CALIFORNIA

Giant Map or Tabletop Map Lesson

TITLE / AUTHOR: Californians on the Move / Dr. Thomas Herman

California ACADEMIC STANDARDS / SUITABLE DISCIPLINES:

Historical and Social Science Analysis Skills

Grades K-5	Grades 6-8	Grades 9-12
Chronological and Spatial Thinking: 1. Students place key events and people of the historical era they are studying in a chronological sequence and within a spatial context; they interpret time lines. 3. Students explain how the present is connected to the past, identifying both similarities and differences between the two, and how some things change over time and some things stay the same. 4. Students use map and globe skills to determine the absolute locations of places and interpret information available through a map's or globe's legend, scale, and symbolic representations. 5. Students judge the significance of the relative location of a place (e.g., proximity to a harbor, on trade routes) and analyze how relative advantages or disadvantages can change over time.	**Chronological and Spatial Thinking:** 1. Students explain how major events are related to one another in time [and space]. 2. Students construct various time lines of key events, people, [locations], and periods of the historical era they are studying. 3. Students use a variety of maps and documents to identify physical and cultural features of neighborhoods, cities, states, and countries and to explain the historical migration of people, expansion and disintegration of empires, and the growth of economic systems. **Historical Interpretation**: 1. Students explain the central issues and problems from the past, placing people and events in a matrix of time and place. 2. Students understand and distinguish cause, effect, sequence, and correlation in historical events, including the long- and short-term causal relations. 3. Students explain the sources of historical continuity and how the combination of ideas and events explains the emergence of new patterns.	**Chronological and Spatial Thinking:** 3. Students use a variety of maps and documents to interpret human movement, including major patterns of domestic and international migration, changing environmental preferences and settlement patterns, the frictions that develop between population groups, and the diffusion of ideas, technological innovations, and goods. **Historical Research, Evidence, and Point of View:** 4. Students construct and test hypotheses; collect, evaluate, and employ information from multiple primary and secondary sources; and apply it in oral and written presentations. **Historical Interpretation:** 1. Students show the connections, causal and otherwise, between particular historical events and larger social, economic, [geographic], and political trends and developments. 2. Students recognize the complexity of historical causes and effects, including the limitations on determining cause and effect.

		5. Students analyze human modifications of landscapes and examine the resulting environmental policy issues.

Content Standards:

3rd Grade, Continuity and Change

- 3.1 Students describe the physical and human geography and use maps, tables, graphs, photographs, and charts to organize information about people, places, and environments in a spatial context.
- 3.3 Students draw from historical and community resources to organize the sequence of local historical events and describe how each period of settlement left its mark on the land.

4th Grade, California – A Changing State

- 4.1 Students demonstrate an understanding of the physical and human geographic features that define places and regions in California.
- 4.4 Students explain how California became an agricultural and industrial power, tracing the transformation of the California economy and its political and cultural development since the 1850s.

8th Grade, US History and Geography: Growth and Conflict

- 8.12 Students analyze the transformation of the American economy and the changing social and political conditions in the United States in response to the Industrial Revolution.

11th Grade, US History and Geography: Continuity and Change in the Twentieth Century

- 11.2 Students analyze the relationship among the rise of industrialization, largescale rural-to-urban migration, and massive immigration from Southern and Eastern Europe.

12th Grade Principles of American Democracy

- 12.6 Students evaluate issues regarding campaigns for national, state, and local elective offices.
  - 6. Analyze trends in voter turnout; the causes and effects of reapportionment and redistricting, with special attention to spatial districting and the rights of minorities; and the function of the Electoral College.

OBJECTIVES:

Participants will:

- Learn about major cities in California during three different historical periods to better understand changes in the state between statehood and the 21st century
- Practice using grids and cardinal directions to locate cities on a map of the state
- Practice using latitude and longitude lines (if appropriate for grade level)
- Analyze changes in the spatial patterns of settlement over time
- Discuss topics such as the census (source of data), physical features associated with settlements, distribution of resources in the state, economic activities, and implications of changes in population for political representation at various levels of government

RECOMMENDED GRADES: Fourth through adult

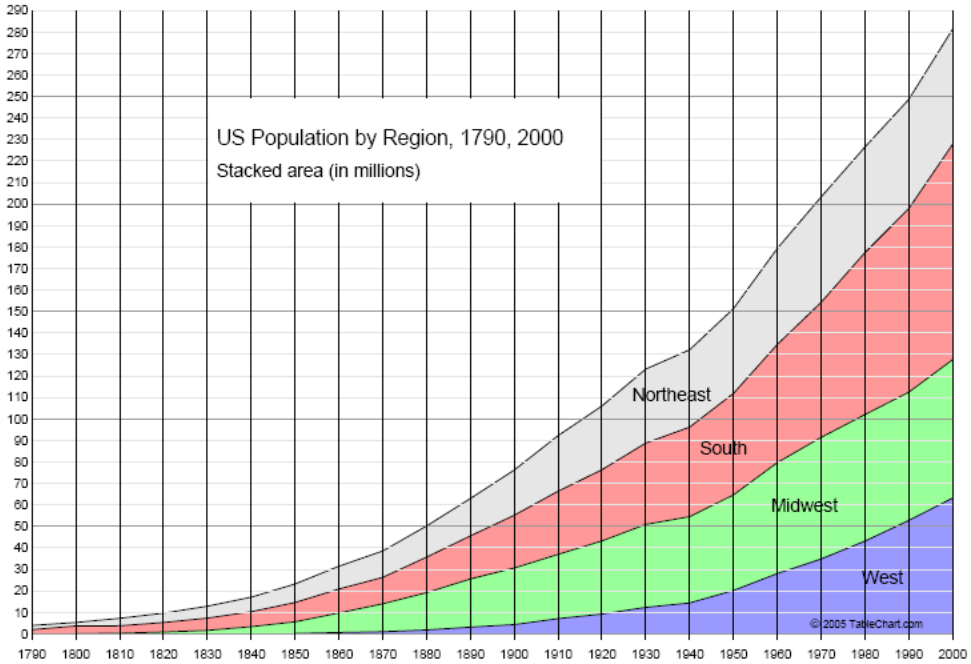
TIME NEEDED: 20 to 25 minutes, depending on whether discussion is held as part of the map visit or at a later time

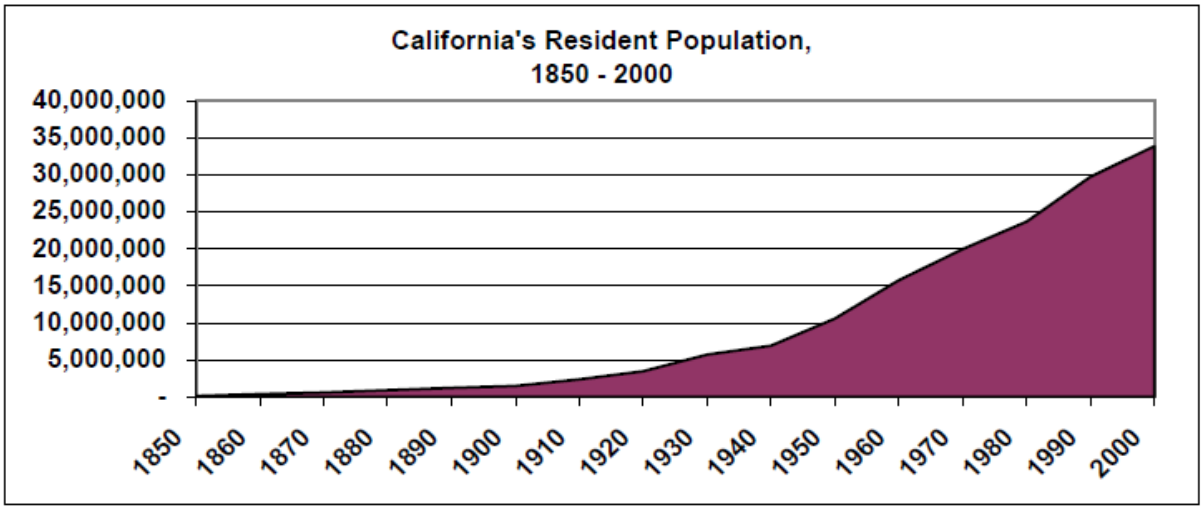
MATERIALS:

- Compass rose
- 3 sets of markers suitable for identifying city location on your map (15 in each set, with different color or symbol to differentiate sets)
- 3 to 4 plastic chains or colored string for dividing the state
- List of California cities by population for 1870, 1940, and 2010
- Assortment of evidence to analyze when attempting to predict settlement patterns for each time period

PREPARATION:

- Discuss: What makes a location good for a settlement? Why do people choose to live in the places in which they live, or to move from one place to another? Discuss how these factors may have changed over time based on technology shifts and a place's role in the national and global economy.
- Review the major eras in the political history of California: Native California, Spanish colonialism, Mexican independence, U.S. statehood. How might each era have generated different types of settlements in different types of locations?
- Review historical population patterns in California and try to answer questions such as How did California's population change over time? When did the growth rate appear to change? Where in the state did population growth first occur?
    - Look at 3 pieces of evidence: graph of population change by decade for US (by region); graph of population change by decade for California; animated map of population density change throughout US history (Visualizing 200 Years of US Population Density - https://www.visualcapitalist.com/visualizing-200-years-of-u-s-population-density/).





- Develop predictions by participants about where they think people might live in each time period: 1870, 1940, 2010. Bonus points for identifying trends in settlement patterns during each time period.
- Consider push and pull factors in migration.

RULES:

- Shoes are not allowed on the map. Please have participants remove shoes before walking on the map.
- No writing utensils on the map.
- No sliding on the map.

DIRECTIONS:

Using the list of cities and sets of location markers, participants will locate the fifteen most populous cities in California for the years 1870, 1940, and 2010. They will then look for trends based on the east/west axis, north/south axis, regions of the state, waterways adjacent to and within California, and defensive settlements from the 18th century. Encourage speculation about the factors that contributed to population development among the various regions of the state.

Before using the map:

1. Provide participants with an overview about exploring the top fifteen populated places in California in 1870, 1940, and 2010 using U.S. Census data as a source of information.
2. Ask participants about the kinds of jobs they imagine people were doing in California in 1870, 1940 and 2010. Refer to and discuss evidence included in Packet A. Ask them to predict where people might be living. (If needed, ask the participants to consider where they live and why? What does a location need for people to live there?)

On the map:

3. Take one set of 15 markers and pass them out to 15 of the participants (usually just ask them to take one and pass the remainder along).

4. Read the 15 largest cities for 1870 one at a time, going down the row of participants and asking the participants to place the marker on the dot identifying the town (star in the case of Sacramento).
5. Remind the participants that they can provide assistance to their classmates or colleagues about the location of a city based on cardinal directions or the grid. They should avoid shouting "over there", "this way", "left/right", etc. From the beginning of the lesson, model the use of cardinal directions or the grid. Students may use the compass. Place NSEW labels on the walls or around the map.
6. After the flat, round markers are all on the map, ask the participants to interpret the new information that has been added to the map. Remind them that this is similar to adding a layer to a geographic information systems map.
7. Move on to the 1940 census and ask participants what jobs people were doing then. Ask them to predict where people might be living.
8. Pass out the second set of markers. Assign individual participants to place their cones on the 15 cities. For cities in the top 15 list by population in both 1870 and 1940, have participants stack the markers in a way that keeps them both visible.
9. After the second set of markers are all on the map, repeat Item 6 above, asking participants to think about what has changed and why.
10. Repeat process with 2010 census data and final set of markers.
11. Discuss where most of the people live and why. Are the largest cities in the state becoming more widely distributed or more concentrated in certain areas? What areas of the state have no large settlements? Why? This is also an opportunity to review the concentration of people in the state in terms of electoral districts.

NOTES:
Review the Major Eras in California History for contextual information for the time periods highlighted in this lesson.

GUIDING QUESTIONS:

Q. What factors influence where people settle(d)?
A. Prior settlement and infrastructure (from Spanish colonial and Mexican periods), safety (avoidance of natural hazards and links to civilization and law enforcement), transportation routes (waterways, railroads, highways), physical geography (availability of water, building materials, minerals, arable land, etc.), economic opportunity (land ownership, mine claims, jobs)

Q. What opportunities brought people to California in the past and keep them here now? What was the state's economy like in 1870, 1940, and 2010? How might changes in the economy and in transportation technology have affected where people chose to settle and which cities grew the most? What functions did cities serve in each time period?

- Look at four pieces included in Evidence Packet: "Miners by Census Year," "California's Agricultural Development," "California Manufacturing Activity, 1859-1997," and "Projected Private Industry Job Growth, 2010-2020."

A. California's economy has transitioned from primary economic activities (mining and agriculture), to secondary economic activities (processing, manufacturing), to tertiary economic activities (services). This shift has been affected by changing transportation infrastructure which enabled California to become better connected and more economically integrated within U.S. and global contexts. Over time, California's people and

institutions have become a major resource enabling growth and leadership in technology, finance, and other advanced economic functions.

Q. How many of the fifteen largest cities can be reached by ship because they are located along a river, lake, or coastline in 1870? 1940? 2010?

A.

1870	1940	2010
12 (all but Santa Rosa, Gilroy, Placerville)	10 (Fresno and San Bernardino on rivers that are not navigable)	10

Q. Refer to the map of California regions above and estimate how many of the cities were in the each region? Are they spread evenly or grouped together?

A.

	1870	1940	2010
Shasta Cascade	0	0	0
Central Valley	4 (Sacramento, Stockton, Marysville, Placerville)	3 (Fresno)	2
Deserts	0	0	0
North Coast	8 (San Francisco, Oakland, San Jose, Santa Clara, Santa Rosa, Santa Cruz, Benicia, Gilroy)	4 (Berkeley)	4 (Fremont)
Central Coast	1 (Santa Barbara)	0	0
South Coast	2 (San Diego, Los Angeles)	8 (Long Beach, Glendale, Pasadena, Santa Monica, San Bernardino, Alhambra)	8 (Bakersfield, Anaheim, Santa Ana, Riverside, Chula Vista)

Q. For what reasons did this pattern exist?
A. Economic shifts and employment opportunities, transportation systems that enabled metropolitan regions to expand

Q. How did California compare with the rest of the United States?
A. In 1870, the population of all of California was 560,247, or 2.4% of the population of the United States at 23,191,876. California represented 6.7% of the country's population in 1940, and 12.1% in 2010.

	1870	1940	2010
California	560,247	6,907,387	37,253,956
United States	23,191,876	106,021,537	308,745,538

Q. How many cities in the new top fifteen in 1940 were also in the top fifteen in 1870? What percentage is that?
A. 7 , 47%

Q. How many cities in the new top fifteen in 2010 were also in the top fifteen in 1870? In 1940?
A. 1870: 47%, 7 of 15; 1940: 60%, 9 of 15

Q. Where are most of the large cities in California located in 2010? Why?
A. Along the Pacific coast. These locations offer the best transportation access and opportunities to interact with other locations around the globe. Trade, manufacturing, and services have become concentrated in these locations over time, meaning economic opportunities and jobs are concentrated here. The coastal environment also has a desirable climate and other characteristics that people value.

Q. Are major cities and suburbs significantly more concentrated than they were in 1940?
A. The largest cities were clustered in the North Coast region in 1870, with the Central valley having the second highest concentration. In 1940, and to an even greater extent in 2010, population shifted to the South Coast region. In 1870, each city on the list tended to be a central place for its own region. In later time periods new cities tended to spring up near older and larger cities, and suburban cities that are satellites of Los Angeles (e.g., Glendale, Pasadena, Anaheim) and San Francisco (e.g., Berkeley, Fremont) made the list of largest cities in the state.

Q. Generally speaking, how would you describe the majority of population movement and growth in the California over the past one hundred years?
A. Population shifted heavily towards the south over time and also became more coastal. Between 1870 and 1940, population became much more concentrated in a few large cities, with the top 15 accounting for 40% of population in 2810 and over 50% in 1940. This pattern reversed after 1940, with large numbers of people moving away from large cities into suburbs. In 2010, the 15 largest cities only accounted for 29% of the state's population, though it is important to understand that a few large metropolitan areas incorporating multiple cities continued to grow.

Q. Why? What factors have encouraged people to move and live in cities?
A. Jobs, with a shift from trade to manufacturing jobs and then later to service sector jobs. Also education and training, which are important to economic opportunity, are more available in large cities. Beyond economic factors, the technological advancements and cultural diversity of cities attracts residents from rural and suburban areas.

MODIFICATIONS:

For younger participants, focus on the mapping aspect and emphasize understanding of the map legend, compass rose, and use of directions. Explain how the evidence presented reflects historical shifts in California's economy and explain how the locations of cities in each time period reflects geographies of economic activity at that time.

For older participants, invite them to have more autonomy in the lesson and incorporate mathematical concepts. Encourage them to interpret the graphs and tables on their own and theorize about what this might suggest in terms of changes in population distribution and the growth and decline of specific types of settlements.

EXTENSIONS:

Consider using the census data in math lessons. How much larger is Los Angeles today than in 1870? How much larger is Los Angeles than the 15th largest city? How concentrated is the population in Los Angeles over time? How did the population of your city change?

For use with the GeoCivics activities (https://www.uccs.edu/geocivics/), invite participants to think about the current configuration of United States Congressional Districts in the state. Ask them to remember the key characteristics of how districts are drawn (equal population and contiguous). Invite them to pretend that their state has just two Congressional Districts; ask two people to pick up one of the chains and divide the state generally in half by population; invite two more people to divide the state into four districts (they may choose to move the original chain, or not). Discuss why some districts would likely be smaller in area than others. If appropriate, determine how to divide the state into state senate districts.

Consider when a giant floor map is a good tool for understanding geographic phenomena and when other tools (paper maps, online maps) might be more appropriate.

NOTE:

Thanks to National Geographic's Giant Traveling Maps team for the inspiration for this lesson, which is based on "People on the Move", a lesson for the North America Giant Map.

RESOURCES:

Information on California's counties and changes over time
[SOURCE: The Newberry Library, 2003
https://publications.newberry.org/ahcbp/documents/CA_Consolidated_Chronology.htm#Consolidated_Chronology]

Property in Land and Other Resources (info about mining)
https://www.lincolninst.edu/sites/default/files/pubfiles/gold-rush-legacy-minerals-knowledge-economy_0.pdf

"The Evolution of California's Agriculture, 1850-2000"

California Agriculture timeline

The Evolution of California Manufacturing

California's Economy

California representation in House of Representatives
https://thirty-thousand.org/pages/CA.htm

Evidence Packet A

Table 1. California's Agricultural Development

Year	No. of Farms	Land in Farms	Improved Land	Cropland Harvested	No. of Farms Irrigated	Irrigated Land	Ag. Labor Force
	(1,000)	*----------(1,000 Acres)----------*			*(1,000)*	*(1,000 Acres)*	*(1,000)*
1859	19	8,730	--	--	--	--	53
1869	24	11,427	6,218	--	--	60-100	69
1879	36	16,594	10,669	3,321	--	300-350	109
1889	53	21,427	12,223	5,289	14	1,004	145
1899	73	28,829	11,959	6,434	26	1,446	151
1909	88	27,931	11,390	4,924	39	2,664	212
1919	118	29,366	11,878	5,761	67	4,219	261
1929	136	30,443	11,465	6,549	86	4,747	332
1939	133	30,524	--	6,534	84	5,070	278
1949	137	36,613	--	7,957	91	6,599	304
1959	99	36,888	--	8,022	74	7,396	284
1969	78	35,328	--	7,649	51	7,240	240
1978	73	32,727	--	8,804	56	8,505	311
1987	83	30,598	--	7,676	59	7,596	416
1997	74	27,699	--	8,543	56	8,713	260

Sources: Taylor and Vasey, "Historical Background," in Rhode, 1995.

U.S. Bureau of the Census: *Fifteenth Census 1930*, Vol. 4; *Census of Agriculture 1959*, California, Vol. 1, Part 48; *1980 Census of Population*, California, Vol. 1, Part 6; *Census of Agriculture 1997*, California, downloaded from http://www.nass.usda.gov/census/census97/volume1/ca-5/ca1_01.pdf; *1990 Census of Population*, California, Section 1; *2000 Census*, "Industry by Sex : 2000 Data Set: Census 2000 Summary File 3 (SF 3)—Sample Data" downloaded at http://factfinder.census.gov.

Thomas Weiss, Unpublished data.

Table 3.1

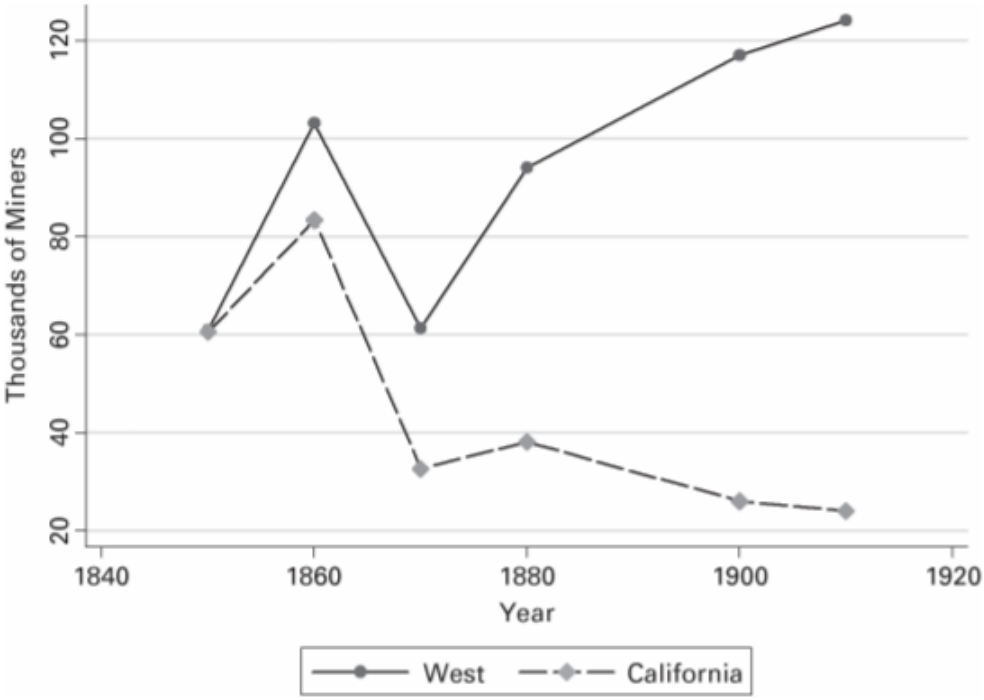
California Manufacturing Activity, 1859–1997

Year	No. of Establishments	No. Employed	Payrolls	No. of Production Workers	Hours Worked	Wages	Value Added
1859	1,218	—	—	6,052	—	5,047	10,792
1869	2,763	—	—	21,890	—	10,727	26,457
1879	4,231	—	—	39,525	—	18,427	38,510
1889	4,695	65,828	38,444	58,286	—	31,049	74,657
1899	6,443	78,995	43,301	71,976	—	35,954	74,328
1899'	4,925	78,112	42,721	71,559	—	35,867	86,940
1904	6,755	101,871	70,868	90,404	—	57,267	114,739
1909	7,522	127,348	94,319	102,386	—	72,664	187,173
1914	9,446	155,906	123,951	121,983	—	90,918	240,382
1919	10,155	265,275	338,757	217,312	—	268,033	705,859
1921	8,502	213,629	317,381	177,398	—	242,082	591,175
1923	9,047	267,135	405,753	220,260	—	309,357	849,444
1925	9,433	—	—	227,567	—	315,425	880,320
1927	9,863	—	—	237,520	—	335,082	964,627
1929	11,839	317,469	503,364	264,418	—	375,749	1,198,079
1931	9,956	—	—	192,970	—	250,692	772,279
1933	8,334	—	—	181,138	—	180,149	594,620
1935	10,345	284,096	358,120	239,101	—	265,645	808,130
1937	10,861	358,083	503,735	302,189	—	389,132	1,091,597
1939	11,558	357,098	533,744	271,290	—	358,734	1,122,545
1947	17,648	663,872	2,064,523	530,283	1,070,270	1,519,255	3,994,981
1954	24,509	1,053,255	4,807,399	773,686	1,534,909	3,151,410	8,597,453
1958	28,735	1,217,300	6,876,300	838,671	1,656,700	4,107,200	12,048,000
1963	32,201	1,397,600	9,612,200	897,500	1,791,400	5,195,200	17,185,000
1967	31,962	1,583,500	12,514,500	1,044,900	2,089,700	6,877,800	23,393,600
1972	35,699	1,545,100	15,483,100	1,020,000	1,974,900	8,430,400	31,175,200
1977	45,289	1,751,500	24,671,500	1,142,600	2,224,200	13,150,500	54,862,400
1982	47,625	2,004,800	42,636,400	1,209,400	2,317,900	20,564,800	94,374,000
1987	49,935	2,103,400	57,133,600	1,276,200	2,432,500	25,694,100	132,403,500
1992	50,478	1,946,700	65,243,700	1,114,900	2,248,700	26,862,500	156,937,400
1997	49,079	1,870,016	—	1,193,550	—	—	204,119,356

NOTE: 1997 number of establishments and number employed exclude central administrative offices. Payroll, wages, and value added are in thousands of current dollars. 1899 and earlier figures include custom operations; 1899' and later figures exclude them.

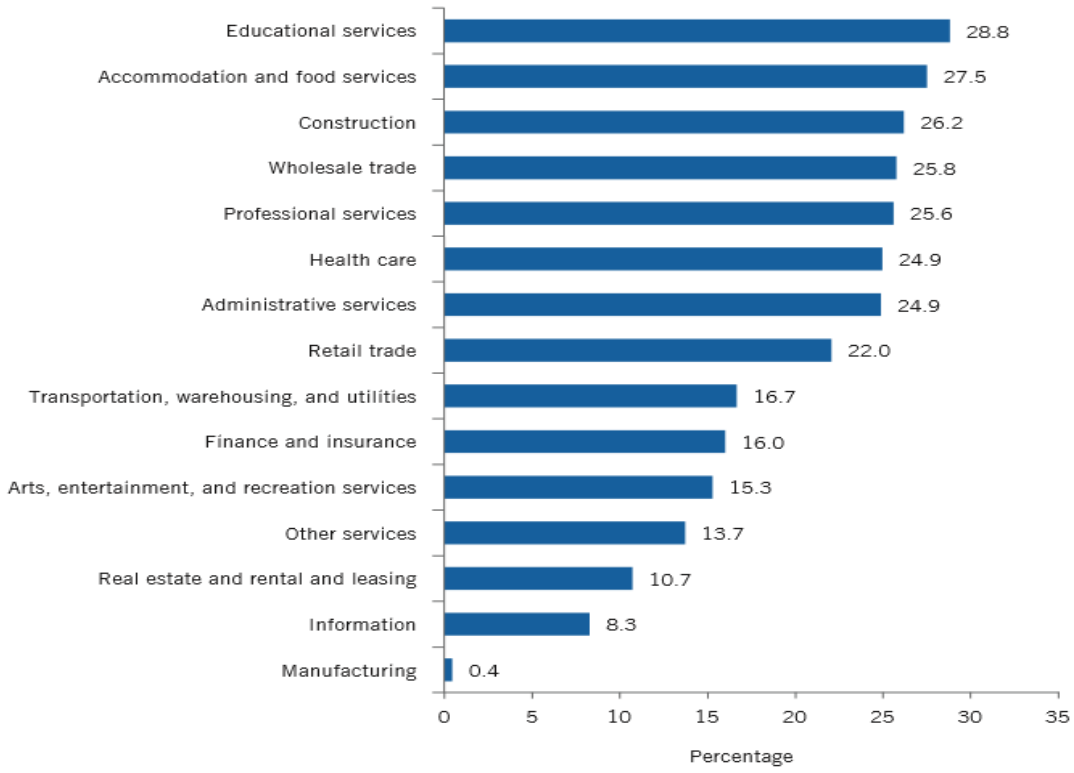
FIGURE 3.1

Miners by Census Year



SOURCE: Authors' calculations based on the 1850–1910 public use samples of the census of population's occupation variable.

PROJECTED PRIVATE SECTOR INDUSTRY GROWTH, 2010–2020



SOURCE: California Employment Development Department.
NOTE: Employment growth projections for private sector only.

Largest Cities in California in 1870, 1940, 2010, and 2020 (US Census data)

	City	1870	√		City	1940	√		City	2010	√
	State	**560,247**			**State**	**6,907,387**			**State**	**37,253,956**	
1	San Francisco (capital 1862)	149,473		1	Los Angeles	1,504,277		1	Los Angeles	3,792,621	
2	Sacramento (capital)	16,283		2	San Francisco	634,536		2	San Diego	1,307,402	
3	Oakland	10,500		3	Oakland	302,163		3	San Jose	945,942	
4	Stockton	10,066		4	San Diego	203,341		4	San Francisco	805,235	
5	San Jose (capital 1849-51)	9,089		5	Long Beach	164,271		5	Fresno	494,665	
6	Los Angeles	5,728		6	Sacramento	105,958		6	Sacramento	466,488	
7	Marysville	4,738		7	Berkeley	85,547		7	Long Beach	462,257	
8	Santa Barbara	4,255		8	Glendale	82,582		8	Oakland	390,724	
9	Santa Clara	3,469		9	Pasadena	81,864		9	Bakersfield	347,483	
10	Santa Rosa	2,898		10	San Jose	68,457		10	Anaheim	336,265	
11	Santa Cruz	2,561		11	Fresno	60,685		11	Santa Ana	324,526	
12	San Diego	2,300		12	Stockton	54,714		12	Riverside	303,871	
13	Benicia (capital 1853-54)	1,656		13	Santa Monica	53,500		13	Stockton	291,707	
14	Gilroy	1,625		14	San Bernardino	43,646		14	Chula Vista	243,916	
15	Placerville	1,562		15	Alhambra	38,935		15	Fremont	214,089	

	City	2020*	√
	California	**39,538,223**	
1	Los Angeles	3,898,747	
2	San Diego	1,386,932	
3	San Jose	1,013,240	
4	San Francisco	873,965	
5	Fresno	542,107	
6	Sacramento	524,943	
7	Long Beach	466,742	
8	Oakland	440,646	
9	Bakersfield	403,455	
10	Anaheim	346,824	
11	Stockton	320,804	
12	Riverside	314,998	
13	Santa Ana	310,227	
14	Irvine	307,670	
15	Chula Vista	275,487	

*2020 Census data is from Redistricting Data Hub using the State and Place level PL 94-171 datasets.
https://redistrictingdatahub.org/data/download-data/#state-menu