# "Lungers" –Tuberculosis in Early Arizona History

| | |
|---|---|
| **Author** | Julie A.M. Leckman |
| **Grade Level** | 7 |
| **Duration** | 1-2 class periods |

## National Standards

**GEOGRAPHY**
**Element 1: The World in Spatial Terms**
1. How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information
**Element 4: Human Systems**
9. The characteristics, distribution and migration of human populations on Earth's surface
**Element 6: The Uses of Geography**
17. How to apply geography to interpret the past
18. How to apply geography to interpret the present and plan for the future

## AZ Standards

**ELA**
**Writing**
**Production and Distribution of Writing**
**7.W.4** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

## Arizona Social Science Standards

**GEOGRAPHY**
**The use of geographic representations and tools helps individuals understand their world.**
7.G1.1  Use and construct maps and other geographic representations to explain the spatial patterns of cultural and environmental characteristics. Key tools and representations such as maps, globes, aerial and other photos, remotely sensed images, tables, graphs, and geospatial technology
7.G1.2  Analyze various geographic representations and use geographic tools to explain relationships between the location of places and their environments.
**Human-environment interactions are essential aspects of human life in all societies.**
7.G4.4  Explain an issue in terms of its scale (local, regional, state, national, or global)

## Overview

This lesson explains how the Arizona population changed during the 1900s because of migration for tuberculosis (TB) treatments. The lesson outlines living conditions, locations of population, and treatments provided. The lesson also provides historical data relating to the migration to Arizona for tuberculosis treatments. The students will make meaning of the data in relation to its historic and current value.

## Purpose

In this lesson, students will learn through the use of historic data how a disease (tuberculosis) can cause migration. They will also practice mapping data, so it easily communicates information to a consumer. They will also determine the scale of a problem.

## Materials

- "Lungers" reading assignment
- Arizona Tuberculosis Disease Case Count and Incidence 2018
- What Do We Know? handout
- Scoring Guide for Visual Representation (map)
- Arizona's Cities and Counties map
- Colored pencils or markers

## Objectives

The student will be able to:

1. Make conjectures about changes and influences on Arizona populations and from historical data.
2. Make a visual representation from data.
3. Determine the scale of a problem.

## Procedures

ARIZONA GEOGRAPHIC ALLIANCE

## Lungers: Tuberculosis in Early Arizona History

1. Introduce the lesson by reading the "Lungers" reading assignment as a whole class.
2. Ask if students still hear about tuberculosis or TB today.  What have they heard?
3. Project Arizona Tuberculosis Disease Case Count and Incidence 2018 information. Talk about the Arizona Counties affected.  What do they notice?  (Possible answers:  larger numbers of people = more TB cases, some rural areas don't have any sufferers, etc.)
4. Partner students and distribute the Arizona Cities and Counties map as well as the "What Do We Know handout.  Read through the handout as a whole class.
5. Explain the three questions at the end of the page. Project again how the Arizona Tuberculosis Disease Case Count and Incidence 2018 information was mapped by counties.  Discuss the possible ways to map the historic data since it is by cities. Do they want to concentrate on the % of Lungers or # of Deaths?
6. Share the Scoring Guide for Visual Representation (map) so students understand how they will be graded.
7. Allow students to work in groups for the rest of the time.

## Assessment

**Social Science**
The visual representation should be graded according to the Scoring Guide for Visual Representation (map)—requirements 1-6.  Mastery is considered 60 points or higher out of the 70 points possible.

**ELA**
Questions 2 and 3 can be graded using the Scoring Guide for Visual Representation (map)—requirements 5-6.  Mastery will be considered 24 points or higher out of the 30 points possible.

## Extensions

Further research can be done on how treatments for TB have increased life expectancy for sufferers.

## Sources

A special thanks to Liz Williams and Marty Huber at the Arizona CDC and Kay McClain at Vanderbilt University

http://www.demog.berkeley.edu/~andrew/1918/

http://publichealth.lacounty.gov/tb/index.htm

https://azdhs.gov/documents/preparedness/epidemiology-disease-control/disease-integrated-services/tb-control/reports/2018-az-tb-cases-rates-by-county.pdf

http://library.columbia.edu/indiv/dsc.html

ARIZONA
GEOGRAPHIC ALLIANCE