

## Lesson Plan – ‘Vehicle Technology’

**Activities and Lesson Plan**

This lesson continues on the theme of encouraging students to think about their perception of ‘the car’ - their attitudes towards it and the image it creates for them.

They are used to living in a world of ever advancing technology. A car is another component in this world – they will be encouraged to find out about both established and new vehicle technologies and how much consideration these deserve when purchasing their first car.

**Introduction**

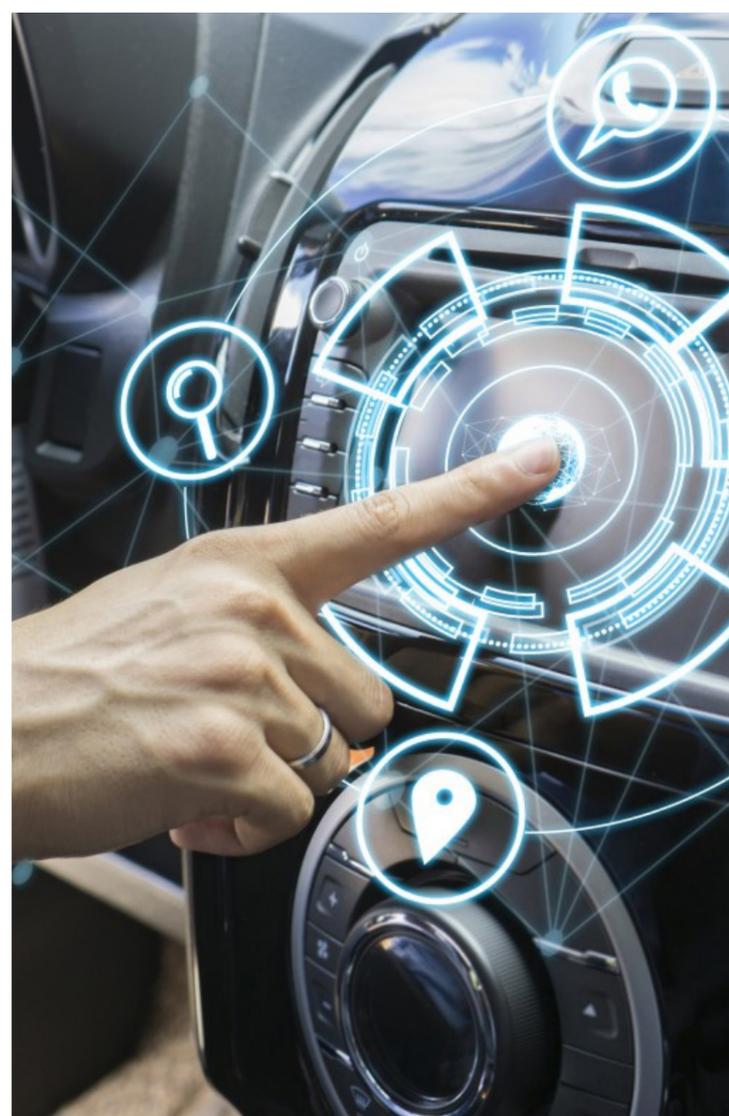
Roads and vehicles are an essential part of our everyday lives and at the same time, being in the road environment is one of the most dangerous activities that most people do.

When choosing a new or second-hand car it is important to consider what features are most important to you – appearance, functionality, safety?

**Part 1: Discussion** (Whole class or groups)

Vehicles are increasingly being fitted with a variety of gadgets and devices designed to ease the driver task and improve safety, but do people consider this when choosing what car, they would like to buy, especially young drivers buying their first car? Which takes priority – safety features or image/status?

Discuss the above – do students already have any knowledge of the variety of features available in cars generally?

**Part 2: What is ‘vehicle technology’ and what is it for?** (In groups)

Ask the students, in their groups, (you could divide up the list) to find out about the following vehicle technologies:

- Euro NCAP Rating
- Seat-belts
- Head Restraints
- Air-bags
- Satellite Navigation Systems (Sat Navs) (Journey Planning)
- Warning Systems
- Reversing and Parking Aids
- Air Conditioning and De-misters
- Load Restraints
- Antilock Braking System (ABS)
- Electronic Stability Control (ESC)
- Brake Assist
- Tyre Pressure Monitoring Systems (TPMS)
- Alcohol Interlocks
- Event Data Recorders (EDRs) (‘Black Boxes’)
- Adaptive Cruise Control
- Lane Departure Warning Device
- Blind Spot Detector
- Driver Fatigue Monitor
- Fitting a Black Box for reducing your insurance

Groups to feed back to the whole class.

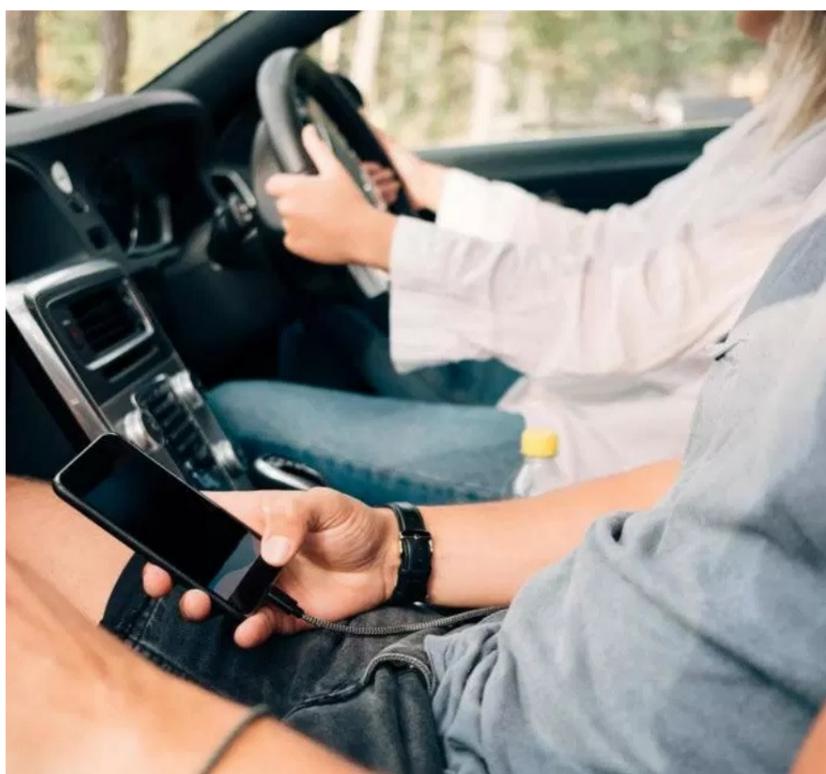
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**Ask:**

- Did they come across any other new technologies over and above those listed whilst doing their research?
- Are they able to put the features into any kind of priority order, or categorise them into features they would consider when choosing a car, and those they wouldn't bother with?
- Are they able to say why?

These technologies need to be used properly to reduce the risk of crashing, or conversely, if not used properly they could increase the risk, by distracting the driver for instance.

Vehicle technology is continually advancing, and new technologies are constantly being introduced, so much so that there is often little published research about the effectiveness of the most recent safety devices. Ask the students where they might go to find out more, so that they can make informed decisions when buying a car.

**Part 3: How might these new vehicle technologies affect me, as an ‘about- to-be’ young driver?** (In groups)

- 1) Students are likely to learn to drive with a driving school, in a car that will have many of the more modern safety features – yet many of them are likely to only be able to afford an older car for their first car.

Discuss the implications of this.

- 2) Other than purchasing the car, their biggest expense is going to be insurance. There are lots of ‘small cars’ around using the internet ask your students in their groups, to investigate what factors make a difference to the insurance premiums for young drivers. Including having a black box fitted, which monitors their driving, in time may reduce their insurance, if they keep within the speed limits etc.,

(Each group could select a make and model of car and look at a variety of other factors; OR select other factors as the constants and compare makes and models)

Discuss each group's findings as a whole class.

What factors had the most influence on reducing insurance premiums? Do the differences seem fair?  
Did safety features play a part in keeping insurance costs down?

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**Part 4: Plenary** (Whole class)

Vehicles are increasingly being fitted with a variety of gadgets and devices designed to ease the driver task and improve safety.

These technologies need to be used properly to reduce the risk of crashing, or conversely, if not used properly they could increase the risk, by distracting the driver for instance.

Vehicle technology is also progressing very quickly and is likely to have significant effects in the future on the way the driver and vehicle interact.

It is now only a matter of months away, before your students will be starting to learn to drive and perhaps getting their first car.

With the students, summarise what they have found out.

Has this increased their awareness of the new vehicle technologies and their implications?

What do they think cars will be like in the future?

Whatever new technology is introduced it **MUST** be used **PROPERLY** to be effective!

**Intelligent vehicles still need intelligent drivers!!**

