

ENGINEERING AND AUTOMOTIVE

SUMMER PROJECTS
YEAR 11 STUDENTS

MOTOR VEHICLE



HEART OF
WORCESTERSHIRE
COLLEGE

KICK START YOUR STUDY AT HOW COLLEGE WITH ONE OF OUR CURRICULUM BRIDGING PROJECTS

Background:

Motor Vehicle covers the operation and components of the Automotive vehicle systems. The systems include the following; Engines, Braking, Suspension Steering, Transmission, Electrical and Electronic. As part of your Motor Vehicle course at the Heart of Worcestershire College, you will study units on all of the above systems.

Tasks:

Throughout the year at Heart of Worcestershire College, staff regularly visit schools to talk about opportunities within Motor Vehicle to students in Years 10 and 11. We would like you to cover the following tasks that relate to Motor Vehicle Systems below.

Key information to include:

Task 1: Write an introduction that explains what an Engine on a vehicle does using the links below.

Task 2: Explain what is the purpose of a transmission system on a vehicle. A little clue here would be speed.

Task 3: Explain what braking components you can find on a vehicle. If you get time add what they do.

Task 4: Explain what the different Electrical systems are on a vehicle and how they operate. Here they are below.

- Charging System
- Electronic Braking System
- Ignition System
- Lighting System

Task 5: Vehicles usually use letters Abbreviations are used, not by vehicles, but to describe various operations and systems. State what they mean and what vehicle system they operate. We have given you an example on the first one in this task.

ABS - Anti Lock Braking.- Operates as part of the Braking System.	AWD -	PAB -
	AFI -	BCM -
4WD -	EGR -	BHP -
ABD -	AIV -	CTS -
AC -	BC -	DFI -
OHC -	EV -	LED -
EMB -	HEV -	MAF -

Use the internet to help with your research. Here are a couple of examples to get you started:

www.howacarworks.com/

auto.howstuffworks.com/engine1.htm

www.launchtech.co.uk/support/information/car-abbreviations/

www.carbibles.com/automotive-abbreviations/

Remember:

- Try to be as creative and engaging as possible.
- Use images, diagrams and pictures.
- The leaflet needs to be 2 sided and A4 in size. You can use PowerPoint or Word to produce the leaflet.

Indicative time for this project:

We would suggest the whole project from start to finish (including research) should take you around 20 hours.

Instructions on how to submit this:

You can email your submission to:

Bromsgrove learners: engineeringbroms@howcollege.ac.uk

Worcester learners: engineeringworcs@howcollege.ac.uk

How will I benefit from this project:

You will gain a basic understanding of Mechanical engineering principles that you will use to build upon when you start the course at HoW in September.

What can I expect to get back after I submit my project work:

You will receive a feedback from our expert tutors on the start of your course in September.

Key information you should include:

Your name

Your email address

A contact telephone number