

Carriage © Hull Museums





Morris 8 1937 © Hull Museums

## Investigation: Changes in design and materials

Look at the pictures to find the answer to the below questions

- Compare the Carriage in the first picture with the early car in picture 2. What similarities can you see?
- What did people use as their main form of transport before the car and train was invented?
- The early car was called the Horseless Carriage, why do you think this is?
- What similarities between the Carriage and early car can you see?
- Look at the pictures closely to see if you can tell what materials have been used make the cars.
- Which of the vehicles would have been most uncomfortable? Why do you think this is?
- What material is the tyre on the 1940s car made of? (Clue: It helps the wheels grip on to the road surface)
- What important piece of safety equipment is missing that all modern cars need to have?
- Where do you think cars get their names from? (clue: look at the words Horseless Carriage).

## **Teachers Background Notes**

When cars first appeared, only the very rich could afford them. (Like the hobby horse bicycle on the other downloadable activity very early cars were used more as an expensive hobby rather than as an effective means of transport).

Encourage the children to imagine that they lived in 1890 and had never heard of a car, let alone seen one. The first time you saw one speeding past, it would have looked just like a carriage moving on its own, with out the help of a horse pulling it!! This is how early cars came to be known as horseless carriages. If you look carefully at the word carriage you can also see where the word car comes from.

The Cleveland Buggy in the second picture was powered by electricity, held in an on board battery. The power would last for about 40 miles.

The early cars speed was limited to 2mph through towns and required a man to walk in front of them waving a red flag.

Through the questions, encourage the children to investigate how the car has developed. Early cars used some very different materials to what are used today. Get the children to look for the areas of wood and metal. Encourage them to think about why wood might be an unsuitable choice of material for a car? Compare the wheels of the 3 vehicles. Attention can be drawn to the fact that the early car has very thin wheels, more like bicycle wheels. Modern cars have wheels with a much wider surface area, increasing friction to allow the cars to grip more safely to the road.