

Firefighters put out fires and help people who are sick or hurt. When firefighters come to your home or school, they drive a fire engine or a fire truck. There is a difference between fire engines and fire trucks. Do you know what the difference is?

Fire trucks carry lots of ladders and tons of tools. Fire trucks also have a gigantic ladder called an aerial. That is why they are also called Ladder Trucks. The aerial ladder reaches 100 feet in the air! That is high enough to see over very tall trees

and to reach up very tall buildings. Can you think of something that is 100 feet long? Fire engines do not have a big ladder. Instead of a big ladder, fire engines have lots of water and long hoses that help fight fires. Firefighters who work on fire engines and fire trucks work together to fight fires.

Ladder Truck 8 is stationed on Market Street in Ballard. The Firefighters who work on Ladder 8 help people all day long, every day of the year. Captain Caldart says "every fire truck in Seattle has an aerial ladder that can reach 100 feet in the air. Firefighters use the aerial ladder to help fight fires." When Captain Caldart arrives at a fire on the ladder truck, he estimates how long of a ladder he will need to reach the fire. Once he picks the right ladder, Captain Caldart tells Firefighter Rose how high to lift the aerial ladder. Then Firefighter Coons and Firefighter Witter can climb up the aerial ladder and help put

out the fire by spraying water from high up. Firefighter Coons says that kids can help firefighters by being prepared for a fire emergency. He says "if you hear a fire alarm go off, get out quick!" Firefighter Witter adds "if you are ever in a smoky room, crawl low under the smoke towards the exit." Firefighter Rose says "once you escape outside, go to your meeting place. If we know you are safe at the meeting place then we can fight the fire instead of rescuing you." Where is your family's meeting place?



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## Firefighter Math

## Firefighters use math in many different ways. See if you can do the firefighter math problems.

When Seattle Fire Captain Caldart arrives on the ladder truck at a fire he estimates how long of a ladder he will need to reach the fire. He must pick the right ladder on his first try. There is no time for mistakes.

★ If Captain Caldart needed to choose a ladder to reach your window which of the following would he choose? Circle your answer.

- A. No ladder, you are on the bottom floor
- **B.** A 24 foot ladder. It will reach two stories
- C. A 35 foot ladder. It will reach three stories
- D. The aerial ladder. Your window is higher than three stories



Firefighters use math when they help people who are hurt or sick.

They take their pulse. They use their index and middle finger to apply pressure to one of the patient's arteries. An artery carries blood through your body. The firefighters count how many "pulses" there are in 15 seconds. They multiply the number of pulses by 4. This tells the firefighters how many times the heart beats in one minute.

★ If the firefighter counts 21 "pulses" in 15 seconds what is the patient's pulse for one minute? **Answer:** 

## Firefighter<mark>s use math to fig</mark>ure out how much water to spray on a fire.

The fire engine's water tank holds 500 gallons of water. If the firefighter sprays water through the fire hose at 100 gallons per minute, how long will it take to empty the water tank? Answer:



## Safety Message:

- Get out quick if you hear a fire alarm
- Go to your meeting place
- Crawl low under smoke