Learning Objective

Students will analyze primary source documents in order to draw conclusions about the past and conduct research to explain how technology has changed over time. Students will also be able to describe the creation of the country’s first professional fire department.

Video Synopsis

In this Our Ohio heritage segment, students will visit the Cincinnati Fire Museum to learn about the first professional fire department in the country as well as innovations that made fighting fires more efficient.

Teacher Background

On April 1, 1853, the Cincinnati City Council established the first professional and fully-paid fire department in the United States. Miles Greenwood, co-inventor of the first practical steam fire engine, served as the department’s first chief. Until that time, the city had relied on volunteer fire fighters to battle blazes. In the early days fire fighting was tedious and slow. Bucket brigade volunteers would form a line starting at the water supply that extended to the scene of the fire, passing water-filled buckets from person to person.

Early fire fighting became much less arduous with the introduction of the Hunneman Pumper, an innovation that directed a one hundred thirty foot stream of water at its target. Though it took twelve men to pump, it was a dramatic improvement over its predecessor.

Even with technological innovations like the pumper, fifty to one hundred men were still required on the scene of the fire. Moreover, not all volunteers were paid by the property owners or insurance companies. Those arriving first to the scene were the only volunteers likely to get paid for their services. This led to clashes and brawls amongst the volunteers as they all competed to be the first to reach the fire.

Things began to change in 1852 when a devastating fire occurred at the Miles Greenwood Ironworks. The fire, which destroyed most of the business, led Greenwood to look for ways to fight fires more effectively. Greenwood and two other Cincinnatians began constructing the first practical steam-powered fire engine, greatly improving upon earlier, largely ineffective attempts. The three men demonstrated the fire engine to the Cincinnati City Council. Shortly after, In April of 1853, the council passed an ordinance establishing a professional fire fighting organization in the city. With its steam powered engine and paid fire fighters, the Cincinnati department provided a model for other cities across the country as they created their own fire departments.
## Ohio Academic Content Standards

### Grade 3

**History**

*Growth*

3. Describe changes in the community over time including changes in:
   - G. Technology

**Social Studies Skills and Methods**

*Obtaining Information*

1. Obtain information about local issues from a variety of sources including:
   - B. Photos;
   - F. Artifacts;
   - G. Documents.

### Grade 4

**Social Studies Skills and Methods**

*Obtaining Information*

1. Obtain information about state issues from a variety of print and electronic sources, and determine the relevance of information to a research topic:
   - E. Multimedia/Electronic sources.

2. Use a glossary and index to locate information.

3. Use primary and secondary sources to answer questions about Ohio history.

### Grade 5

**Social Studies Skills and Methods**

*Obtaining Information*

3. Differentiate between primary and secondary sources.

**Thinking and Organizing**

6. Draw inferences from relevant information.
Instructional Procedure
(3-4 class periods)

The Cincinnati Fire Museum: What I Learned
1. Start by asking students if they know how fires were fought before the days of fire trucks. Explain that before fire engines, people used to fight fires using buckets of water.

2. Now ask students if they know what the term “professional” means. Define the term, and then ask if students knew that the first professional fire department was founded in Cincinnati, Ohio.

3. Next, tell students that they will be watching a short video where they will hear from a curator at the Cincinnati Fire Museum to learn about the history of the fire department and fire fighting innovations.

4. Distribute the worksheet *The Cincinnati Fire Museum: What I Learned* and have students complete the graphic organizer while watching the video.

5. After watching the video, review the worksheets together as a class. Ask students for examples of some of the technological innovations that made fighting fires more effective and efficient (e.g. steam powered fire engine)

Photograph Analysis
1. Begin by asking students if photographs are primary or secondary sources. Ask them to explain why photographs are primary sources.

2. Next ask students to describe some of the information we can learn about a time, place, person, etc. by examining photographs.

3. Now, tell students that they will be examining two historic photographs to see what conclusions they can draw by looking closely at them. The photographs both depict fire departments from the past.

4. Organize students into groups of two to three and distribute the two *Photograph Analysis* worksheets. Each student in a group should have a copy. Students will first examine each image and make observations.

5. Instruct the class to complete the worksheet and then wait till their classmates have all finished to review.
Compare and Contrast
1. Now that students have finished analyzing each photograph individually they will compare and contrast the two images to identify differences and similarities between the two and arrive at conclusions about which photograph they think is older.

2. Distribute the Compare and Contrast Worksheet to the groups. Once all groups are finished go over the answers as a class.

3. Now, ask students which photograph they think is older. Photograph 2 is in fact older by approximately twenty three years. Now, ask students why they decided this was the older photograph. (most will likely say because of the horse drawn fire engine)

4. Next, draw their attention back to photograph 1 and instruct them to look at the far left edge of the picture. Ask them what they see (the head of a horse and carriage wheel) What does this tell them? (that horses were still in use at the time of photograph 1 and that they could not be certain that photo 2 is the older based on this info alone)

5. Now, discuss some of the other ways we could date these photos. Clothing style, style of carriage, the type of fire engine, buildings, and, if we had the original photograph, experts could even analyze the photo paper to determine which is older.

Technology Then and Now
1. Start by asking students to think about the video they watched about the Cincinnati Fire Department. Ask students to think about how the way we fight fires changed over the years.

2. Next explain that as things change over time we must find ways to adapt to them. For example, before the nineteenth century hardly any buildings were taller than six stories. After 1890, buildings became skyscrapers by becoming over 20 stories tall.

3. Now, ask students how good of a job the Hunneman pumper, whose water stream could reach 130 feet, would have done fighting a skyscraper fire. (skyscrapers are at minimum 200 feet tall)

4. Explain that since the old fire engines just would not get the job done, people had to innovate and come up with a new design that would meet the need of our changing society.

5. Now, let students know they will be conducting research in the library using books and the internet to find out how some of the activities we still do today differ from the past.

6. Distribute the Technology Then and Now worksheets and have students complete either individually or working in small groups.
The Cincinnati Fire Museum: What I Learned

1. It was the first Professional Fire Department in the United States.
2. They had to hurry to be first in order to get paid.
3. The firemen rioted at the scene of a fire causing the lumber yard to be destroyed.
4. The drum was used to warn people that a fire was happening.
5. They all had to have two buckets and help put out fires.

Photograph Analysis: Photograph 1

1. People: four men on the fire truck and one person walking in the background. Things: There are 3-4 stone buildings visible, a fire truck, a carriage wheel is present in the corner. There are several trees and some kind of utility pole. Activities: the men in the picture are posing on the fire truck.
2. It is probably summer because the trees are in full leaf, but it could be early fall.
3. It is a fire truck and the word “hose” is written on the side.
4. The people in the picture are probably firemen. They are on a fire truck and are in uniform. They are all men.
5. The photo is outdoors and appears to be in a city.
6. The photo was taken as a group commemorative photo similar to class photos.

Photograph Analysis: Photograph 2

1. People: Eight people appear in the photo. A few appear to be quite young. Things: There is a building that might be a barn, a horse drawn fire engine, and a few trees. Activities: They are all posing in the photo on the fire engine.
2. It looks like winter, or maybe early spring because there are no leaves.
3. The vehicle is a horse drawn fire engine.
4. They are probably fire fighters. They are all male, some of them are young and could be children, pre-teens or teenagers.
5. The photo was taken outside. It looks like the country because of the muddy ground, but this is not certain.
6. The photo was taken as a group commemorative photo similar to class photos.

Compare and Contrast

1. Camera that uses film, because it is an older photo.
2. One of the streets is paved and the other isn’t • The seasons are different • The fire trucks are different • There are more people in one photo • Their clothes are different • The settings are different (other examples are possible)
3. The fire engine that is an actual truck would likely be better because it includes the most recent technology.
4. Similarities are that they are both pictures of fire fighters, they are all in uniform, and are posing for a group photo. The photos are both taken outdoors. (other examples are possible)
5. Photograph 1 dates to 1913 and Photograph 2 dates to 1890

Technology Then and Now

Fighting Fires
Then: buckets, steam fire engines
Now: Modern Fire Trucks with ladders and far water range

Communicating with mom in another state
Then: Letters, Telegraph
Now: Phone, email, letters, text message, instant message etc.

Traveling Long Distances
Then: Horseback, train, boat, carriage
Now: Cars, buses, airplanes

Cooking Food
Then: Hearth, coal stove, etc.
Now: Microwave, electric and gas stoves.
The Cincinnati Fire Museum: What I Learned

NAME: ___________________________    DATE: ______________________

Instructions: Read all of the boxes in the Find Out column below. Fill in the correct answers in the What I Learned column while watching the video The Cincinnati Fire Museum.

<table>
<thead>
<tr>
<th>FIND OUT</th>
<th>WHAT I LEARNED</th>
</tr>
</thead>
<tbody>
<tr>
<td>What makes the Fire Department in Cincinnati special?</td>
<td></td>
</tr>
<tr>
<td>Why did the volunteer fire fighters have to hurry to the fire?</td>
<td></td>
</tr>
<tr>
<td>What happened in 1853?</td>
<td></td>
</tr>
<tr>
<td>What was the giant drum used for?</td>
<td></td>
</tr>
<tr>
<td>What did all the men between 15 and 50 years old have to do before the professional fire department was created?</td>
<td></td>
</tr>
</tbody>
</table>
Photograph Analysis

NAME:__________________________    DATE:____________________

Instructions: Look closely at the photograph for one to two minutes. Use the information in the photograph to answer the questions below. Hint: To help see details in the image, look at the photograph in sections of four.

Photograph 1

Find the original online at:
http://www.cincinnatimemory.org
Photograph Analysis

NAME: ________________________    DATE: ______________________

Instructions: Look closely at the photograph for one to two minutes. Use the information in the photograph to answer the questions below. Hint: To help see details in the image, look at the photograph in sections of four.

1. Start by listing the people, things, and activities in the photograph.
   people: ________________________________________________________________
   things (buildings, trees, cars etc.): ___________________________________________
   activities: __________________________________________________________________

2. Look closely at the picture, what season do you think it is and why?
   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________

3. What kind of vehicle is pictured in the photograph and what is written on the side?
   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________

4. Describe the people in the picture. Who do you think they are and why? Are there men, women, and children?
   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________

5. Describe the place the photo was taken. Was the photo taken indoors or outdoors? Is it in a city or in the country? How can you tell?
   _______________________________________________________________________
   _______________________________________________________________________

6. Look closely at the picture again. Why do you think this photograph was taken?
   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________
Photograph Analysis

NAME: ___________________________ DATE: ______________________

Instructions: Look closely at the photograph for one to two minutes. Use the information in the photograph to answer the questions below. Hint: To help see details in the image, look at the photograph in sections of four.

![Photograph 2](http://www.cincinnatimemory.org)

Courtesy of The Cincinnati Public Library

Photograph 2

Find the original online at:

http://www.cincinnatimemory.org
Photograph Analysis

NAME: ___________________________    DATE: __________________________

Instructions: Look closely at the photograph for one to two minutes. Use the information in the photograph to answer the questions below. Hint: To help see details in the image, look at the photograph in sections of four.

1. Start by listing the people, things, and activities in the photograph.
   people: ________________________________________________________________
   things (buildings, trees, cars etc.): _______________________________________
   activities: _____________________________________________________________

2. Look closely at the picture, what season do you think it is and why?
   _____________________________________________________________________
   _____________________________________________________________________
   _____________________________________________________________________

3. What kind of vehicle is pictured in the photograph?
   _____________________________________________________________________
   _____________________________________________________________________
   _____________________________________________________________________

4. Describe the people in the picture. Who do you think they are and why? Are there men, women, and children?
   _____________________________________________________________________
   _____________________________________________________________________
   _____________________________________________________________________
   _____________________________________________________________________

5. Describe the place the photo was taken. Was the photo taken indoors or outdoors? Is it in a city or in the country? How can you tell?
   _____________________________________________________________________
   _____________________________________________________________________
   _____________________________________________________________________
   _____________________________________________________________________

6. Look closely at the picture again. Why do you think this photograph was taken?
   _____________________________________________________________________
   _____________________________________________________________________
   _____________________________________________________________________
   _____________________________________________________________________
Compare and Contrast

NAME: ___________________________ DATE: _____________________

Instructions: Now that you have finished analyzing the photographs individually, look at the images side by side to compare and contrast and answer the questions that follow.

Word Bank

analyze: to study, consider, and look at closely
film: a thin sheet of plastic like substance with light sensitive particles used for taking photographs

With what do you think each picture was taken and why?
______________________________________________________________________
______________________________________________________________________

Look closely at each photo and compare and contrast. List at least six things that are different about each picture.

1. _______________________________________________________________
2. _______________________________________________________________
3. _______________________________________________________________
4. _______________________________________________________________
5. _______________________________________________________________
6. _______________________________________________________________
Compare and Contrast

NAME:__________________________    DATE:____________________

Instructions: Now that you have finished analyzing the photographs individually, look at the images side by side to compare and contrast and answer the questions that follow.

3. Look at the two fire engines in each photograph. Which do you think would be better at fighting fires and why?

______________________________________________________________________

______________________________________________________________________

4. What are some of the similarities in the photos? List at least three things.

1. _______________________________________________________________

2. _______________________________________________________________

3. _______________________________________________________________

5. Now, think about the differences and similarities between photograph 1 and photograph 2. Now, decide which picture was taken earlier and explain why you think so.

Oldest Picture:

______________________________________________________________________

______________________________________________________________________

Why I think it’s older:

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________
Technology Then and Now

Instructions: Below are listed four activities that we still do today. Conduct research in the library using books and the internet to find out how people used to do the following tasks in the 1800s. Then, fill out the appropriate information for each column.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>THEN</th>
<th>NOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fighting Fires</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communicating with your mother in another state</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traveling Long Distances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooking Food</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>