as a hospital for the treatment of tuberculosis, it was converted to Lowry AFB in 1932.</p>	<p>View of the main building at Agnes Memorial Sanatorium for tuberculosis patients (named for Agnes McCall Phipps), at East 6th (Sixth) Avenue and Quebec Street in Denver, CO.</p>	<p>The article from which this image is taken, “History of Search for TB cure tied to history of Colorado Springs” is described in the <i>Colorado Springs Gazette</i>, December 27, 2014.</p>	<p>Overview of the Fitzsimons General Hospital buildings in Denver, CO. The hospital was opened in 1918 to serve WWI veterans suffering from TB. It grew to 86 buildings and 1,400 patient beds.</p>
<p>Former slave, James K. Polk Taylor (age 71) and his free-born wife Elizabeth Jane Taylor (age 75) gave land in Calhan near Colorado Springs for the Sanatorium. W.E.B. DuBois, among others, was on the Advisory Committee.</p>	<p>In depth article about the history of Cragmor Santorium located beneath Austin Bluffs in Colorado Springs. It details the reorganization of the once private institution for the wealthy.</p>	<p>From 1904-1932, Lowry was the Agnes C. Phipps Memorial Sanatorium, a 150-bed facility boasting the curative properties of Colorado’s climate.</p> <p>This is an excellent example of the reuse of an existing historic building.</p>	<p>The Spanish Colonial structure features stucco walls, arched windows, a tile hipped roof, and central dome.</p>	<p>Other examples of the diversity of housing for tuberculars are available in the View Gallery of the article. They include the Central Building of Cragmor Sanatorium, now the Main Hall at University of Colorado-Colorado Springs and Modern Woodman of America Sanatorium, January 25, 1927.</p>	<p>Fitzsimons has changed over the years and currently is the site of the University of Colorado Anschutz Medical Campus. Fitzsimons was placed in the State Register in 1999.</p> <p>For more information visit the Colorado Encyclopedia’s materials on Fitzsimons.</p>

<p><a href="http://more.ppld.org:80/SpecialCollections/Index/ArticleOrders/355046.pdf">http://more.ppld.org:80/SpecialCollections/Index/ArticleOrders/355046.pdf</a></p>	<p><a href="http://more.ppld.org:80/specialCollections/Index/ArticleOrders/238334.pdf">http://more.ppld.org:80/specialCollections/Index/ArticleOrders/238334.pdf</a></p>	<p><a href="https://npgallery.nps.gov/NRHP/AssetDetail?assetID=f82a2f65-9e15-4387-842a-7b9ae76e8eb4">https://npgallery.nps.gov/NRHP/AssetDetail?assetID=f82a2f65-9e15-4387-842a-7b9ae76e8eb4</a></p>	<p><a href="http://digital.denverlibrary.org/cdm/ref/collect/p15330coll22/id/63169">http://digital.denverlibrary.org/cdm/ref/collect/p15330coll22/id/63169</a></p>	<p><a href="http://gazette.com/history-of-search-for-tb-cure-tied-to-history-of-colorado-springs/article/1543674">http://gazette.com/history-of-search-for-tb-cure-tied-to-history-of-colorado-springs/article/1543674</a></p>	<p><a href="http://digital.denverlibrary.org/cdm/ref/collect/p15330coll22/id/17723">http://digital.denverlibrary.org/cdm/ref/collect/p15330coll22/id/17723</a></p>

<p><b>“Where Colorado Springs Proves Its Sense of Brotherhood”</b> <i>Colorado Springs Gazette, October 5, 1913</i></p>	<p><b>Jewish Consumptives’ Relief Society (JCRS) Denver, CO</b></p>	<p><b>Sun Porch Tuberculosis Therapy</b></p>	<p><b>Sun Deck Therapy for Tuberculosis Patients</b></p>	<p><b>Denver Sanatorium for Tuberculosis</b></p>	<p><b>Tuberculosis in Colorado - Historic Photographs</b></p>
<p>The article highlights the work being done at Sunnyrest Sanatorium for tubercular treatment.</p>	<p>This sign marks the entrance to the JCRS sanatorium. It is contained in an article by Devorah Klein.</p>	<p>Heliotherapy at JCRS sanatorium. c. 1920-1940.</p>	<p>Adult patients on the Sun deck of the B’nai B’rith Infirmary Building.</p>	<p>The B’nai B’rith Infirmary Building at the National Jewish Hospital in Denver.</p>	<p>Historic photos related to tuberculosis in the Denver area from the Denver Public Library Digital Collection.</p>

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<p>Anecdotal stories about several patients illustrates local attitudes toward TB patients. It also discusses belief that climate could cure the disease.</p>	<p>The article contains photos and biographies of many Jews of Eastern European heritage who moved to Colorado from the East to seek treatment.</p>	<p>Tuberculosis patients lie in beds on the porch of a building at the Jewish Consumptive Relief Society (J.C.R.S.) sanatorium, 1600 Pierce Street, Lakewood, Colorado. The men lie in rows outside their rooms, and nurses attend to some patients.</p>	<p>Some of the thousands of Jews of Western European heritage who came to cure their tuberculosis with sun therapy.</p>	<p>This state-of-the-art sanatorium included sun porches and sun treatment decks to facilitate the healing of tuberculars at a time when it was believed that sun light could cure TB.</p>	<p>This collection contains photos of many of the sanatoria located in the Denver area at the turn of the 20<sup>th</sup> century. Institutions include Craig Colony, Lutheran Sanatorium, the Oakes Home. They provide an interesting comparison of architectural styles of the period.</p>
		 <p>In this image from the early 1900s, tubercular patients lie in the sun. This was called heliotherapy. Photo Courtesy: J. Paul Aronson, University of Denver, Colorado</p>	 <p>In the early 1900s Colorado's health-giving sunshine was thought to be an essential factor in healing tuberculars at the National Jewish Hospital. This image shows a group of adult patients on one of the spacious sun porches of the 8th floor Infirmary Building. Photo Courtesy: University of Denver, Colorado</p>	 <p>In the 1920s the 8th floor Infirmary Building at the National Jewish Hospital in Denver was considered a state of the art structure featuring sun porches, Jacuzzis, and sun-treatment decks. Photo Courtesy: University of Denver, Colorado</p>	
<p><a href="http://more.ppld.org:8080/SpecialCollections/Index/ArticleOrders/381691.pdf">http://more.ppld.org:8080/SpecialCollections/Index/ArticleOrders/381691.pdf</a></p>	<p><a href="http://58028505f9d0490e239d-dd278761b79c5ed7a0a13a08da51440a.r34.cf2.rackcdn.com/6738446351100eba8673f0.pdf">http://58028505f9d0490e239d-dd278761b79c5ed7a0a13a08da51440a.r34.cf2.rackcdn.com/6738446351100eba8673f0.pdf</a></p>	<p><a href="http://www.cpr.org/news/story/how-tuberculosis-fueled-colorados-growth">http://www.cpr.org/news/story/how-tuberculosis-fueled-colorados-growth</a></p>	<p><a href="http://www.cpr.org/news/story/how-tuberculosis-fueled-colorados-growth">http://www.cpr.org/news/story/how-tuberculosis-fueled-colorados-growth</a></p>	<p><a href="http://www.cpr.org/news/story/how-tuberculosis-fueled-colorados-growth">http://www.cpr.org/news/story/how-tuberculosis-fueled-colorados-growth</a></p>	<p><a href="http://digital.denverlibrary.org/cdm/searchcollection/p15330coll14!p15330coll22/searchterm/Tuberculosis/field/all/model/all/conn/and/order/nosort/page/2">http://digital.denverlibrary.org/cdm/searchcollection/p15330coll14!p15330coll22/searchterm/Tuberculosis/field/all/model/all/conn/and/order/nosort/page/2</a></p>

<b>Foundations Annotations</b>
<b>Curriculum Connections</b>
History
Geography
Reading
<b>Curriculum Standards</b>
<p><b>CO State History Standard 1:</b> The historical method of inquiry to ask questions, evaluate primary and secondary sources, critically analyze and interpret data, and develop interpretations defended by evidence from a variety of primary and secondary sources. (High School)</p> <p><b>CO State Geography Standard 3:</b> The interconnected nature of the world, its people and places. (High School)</p> <p><b>CO State Geography Standard 1:</b> Use geographic tools to analyze patterns in human and physical systems. (Eighth Grade)</p> <p><b>CO State Geography Standard 2:</b> Connections within and across human and physical systems are developed. (Fourth Grade)</p> <p><b>Reading for Information Literacy Standard 4.1</b> Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.</p> <p><b>Reading for Information Literacy Standard 4.9</b> Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.</p>

**Content and Thinking Objectives**

Students will be able to:

- evaluate primary sources to understand local views on the massive migration of tuberculosis patients both those with and without money.
- discuss how changing perceptions and knowledge about tuberculosis affected the ways Coloradans dealt with tubercular migrants.
- explain what doctors first incorrectly believed about the causes of tuberculosis and how it could be cured.
- discuss how tuberculosis effected the built environment in Colorado then and now.

**Objectives are based on the Colorado Department of Education Content Connections located at:**

[https://www.cde.state.co.us/contentareas/contentconnections/5gr\\_changetransform](https://www.cde.state.co.us/contentareas/contentconnections/5gr_changetransform)

**The Colorado Department of Education Prepared Graduate Competencies at:**

<https://www.cde.state.co.us/cosocialstudies/cas-ss-corrections>

**Inquiry Questions, Activities and Strategies****Inquiry Questions:**

Who are famous people who came to Colorado due to tuberculosis? Why did many of them remain?

How did tuberculosis drive the Colorado economy? Why were so many poor sick people welcomed?

Why would people continue to migrate to Colorado after it was discovered that the climate would not cure tuberculosis?

**Inquiry Activities:**

Ask students to plot the locations and a description of historic sites related to tuberculosis on Google Maps.

Ask students to research tuberculosis and whether Colorado continues to remain an important state in the research and treatment of the disease today.

Ask students to research germ theory. How has it evolved over time?

## Assessment Strategies

Depending upon how one uses the resources and which standards are chosen, assessment can take many forms. For example:

**CO History Standard 1** (High School) After analyzing items from the resource set, describe local people's attitudes toward thousands of tubercular patients migrating to Colorado, both those who could afford to pay for their care and those who were penniless.

**CO Geography Standard 3** (High School) After analyzing items from the resource set, describe how sanatoria were adapted for tuberculosis patients in particular as opposed to a regular hospital or hotel for tourists.

**CO Geography Standard 1** (Eighth Grade) Students will plot the locations and a description of historic sites related to tuberculosis on Google Maps and make inferences about the patterns that emerge.

**CO Geography Standard 2** (Fourth Grade) Read a newspaper account from between 1880-1930 and list ways people with tuberculosis were treated for their disease.

## Other Resources

## Web Resources

National Register of Historic Places: <http://www.nps.gov/nr>

Resources from History Colorado: <http://www.historycolorado.org/researchers/tuberculosis>

Colorado Public Radio news report: <http://www.cpr.org/news/story/how-tuberculosis-fueled-colorados-growth>

*Denver Post* news story: <http://www.denverpost.com/2007/05/30/tuberculosis-in-colorado-history/>

Tuberculosis and its treatment: <http://www.uccs.edu/cragmor/colorado-medical-history/tuberculosis-and-its-treatment.html>

Origin of National Jewish Hospital for Consumptives: <http://coloradohealthcarehistory.com/hospitals-national-jewish.html>

Former Tuberculosis Sanatorium: <http://digital.denverlibrary.org/cdm/ref/collection/p15330coll7/id/345>

**Web Resources (continued)**

Fitzsimons General Hospital, Open Air Tuberculosis Ward: <https://www.loc.gov/item/co0799/>

Fitzsimons General Hospital, Nurses' Tubercular Ward/Nurses' Infirmary: <https://www.loc.gov/resource/hhh.co0827.photos?st=gallery>

Mary Swanson, "Tuberculosis in Colorado," *Colorado Encyclopedia*: <http://coloradoencyclopedia.org/article/tuberculosis-colorado>

**Secondary Sources**

Katherine Ott, *Fevered Lives: Tuberculosis in American Culture since 1870* (Cambridge, MA: Harvard University Press, 1996).

Sheila Rothman, *Living in the Shadow of Death: Tuberculosis and the Social Experience of Illness in American History* (Baltimore: Johns Hopkins University Press, 1995).

Cynthia Kay Stout, "A Consumptive's Refuge: Colorado and Tuberculosis (PhD dissertation, George Washington University, Washington, DC, 1997).

William N. Beggs, "What Consumptives Should Not Come to Colorado," in *Colorado Souvenir Book for the International Congress on Tuberculosis in Colorado* ed. William N. Beggs (Denver: Colorado Organization of the International Congress on Tuberculosis, 1908).

**Preservation Connection**

The influence of tuberculosis on the built environment is substantial. Sanatoria were designed to provide optimum exposure to Colorado's sunshine and dry air. Windows were a common feature of these buildings. Another feature that can be observed today in areas like North Cascade Avenue in Colorado Springs or Montclair neighborhood in Denver are sleeping porches. It is not unusual to drive through the neighborhoods east of Colorado College in Colorado Springs and see wooden structures that resemble small sheds or playhouses in many backyards. These structures housed tuberculars in Woodmen Valley and Nordrach Ranch and as sanatoria closed, many citizens of the city relocated them to their yards. See the TB Hut in the resource set.

During the Progressive Era, numerous books and pamphlets were written about the architectural design of sanatoria. Thus, throughout Colorado and the United States, sanatoria were built according to these modern, scientific designs that included easy access to air and sunshine.

**Preservation Inquiry Questions:**

Why are buildings that housed people with tuberculosis worth preserving?

How does preserving this collection of buildings tell an important story about the history of Colorado?

Who has taken on the role as preservationist of these buildings?

Why are these buildings significant? Is the significance about the story they tell or the buildings and their architecture or both?

How have these buildings been preserved and used for another (or the same) purpose?

Working together to tell the story of our state!

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