

Big Pedal 2021

# Amazing air investigation

Worksheet page 1



## Aim

To investigate the trends of national and regional vehicle type use in Great Britain between 1993 and 2019.

To investigate the trends of national and regional road type use in Great Britain between 1993 and 2019.

To investigate the impact of vehicle use on air pollution and emissions.

To recognise the importance of active travel in reducing emissions.

## Hypotheses

**What do you expect to find in this investigation?**

(Answer this question in your exercise book.)

## Method

### Part 1: data analysis

Using your device follow the link to access the Department of Transport's road traffic data: <https://roadtraffic.dft.gov.uk/summary>

Find the national trends summary and evaluate how the **vehicle** use has changed between 1993 and 2019. Which vehicles have seen an increase in use, have any seen a decrease in use?

Find the national trends summary and evaluate how the **road type** use has changed between 1993 and 2019. Has there been a change in road use?

Using the Department of Transport's website again, select the region you live in using this link: <https://roadtraffic.dft.gov.uk/regions>.

Compare the regional trends for vehicle and road use to the national trends between 1993 and 2019. What are the similarities and differences?

Big Pedal 2021

# Amazing air investigation

## Worksheet page 2



### Part 2: emissions calculation

Use the information below to work out how much carbon dioxide emission would be emitted on your journey to school for each mode of transport listed below. First work out how far your journey is in miles, then multiple by the figure below.

**Active travel (walking, cycling, wheelchair) emit 0 kilograms of CO<sub>2</sub>/mile**

**Cars emit 0.30 kilograms of CO<sub>2</sub>/mile**

**Buses emit 0.18 kilograms of CO<sub>2</sub>/mile per passenger**

**Trains emit 0.08 kilograms of CO<sub>2</sub>/mile per passenger**

Please note: Carbon emissions can vary according to specific types of vehicle, such as a small or large car. The figures used above are based on certain averages and you can use them as the starting point for further investigation.

## Results

Record what you have found in your exercise book. Include your workings for the calculations.

## Conclusions

Can you draw conclusions on your findings on the National and Regional trends and emissions data? Can you suggest any reasons for these findings? Can you conclude which modes of transport are better for the environment?

(Answer these questions in your exercise book.)

## What's the best way to get to school?



Walking



Cycling



Train



Bus



Car share



Drive and park

Most sustainable



Least sustainable