SILSBY'S STEAM POWERED PUMPER

Post & Lesson Plan

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SILSBY'S STEAM POWERED PUMPER

Try to say Silsby's Steam Powered Pumper five times fast. It's a tongue twister, isn't it? Although the name may be a mouthful, the people who used the Pumper did not seem to mind. Why? Well, the Pumper worked. Until the Pumper was invented, the modern firefighters that you know now did not exist. Instead, most neighborhoods had bucket **brigades**. This method involved a line of people passing buckets of water to each other. The person nearest the fire then threw the full bucket of water over the fire and passed the empty bucket back As you might imagine, this did not work very well. It did, however, buy time for people to save a few things.

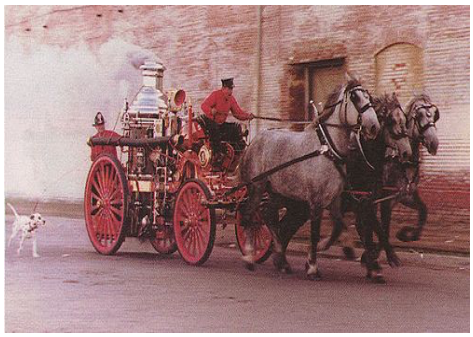
A neighborhood bucket brigade rushes to a well, with buckets in hand, to combat a local fire. Image courtesy of FASNY Museum of Firefighting.

After bucket brigades, many firefighters were volunteers with a little training. These firefighters did not respond to all fires, but they did use things like hand pump engines. These worked well. However, they required large numbers of men. Because many men were needed, their training was minimal. As time went on, again the **technology** of firefighters changed.

In the late 1800s, the Silsby Company created the Pumper in New York. It made the lives of firefighters everywhere easier. It was so effective that some places used it until the 1930s. That's over 50 years!

One of those places was Berlin, Wisconsin. The Pumper was liked because it was powerful. It pumped 600 gallons of water a minute over 200 feet. Most pumps, at the time, were not so powerful. **Firefighters** in Berlin, for example, used hand pumps before the Pumper. These hand pumps were similar to a squirt gun. A team had to pump a lever, building up pressure. After enough pumps, someone would pull the release and the water would come shooting out. Compared to the Powered Pumper, hand pumps were not as effective. That is why firefighters started using the Powered Pumper.

The Steam Powered Pumper was different. Starting on the outside, it was painted bright red with big black wheels. It was hard to miss! The Pumper had four main parts: a coal box, firebox, water tank, and pump. To make it work, someone took coal and placed it in the firebox. Coal in the firebox was heated and made steam. The steam built up pressure. This pressure made the water in the water tank shoot out of the pump.



A dalmatian running alongside a fire engine. **(courtesy of Two Little Cavaliers)**

One drawback of the Powered Pumper was it needed a better trained team to handle the horses and engine. It needed a driver, assistants, three horses and a trusty **dalmatian**. This may seem like a lot of parts, but the number of people needed for the Pumper was a lot less than bucket brigades. As fire engines advanced, firefighters needed more training.

For example, the Pumper needed regular maintenance. Training took time and money, so it was more effective to keep a small, well-trained team instead of a large amount of semi-trained volunteers. Regardless, with all of these parts to the team, the Pumper would have been quite a sight when racing to a fire.

Why do you think they needed a dalmatian? I'll give you a hint. They were more than just a mascot. Dalmatians would run next horse-drawn fire engines, protecting and calming down the horses. Dalmatians had a soothing effect which made horses calm. As horse-drawn fire engines fell out of use, many firefighters could not part from their trusty teammates. When fire trucks came into use, the dalmatians became more of a mascot. They helped keep up team moral. That is why you may notice a resident Dalmatian in your local fire house.

Just as bucket brigades fell out of use, steam powered pumpers were eventually replaced with gas-powered pump engines. Similarly, with bucket brigades and Pumpers too, the number of firefighters decreased. Training was expensive. It was better for cities to keep a small effective team than a large team. Still, the Silsby's Steam Powered Pumper was an important invention, helping firefighters put out fires, saving many lives, and bringing the tradition of dalmatians into firefighting.

Word Bank:

Brigade (bri-geyd): a large group formed for a specific reason.

Dalmatian (dal-mey-shuh n): a breed of dog known for black and white spots.

Firefighter: a rescuer trained in putting out fires.

Technology (tek-nol-uh-jee): science or knowledge put into everyday use to solve problems or invent useful tools.

Reading Comprehension Questions:

1) What is the Steam Powered Pumper? Who was needed to make it run?

2) How did the Steam Powered Pumper make its water hot?

3) What other ways can someone fight fire? Try and think of specific techniques.

4) What parts make up the Steam Powered Pumper?

5) Can you think of anyways to improve the Steam Powered Pumper?

Silsby's Steam Powered Pumper

Enduring Questions:

- How do objects help us understand Wisconsin history?

Essential Questions:

- Why do we save things?
- What makes the things we save important?
- What questions can objects help us answer?
- How do we unlock the meaning of an object?

Wisconsin Standard for Social Studies

Behavioral Sciences:

- Describe how a person's behaviors are affected by relationships (**SS.BH1**)
- Give examples of how peoples from different cultures develop different values and ways of interpreting experiences **(SS.BH2)**

Social Studies Inquiry Practices and Processes:

- Evaluate the strength of claim, evidence, and communication using criteria established by both teacher and student. **(SS.Inq4)**
- Explore opportunities for personal or collaborative civic engagement with community, school, state, tribal, national, and/or global implications **(SS.Inq5)**

Economics:

- Infer potential incentives in a real-world situation. **(SS.Econ1)**

Geography:

- Classify various ways that people and countries depend on one another. **(SS.Geog3)**
- Summarize how transportation and communication have changed economic activities over time. (**SS.Geog4)**

History:

- Use evidence to draw conclusions about probable causes of historical events, issues, and problems. **(SS.Hist1)**
- Describe patterns of change over time in the community, state, and the United States. **(SS.Hist2)**
- Explain how historical events have possible implications on the present. **(SS.Hist3)**

Content Questions:

- Why would the people of Berlin want to buy a Steam Powered Pumper?
- How have fire fighters changed over time? Is their team the same?
- What was the team of the Steam Powered Pumper composed of?
- How does the Steam Powered Pumper work?

Educational Goals:

- Compare and contrast bucket brigades to hand pumps
- Learn what goes into naming an object

Activity #1: Lever (Great for a field day!)

To showcase the ways bucket brigades and hand pumps worked, allow the students to experiment. For bucket brigades, fill up buckets with water and have the students pick them up and carry them a long distance to "put out" a fire. With the hand pumps, let the students use pump water guns to spray. In discussion, talk with the students about what was most effective and why new developments may have come about.

- In this scenario, what puts out a "fire" faster might be decided by which technique fills up an empty tub fastest. For instance, place two plastic tubs 10 yards away and place students into two teams, hand pumps and bucket brigade.

Activity #2: Branding

The Steam Powered Pumper is a slight mouthful, but it makes the name more memorable. A fun activity to try with students would be to make up their own outlandish names for an object in the classroom. Some objects to rename might be a pencil or a projector. You could also try to think of a better name for the Steam Powered Pumper. Some things to keep in mind while naming:

- What purpose does naming serve? Is it only to present the function?

- An example for the projector: Light Shooting Lantern
- An example for a pencil: Yellow Coated Graphite Wand
- An example for a water bottle: Cylindrical Fluid Catcher

Resources:

Example of a Bucket Brigade today:

https://www.youtube.com/watch?v=b08glFIh4kU

History of the Dalmatian in the Fire Service:

http://www.kearneyfire.org/History-of-the-Dalmation-in-the-Fire-Service.asp

Why are Dalmatians the Traditional Dog of Choice at Fire Stations:

https://www.youtube.com/watch?v=OUcV-nTnc-w

Bibliography

Special thank you to the Wade House's Wesley W. Jung Carriage Collection

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