

Firefighting in the 1600-1700's and the Bucket Brigade

These classroom activities are designed to provide elementary school teachers K-2 with lessons that teach or reinforce selected Social Studies and English Language Arts standards using The FASNY Museum of Firefighting's online collections.

Summary

Students will explore the role of citizen-volunteers in firefighting during the 1600 and 1700s. Students will gain insight to firefighting and the involvement of citizens in colonial New York. Firefighting in colonial New York relied on all citizens to be alert to fire prevention and to be active to the call of duty of fighting fires. If fires were not extinguished quickly, a conflagration could result. Entire communities could suffer the loss of their dwellings and all their belongings. A conflagration could put existence in peril. There were no relief agencies at that time.

An optional bucket brigade activity will offer an opportunity for them to will work as firefighting citizens and extinguish a "structure fire".

Background to Firefighting in the 1600-1700's

In 1609, the Dutch founded the colony of New Netherland on land that is part of present-day New York. Fire was a terrible danger for early settlers in America. Homes were constructed such as thatch (dried plant materials.) These types of materials burned very quickly once on fire. They even had wood and mud chimney!. The fireplace was used daily for cooking and for warmth when necessary.

Governor Peter Stuyvesant instituted many laws related to fire safety and prevention that greatly benefited the colonists. In 1648, he appointed four fire wardens to inspect the chimneys of the homes in New Netherland. These fire wardens would fine offenders if their chimneys were not clean. This was the first fire prevention act passed in what would later become the U.S.A. Stuyvesant also established fire prevention criteria for the building of new homes, such as a ban on wooden chimneys. Another law passed imposed a fine for carelessness if a homeowner's house caught fire. These fines were used to purchase fire buckets and ladders, which were placed around the colony, adding to the colony's fire protection. He also appointed eight men to patrol at night and look for fires and assist with putting them out. These men were often called the "the rattle watch" because of the wooden rattles they carried to sound the alarm if they saw a fire. The appointment of these men made Peter Stuyvesant the organizer of the first volunteer firemen in what would later become the U.S.A.

When a fire occurred people used a bucket brigade to pass water buckets from the water source to the site of a fire. The buckets were made of leather and were hand sewn. After a fire the buckets needed to be retrieved; the owner's name or initials would identify the owner. A fine was imposed if the homeowner did not have a bucket ready at their door.

In the early 1700's the Newsham Pumper, the first mobile fire engine, could send a continuous stream of water out at great force. The water was supplied by the bucket brigade. Human power was used to transport hand engines and operate them.

The typical dress (everyday clothes) of a volunteer firefighter during the 1700's, wide sleeves and tri-corner hat, gave the firefighter little protection. Speaking trumpets were

used to shout orders to other firefighters. As towns grew in size and buildings became taller and larger, bigger hand pumpers were needed

As a fire was being fought, the furnishings and house wares would be salvaged. Everything was handmade, and if lost in a fire, replacing these items would be very expensive. A tool called a bed key was used to dismantle the bed, as it wouldn't go through the door in one piece and was usually the most expensive piece of furniture a person owned.

Materials:

- Images of fire fighting apparatus and objects from the 1600-1700's from the online image gallery of the FASNY Firefighting Museum.
- Optional bucket brigade material listed below

Procedure:

Introduction

Part I – How was early America “built to burn?”

- **Using images from the online exhibit ask students why fires were common in the early American settlements:**

1. The materials used in house construction were highly flammable.
2. Towns were crowded and houses were built close together so a fire in one home would spread quickly to others.
3. Open fireplaces in homes and buildings meant sparks and embers could easily fly out into the room.
4. Chimneys would get dirty with soot because the fireplace was used every day for cooking.
5. Particular weather conditions were favorable to fires -- dry seasons or cold weather.

- Discuss the reasons that particular building materials were used to build houses, even if they were likely to burn more easily:

1. Economics – cheaper to build.
2. Time – could be built more quickly to accommodate rapidly growing cities and towns.
3. Availability – materials had to be readily available.
4. Technology– materials from the land were the only materials available.

Part II – Study the Solutions

Fire Prevention

- Using images from the online exhibit ask students what fire prevention measures were put into place in New York State (New Netherlands).

1. What was the “the rattle watch”.
2. What material was used to make the buckets for the bucket brigade?
3. Could these be replaced quickly if they were lost?
4. Why is there writing on the buckets?
5. How could leaders insure that the townspeople kept up with cleaning chimneys?
6. How could the townspeople keep watch for fires at night (when most fires start)?

Technology

• **Using the online exhibit images discuss apparatus such as the Newsham fire engine.**

Discuss:

1. How would the engine get to the scene of a fire?
2. How was water put into the engine?
3. How was water pumped out of the engine?
4. Approximately how many people are needed to get the engine to work? (Hint: the engine is less than 8 feet long)

• **Evaluation:**

Students will be able to explain colonial firefighting by using drawings or writing.

Follow-up Activities

Optional bucket brigade activity:

Lesson Objective:

Students learn about and critique an earlier firefighting method

Suggested Procedure:

As part of a discussion of people's life styles in America over 200 years ago, talk about the ways people fought fires. Remind students that the early settlers had no fire departments, fire trucks, fire hydrants, or hoses. There was no water system to deliver water to each home.

Ask where they would get the water? (It had to be carried in leather or wooden buckets (there were no plastic pails) from wells, streams or rivers. Everybody in the town came out to help.

Discuss the problem with a single person filling a bucket and running back to throw the water on a fire, then running back to well or stream.
(The water would spill out, would be tiring, very slow).

What did they do to get water to the fire faster?

They worked together as a team. They formed a bucket brigade.

Tell students they are going to form a bucket brigade to experience how it worked.

Materials:

Assemble the materials and tell students what they represent:

- an empty box (copy paper carton or similar size) filled with paper scraps or packing peanuts (the "water source")
- an empty box (copy paper carton or similar size) (the "structure fire" to be extinguished)
- enough empty clean half gallon milk cartons with the closed end removed, or similar size containers (as buckets) for half of the class

Divide your group into two lines, one for passing filled buckets and one for passing empty buckets to your “water source”. Space your group so their lines stretch from the “water” to the “fire”. This process will continue until the water source is “dry.”

Conclusion:

Discuss the problems with a bucket brigade.

(You need a large group of people; you need at least several buckets; it is a slow method that does not provide a heavy, steady flow of water. To attack a fire one had to get very close to it, which was very dangerous.)

Ask the students what improvements might be made, to make applying water to a fire more efficient. (A machine could apply more force and to supply more water, etc.)

New York Standards

ELA 1

ELA 4

SST1

SST5

Suggested Images From the Online Gallery:

Bucket Brigade Graphic

Colonial Bucket Brigade 1762

Leather Bucket

Thatch Roof

Newsham Engine

Peter Stuyvesant Portrait

Dutch Clothing

Rattle