

# MarchantCain Group Virtual Work Experience KS2

Welcome to MarchantCain Automotive.

We're so pleased that you're joining us for your virtual work experience.

MarchantCain is based in Coventry. Our team designs and builds special parts and clever mechanisms that help cars work smoothly, safely and efficient.

Here are some of the things we do at MarchantCain:

- We design lightweight parts that help cars go faster and use less fuel.
- We create precision mechanisms, such as moving parts that open and close at exactly the right time.
- We solve engineering problems for car companies.

Our engineers must think carefully and measure accurately. Every small part matters.

During your time with us, you'll complete three tasks that will help you think, design and solve problems like a MarchantCain engineer.

We hope you enjoy the work experience.  
The MarchantCain Group.



# Starter Task – What makes a car work?

## Your goal:

Understand the important parts a car needs to move.

## What to do:

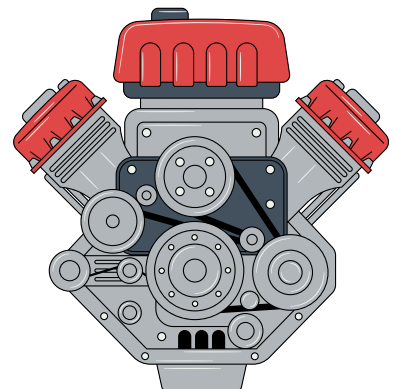
1. Write down five key parts a car needs to work (e.g. wheels, engine etc)

2. For each part, explain what it does.

3. Explain why engineering is important for keeping cars safe and reliable.

## Suggested search prompts:

- 'Parts of a car explained for kids'
- 'What do engineers do for cars?'
- 'How do car mechanisms work?'



# Starter Task - What makes a car work?

## Helpful vocabulary

Mechanism - parts that move together to do a job

Precision - being careful and exact

Safety - keeping people protected

Materials - what something is made of

## Sentence starters

A car needs...

This part is important because...

Engineering helps cars by...

Engineering is important because...

## Example

Engineering is important for keeping cars safe and reliable because engineers design strong parts, test how the car works, and make sure everything meets safety standards.

# Main Task – Be a MarchantCain Mechanism Designer.

Your goal:

Create your own clever car mechanism.

What to do:

1. Imagine you are an engineer at MarchantCain.

Your job is to invent a new mechanism that solves a problem in car.

- Choose a problem to solve, for example:
- Mirrors that move by themselves
- A boot that opens hands-free
- Air vents that adjust automatically

2. Draw or describe your mechanism

3. Write a few sentences explaining:

- What your invention does
- How it moves or works
- What materials it's made from

Suggested search prompts:

- 'simple car mechanisms for kids'
- 'how engineers design car components'



# Main Task - Be a mechanism designer

## Helpful vocabulary

Component - one part of a bigger machine

Movement - how something opens, closes or turns

Prototype - the first version of an invention

Lightweight - not heavy

## Sentence starters

My mechanism is called ...

It helps the car by...

It works when...

Some materials used to make my mechanism include...

## Example

My mechanism is called the 'smart boot'. It opens when you wave your foot under it. It uses sensors and lightweight metal parts.

## Extension Task – Cars of the future

### Your goal:

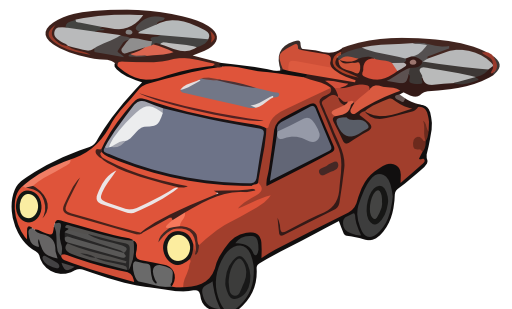
Imagine how cars might look or work in the future.

### What to do:

1. Think about what future cars might need
2. Create a future car idea for MarchantCain to help build
3. Write or draw:
  - • What the car looks like
  - • What special features it has
  - • How it helps people or the planet

### Suggested search prompts:

- • 'future car ideas for kids'
- • 'how engineers design future vehicles'



## Extension Task – Design an inclusive club.

### Helpful vocabulary

Aerodynamic – shaped to move through air easily

Electric – powered by batteries instead of fuel

Innovation – a new, clever idea

Sustainability – helping the planet stay healthy

### Sentence starters

My future car is designed to...

One special feature is...

This helps the planet by...

Engineers would need to...

### Example

My future care is designed to be a self-adjusting smart car that changes its shape slightly at high speeds to reduce drag and save energy.