Investigate <u>bivariate</u> numerical data using the statistical inquiry cycle

# Masterton to Everywhere

**Credits:** 3

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### TASK
People are wanting to know if there is a relationship between the distance towns and cities are from Masterton and how long it takes to get there in the North Island according to Google Maps.

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## PLANNING AND DATA COLLECTION

Write a plan to investigate the question. You can do your planning and data collection in groups of 2 or 3.

**Your plan needs to include:**

| The relationship question.  (This is provided in the box) | **Write your question here** |
|---|---|
| <ul><li>the variables you will be investigating.</li><li>how you will measure these variables.</li><li>how you will collect the data to answer the question.</li><li>decide how many data values you will need to collect</li><li>what things might affect the measures you take (i.e. possible sources of variation) and how you will minimise their effects.</li><li>how you will record your results.</li></ul> | **Write your plan below**<br>**Because it is a formative assessment, you will only need to collect 25 pieces of data.** |

One you have written your plan you need to get it checked by your teacher before you proceed to data collection. Once it has been checked you can collect your data. All members of the group will need a copy of the plan and the data set.

## DATA

You need to work on your own to analyse the data and write a conclusion.

- Draw at least one appropriate graph to show features of the distribution. Software suitable for statistical analysis such as **NZGrapher** (Click on the link)

**Copy and Paste graph under here**

# ANALYSIS & CONCLUSION

Write a conclusion summarising your findings.

## Conclusion

| In your conclusion include:<br>● a description of your role in developing the plan and gathering data<br>● a description of the relationship in answer to the investigative question<br>● a discussion of features to support the description, for example, clusters or groups, unusual points, trend, closeness of the data to the trend, spread or variation of the data. | |
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Remember to include your group's plan and the data collected when you hand in your analysis and conclusion for marking.