

Heroes

Specific focus : Fire services

W/C: 22nd June 2020



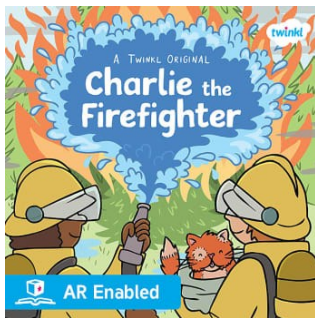
Our fire and rescue services play a very important role in keeping us safe. Fire officers put themselves in danger every day to save lives and protect buildings. This week, we are going to focus our learning on these everyday superheroes!

Subject: Reading comprehension

Activity Outcome: To read to find information.

Explain: Read the information about Charlie the firefighter on pages 2 and 3. Then answer the questions on page 4 in full sentences.

The answers are on page 5.



Subject: Design technology

Activity Outcome: Make a moving fire engine using wheels and axels.

Explain: Fire Engines are a very important part of the fire brigade,

We are going to make a model fire engine.

Our models will have moving wheels.

Use pages 7-9 to find out more.

Subject: Science

Activity Outcome: To make scientific predictions and conclusions.

Explain: We are going to carry out a science experiment today.

Please see page 6 for more information.

We will be predicting, testing and trying to explain why things happen.



Subject: PE

Activity Outcome: To make/carry out a fitness regime based on the job of a fire fighter.

Explain: Firefighters need to be really fit and healthy.

Today, you are going to create and perform a fitness program to train up a new fire fighter.

See page 10 for ideas.

Fantastic Firefighters

What Do Firefighters Do?

Firefighters are people who are part of the emergency services. They spend lots of time making sure buildings are safe. Firefighters put out fires and rescue people. Sometimes they are even needed to help rescue animals!



A firefighter's job can be dangerous and it is important that they work well as part of a team. They need to be fit and strong. They also need to be kind and good at making people feel calm.

A Firefighter's Uniform

Firefighters wear a long jacket and thick trousers when they are fighting fires, to protect them from the heat. They are made from special material that stops the fire from getting through. A firefighter's uniform has reflective strips on it so that they can be seen in the dark and smoke. They also wear rubber boots, thick gloves and a helmet.



A Fire Engine

Fire engines are large trucks that carry lots of equipment to help firefighters rescue people and put fires out. Up to six firefighters can ride in one fire engine.

Sirens and blue flashing lights

These are used to let people know that the fire engine is travelling to an emergency.

Ladders

There are ladders of different lengths on top of the fire engine.



Cabin

This is where the firefighters sit.

Hoses

Different types of hoses are used to help fight fires.

Various tools

Lots of different tools are stored on the fire engine. Some are used to help rescue people in road traffic accidents.

Breathing apparatus

Firefighters need to wear masks attached to oxygen cylinders to help them breathe when working in smoke.

Questions

1. What are people called who put out fires? Tick one.

- firefighters
- fire people
- fire stoppers

2. Write **one** thing that firefighters do.

3. What is it important to do as a firefighter? Tick one.

- work by themselves
- make friends
- work together as a team

4. Draw a line to complete the sentences.

Firefighters wear a long jacket and thick trousers when they are fighting fires,

thick gloves and a helmet.

They also wear rubber boots,

so that they can be seen in the dark and smoke.

A firefighter's uniform has reflective strips on it

to protect them from the heat.

5. Complete this sentence:

Sirens and blue flashing lights are used to let people know that the fire engine is travelling to an _____.

emergency

fire station

ambulance

Answers

1. What are people called who put out fires? Tick one.

- firefighters**
- fire people
- fire stoppers

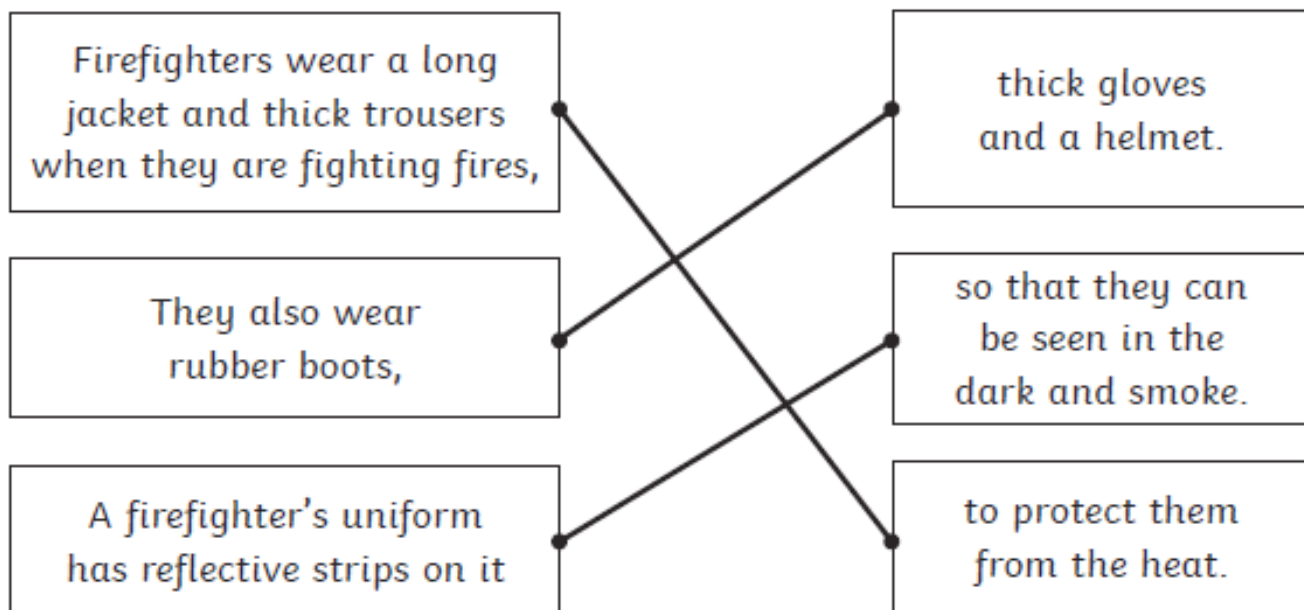
2. Write **one** thing that firefighters do.

Answers may include: making buildings safe; putting out fires; rescuing people; rescuing animals; making people feel calm.

3. What is it important to do as a firefighter? Tick one.

- work by themselves
- make friends
- work together as a team**

4. Draw a line to complete the sentences.



5. Complete this sentence:

Sirens and blue flashing lights are used to let people know that the fire engine is travelling to an **emergency**.

Science experiment

You will need:

2 tealight candles.

2 saucers/small plates

1 see through drinking glass

Lighter or matches

A timer (This could be on a mobile phone or a stopwatch).



This science experiment uses fire. Please use caution and make sure there is an adult helper every step of the way

What to do:

1. Set a tea light on each saucer and place them side by side. Make sure there is enough room to put the glass over one of your candles
2. Prepare your timer.
3. Light both tealight candles.



Stop! Make a prediction: What will happen if you put the glass over one of the candles? Which will stay lit the longest?

4. Place your drinking glass over one of the candles and start the timer.
5. Watch the candles. As soon as one of them goes out stop the timer.



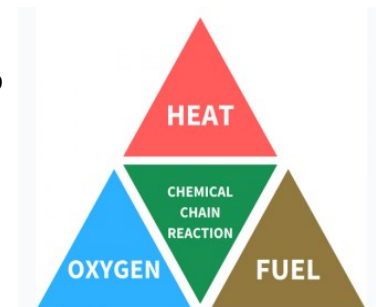
Conclusions Which candle went out first? How long did it take? Why do you think that happened?

Science behind the experiment

Look at the fire triangle diagram on the right. A fire needs all of these things to burn. If you take one away, a fire can no longer burn and goes out. This is

How the fire brigade put out fires, by taking away one of these things using different methods.

In our experiment, we took away the oxygen by stopping the air getting to the candle with the glass.

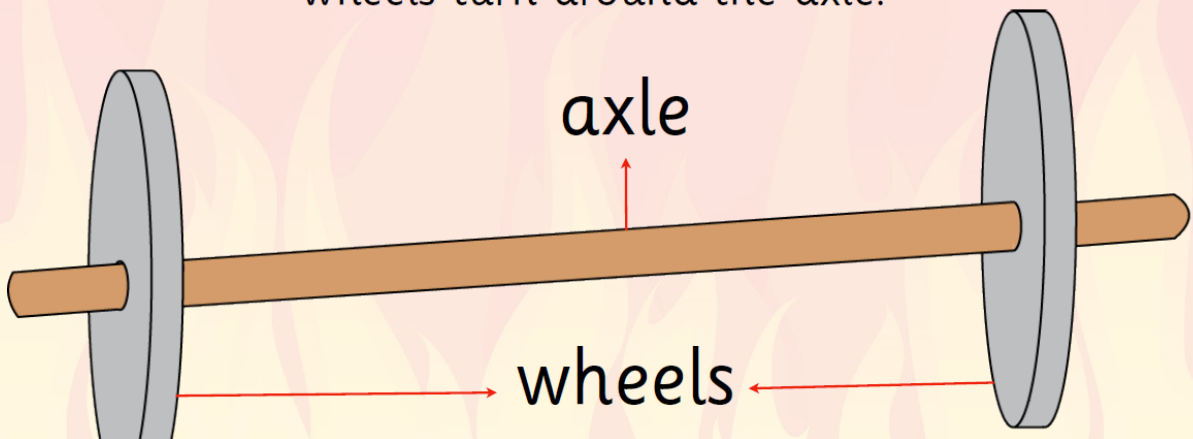




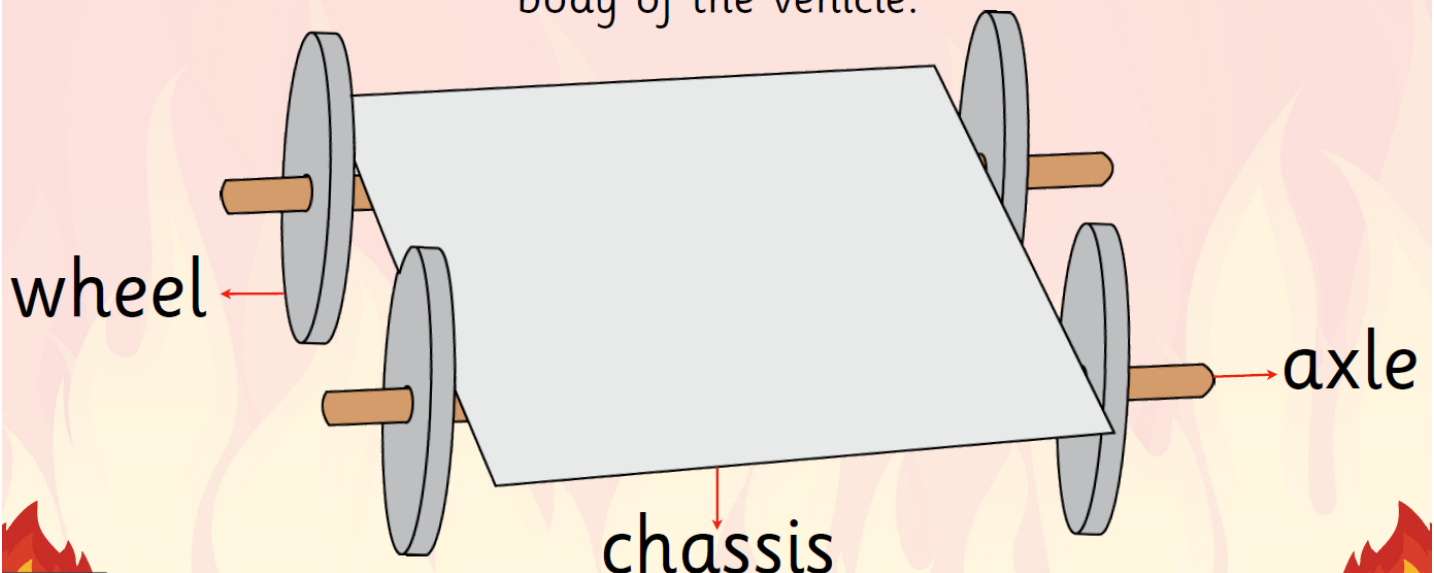
How does a fire engine move?

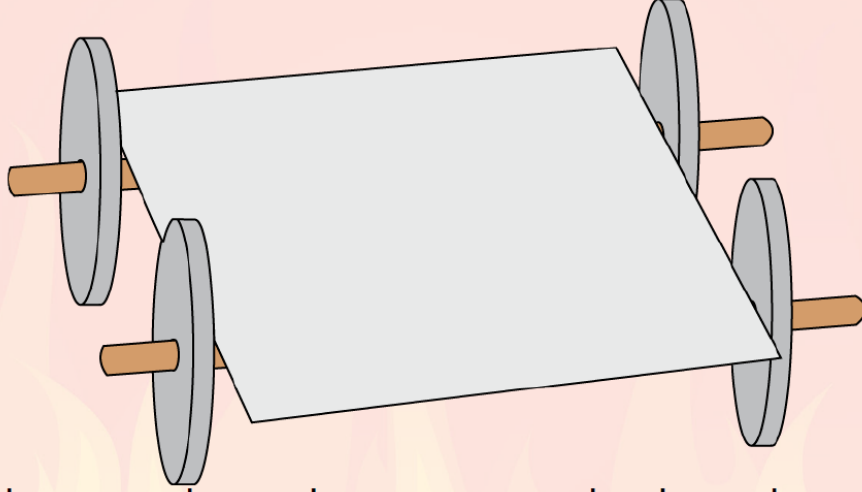


Vehicles all have **wheels** to make them move. The wheels are attached by **axles**. Axles can work in two ways: they are either attached firmly to the wheel so the axle rotates and the wheels turn with it, or the wheels are placed loosely on the axle so that the wheels turn around the axle.



Axles then need to be attached to a **chassis**. The chassis is the framework of the vehicle and attaches the axles and wheels to the body of the vehicle.





With this chassis, the axles are attached to the chassis from underneath. This means the axles cannot turn around. The wheels are placed over the axles but not attached so that the wheels can rotate around the axle.



The axles are not fixed to the chassis in this example. Instead, the axles are put through holes in the chassis so that the axle can turn around. The wheels are firmly attached to the axle so they turn when the axle turns.

ACK
PLENARY

NEX

Which type of axle do you think you will use when you design your fire engine? Why?

Think, pair, share your ideas.





Now that, we know about wheels and axels. We need to make a chassis to attach our axels to using our chosen method.

A small box would be a great Starting shape for your chassis.

These are examples of fire engine models made by other children. I know yours will be just as good, if not better.



Drinking straws make super axels. You could use bottle tops for wheels but cardboard would be just as good.





Firefighter fitness



We are going to design a fitness routine to train a new fire fighter.

You need to think of 6-10 exercises that a firefighter could do to train and keep healthy.

Firefighters need to be able to :

Run to get to places quicker

Climb ladders

Lift heavy things even people

Jump over low objects

