

Lanchester inspired designs of the past, present and future...



- **Frederick Lanchester** was an engineer, inventor and designer born 150 years ago in 1868
- He is best known for inventing the **first all-British four-wheeled petrol motor car** in 1895.
- Fred was ahead of his time and developed many ideas that we see on cars today. He came up with designs for four-wheel-drive, turbo-charging, disc brakes and even a **hybrid petrol-electric car in 1927**.



Design, technology and fashions change over the years. Armoured cars, record-breaking racers and luxurious limousines all look different...but why?



Past: 1926 Lanchester 40 h.p.

- In the 1920s there was a fashion for cars that looked like boats – this Lanchester is nicknamed Noah - in case there is a flood!
- Its huge 6.2 litre engine is very powerful and Lanchesters had a reputation for smooth running
- When it was new it would have cost as much as a Rolls Royce, around £2500...

...that would be over £120,000 in today's money – only the richest customers could afford the best technology and design of the day!

Blueprint notes

Length: 550 cm
Width: 188 cm
Wheelbase: 381 cm

Streamlining was important and not just for looks. The word was invented by Fred to describe how a design can help air flow over more efficiently over a surface to reduce drag.

Top speed: 78 mph
Fuel economy 12 mpg
Engine: 6.2 litre, 96 bhp

Present: 2017 Renault Zoe

Blueprint notes

Length: 408 cm
Width: 151 cm
Wheelbase: 259 cm

By 2040 all cars in the UK must be electrically driven. Cars are even being developed today that don't need a driver

- The Renault Zoe is Europe's best selling electric car
- You can plug it into a normal mains electric socket for a slow charge (like charging a phone overnight), or use a rapid charger to get 80% range in just 30 minutes
- It is almost silent to drive and much cheaper and cleaner to run than a petrol car
- It is called Zoe because it produces ZerO Emissions – there is no exhaust pipe!



Top speed: 84 mph
Range: 80-120 miles
Engine: Electric, 89 bhp

Design Challenge



Lanchester inspired designs of the past, present and future...

Future: The 2040 Lanchester.....

Designer's name:
.....

Blueprint notes:

You have been made the Chief Designer of the new Lanchester concept car which will be unveiled at this year's London Motor Show.

You must decide what sort of car to design that will amaze the public and relaunch the Lanchester brand: will it be a racing car, a family car, an off-road car or something completely different?

Come up with a name for your car to reflect your design and write it in the box

How will your design be affected by the way your car will be used?

Who will drive your car...if anyone will?

Think about the similarities and differences between the cars you've seen today - how will yours be the same or different?

Top features

Write down your top 3 features and explain how they work in your design. Eg streamlined bodywork or large knobby tyres

Feature 1:
.....

How your design works
.....
.....
.....

Feature 2:
.....

How your design works
.....
.....
.....

Feature 3:
.....

How your design works
.....
.....
.....