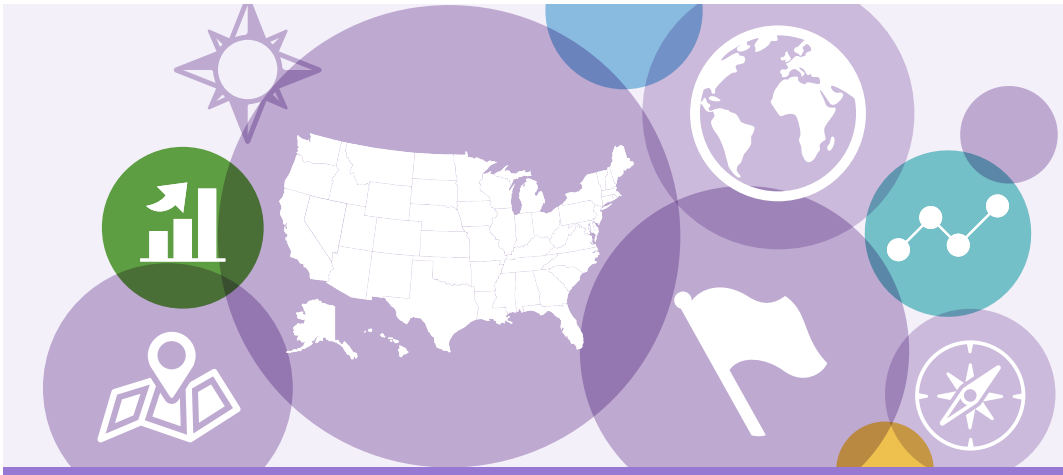

STUDENT VERSION

PHOTO HUNT: EXAMINING CHANGES TO THE ENVIRONMENT THROUGH PICTURES AND DATA

Activity Items

The following items are part of this activity. The items and their sources appear at the end of this student version.

- Item 1: New York City, NY
- Item 2: Salt Lake City, UT
- Item 3: Laguna Beach, CA
- Item 4: Niagara Falls, NY

Student Learning Objectives

- I will be able to describe changes I see in photographs of the same location or landmark taken in different years.
- I will be able to explain how population changes and other factors affect the environment.

NAME:_____ DATE:_____

Human beings are constantly changing the environment in which we live. We cut down trees to make room for buildings, we convert open fields to baseball fields, we pour pavement over dirt roads, and more. Let's look at the changes that have occurred in four different locations across the United States—landmarks in a large city, medium city, and in two small cities—by examining photos of the same landmark from different time periods.

Large City

First, look at a photo of Times Square from 1903 and one of the same area from around 2012.

Photo 1: Times Square 1903

Photo 2: Times Square 2012

1. What changes do you notice?

2. Examine the Census Bureau data in **Item 1: New York City, NY**, which shows the numbers of houses and businesses in New York City and the population of the city in years close to when the photos were taken. The Census Bureau collects data on the number of houses and population once every 10 years, through the decennial census, so that's why those numbers in the second column are from 2010 and not 2012. What changes do you notice in the data from the first column to the second?

3. Think about the data that you saw in the table and the photos. How do you think the changes in the data points may have affected the way that Times Square looked between 1903 and 2012?

Medium City

Now let's examine two photos from Utah of the Saltair Pavilion in 1900 and in the mid-1920s. The Saltair Pavilion had a dance floor, concerts, rides, a boardwalk, and more for young people and families. The pavilion shown in Photo 1 burned down in 1925; Photo 2 shows a rebuilt version.

Photo 1: Saltair Pavilion 1900

Photo 2: Saltair Pavilion mid-1920s

4. What changes do you notice between the two photos?

5. Examine the Census Bureau data in **Item 2: Salt Lake City, UT**, which shows the numbers of houses and businesses in Salt Lake City (right around where the Saltair Pavilion is located) and the population of the city in different years. What changes do you notice in the data between the two time periods?

6. Think about the data that you saw in the table and the photos. How do you think the changes in the data points may have affected the way that the Saltair Pavilion looked between 1900 and the 1920s?

Small City 1

Now let's look at two photos of the beach in Laguna Beach, California—one from 1910 and the other from 2015.

Photo 1: Laguna Beach 1910

Photo 2: Laguna Beach 2015

7. What changes do you notice?

8. Examine the Census Bureau data in **Item 3: Laguna Beach, CA**, which shows the numbers of houses and businesses in Laguna Beach and the population of the city in years close to when the photos were taken. It should be noted that historical data on Laguna Beach were not available in 1910 because at that time the area was not officially recognized as a city. Also, as noted earlier in this activity, the Census Bureau collects data on the number of houses and population once every 10 years, through the decennial census, so that's why those numbers in the second column are from 2010. What changes do you notice in the data between the two time periods?

9. Think about the data that you saw in the table and the photos. How do you think the changes in the data points may have affected the way that Laguna Beach looked between 1910 and 2015?

Small City 2

Now let's examine two photos from New York state's Niagara Falls waterfalls in 1886 and 2015. (Niagara Falls is both a city in New York and the name of the waterfalls!)

Photo 1: Niagara Falls Waterfalls 1886

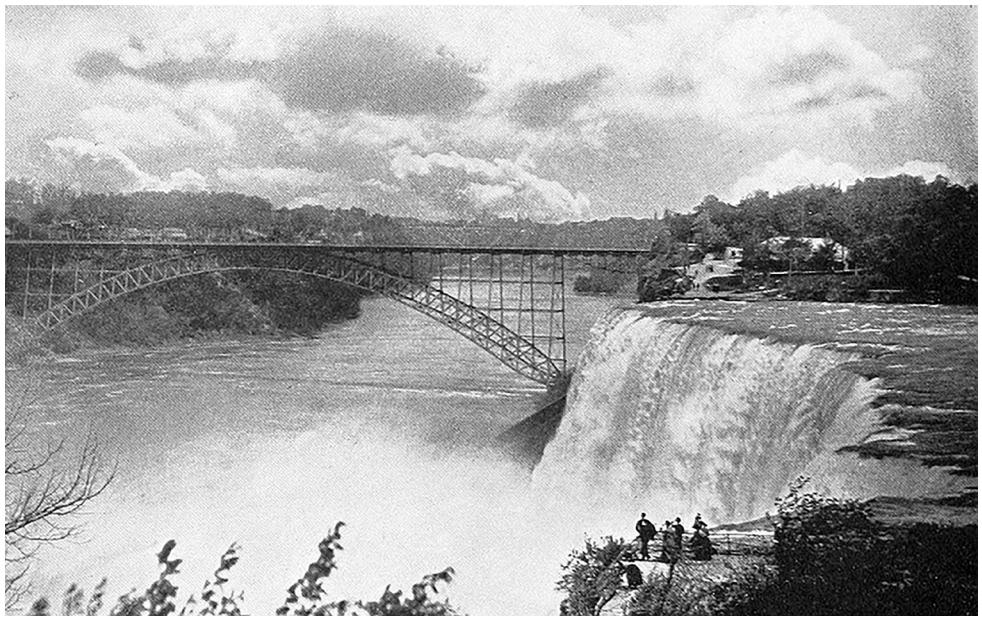

Photo 2: Niagara Falls Waterfalls 2015

10. What changes do you notice?

11. Examine the Census Bureau data in **Item 4: Niagara Falls, NY**, which shows the numbers of houses and businesses in the city of Niagara Falls and the population of the city in years around the times the photos were taken. (As with earlier data tables used in this activity, the data shown here are for the closest years that data were available. Although the data don't match up exactly, they can still give us a great picture of what life was like then!) What changes do you notice in the data between the two time periods?

Drawing Conclusions

12.

a. Fill in the blanks: What are some possible problems that can happen in the environment when humans modify, or make changes to, the physical environment in a particular area?

When humans cut down trees, _____.

When humans build more roads and buildings, _____

_____.

b. What are some possible benefits to the environment that can result when humans modify the physical environment in a particular area?

13. What are some other factors (aside from an increase in population) that can result in the changes you have seen in any of these photos?

14. Think about the changes you have seen in the photos. Now, imagine that your local government is considering building a new road, water park, or shopping center in your community. Fill in the table below with your predictions for how each of these would change the physical environment of the area (positively or negatively).

New construction	Impact on physical environment
New road	
Water park	
Shopping center	

Item 1: New York City, NY

Category	Historical Data	Current Data
Number of houses	249,991 (1900)	3,371,062 (2010)
Number of businesses	39,776* (1900)	1,050,911 (2012)
Population	3,437,202 (1900)	8,175,133 (2010)

**Business data in 1900 count only manufacturers (companies who create products), not all retail or service businesses.*

Data Sources:

Historical data: Twelfth Census of the United States – 1900, U.S. Census Bureau. Volume II: Population Part II and Volume VIII: Manufactures Part II, States and Territories.

2010 housing data:

https://data.census.gov/cedsci/table?g=1600000US3651000&text=h1&y=2010&hidePreview=true

2012 business data:

https://data.census.gov/cedsci/table?

g=E600000US3600051000&y=2012&text=SB1200CSA01&hidePreview=true

2010 population data:

https://data.census.gov/cedsci/table?g=1600000US3651000&text=p1&y=2010&hidePreview=true

Item 2: Salt Lake City, UT

Category	1900 Historical Data	1920 Historical Data
Number of houses	10,233	23,685
Number of businesses	432*	415*
Population	53,531	118,110

**Business data in 1900 and 1920 count only manufacturers (companies who create products), not all retail or service businesses.*

Data Sources:

1900 historical data: Twelfth Census of the United States – 1900, U.S. Census Bureau. Volume II: Population Part II and Volume VIII: Manufactures Part II, States and Territories.

1920 historical data: Fourteenth Census of the United States – 1920, U.S. Census Bureau. Volume II: Population, Composition and Characteristics of the Population by States and Volume IX: Manufactures, Reports for State with Statistics for Principal Cities.

Item 3: Laguna Beach, CA

Category	Historical Data	Current Data
Number of houses	131 (1920)	12,923 (2010)
Number of businesses	9* (1918)	4,944 (2012)
Population	363 (1920)	22,723 (2010)

**This number reflects only retail businesses, as there were no manufacturing or fully service-oriented businesses in Laguna Beach in 1918.*

Data Sources:

Historical housing and population data: 1920 Decennial Census Schedules.

Historical business data: 1918 Orange County Phone Book, Laguna Beach Public Library.

2010 housing data:

https://data.census.gov/cedsci/table?g=1600000US0639178&text=h1&y=2010&hidePreview=true

2012 business data:

https://data.census.gov/cedsci/table?

g=E600000US0605939178&y=2012&text=SB1200CSA01&hidePreview=true

2010 population data:

https://data.census.gov/cedsci/table?g=1600000US0639178&text=p1&y=2010&hidePreview=true

Item 4: Niagara Falls, NY

Category	Historical Data	Current Data
Number of houses	3,698 (1900)	26,220 (2010)
Number of businesses	265* (1900)	2,467 (2012)
Population	19,457 (1900)	50,193 (2010)

**Business data in 1900 count only manufacturers (companies who create products), not all retail or service businesses.*

Data Sources:

Historical housing data: 1900 Decennial Census Schedules.

Historical population and business data: Twelfth Census of the United States – 1900, U.S. Census Bureau. Volume II: Population Part II and Volume VIII: Manufactures Part II, States and Territories.

2010 housing data:

https://data.census.gov/cedsci/table?g=1600000US3651055&text=h1&y=2010&hidePreview=true

2012 business data:

https://data.census.gov/cedsci/table?

g=E600000US3606351055&y=2012&text=SB1200CSA01&hidePreview=true

2010 population data:

https://data.census.gov/cedsci/table?g=1600000US3651055&text=p1&y=2010&hidePreview=true