Collate and Analyse
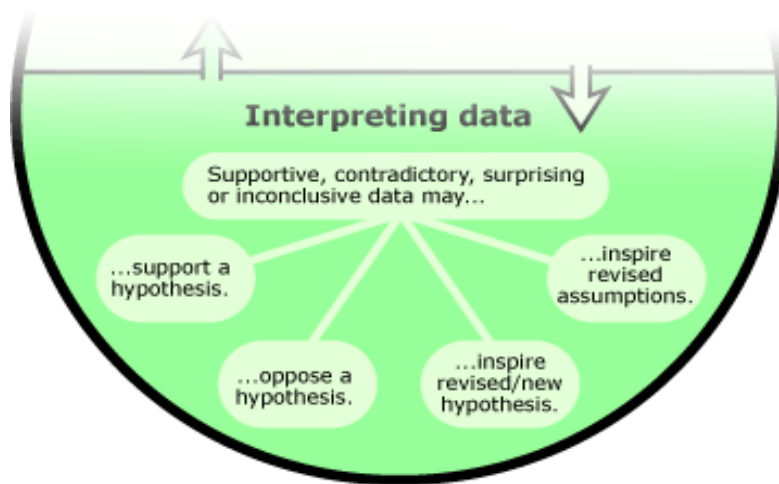
TAHI
RUA TECH
TORU

KIA HIHIKO AOTEAROA!

Senior Secondary

Now it's time to **Review** your data, and try to look at the results of your project research with a critical eye.

Ask yourself these questions:

- o Is it complete, or did you forget something?
- o Do you need to collect more data?
- o Did you make any mistakes?

Interpreting data

Supportive, contradictory, surprising or inconclusive data may...

...support a hypothesis.

...inspire revised assumptions.

...oppose a hypothesis.

...inspire revised/new hypothesis.

Research and evidence might:

- **support** your project and proposed solution.

- help **rule out** other approaches.

- lead to revision, and maybe even a **Pivot**.

- reveal a **faulty assumption**, causing you to revise your assumptions and possibly redesign your project.

- be so surprising that a wholly new idea might prove to be more realistic, useful, or even better than your original idea.

- feed back into your project development in many ways. Most importantly, new evidence helps us evaluate ideas.

Take some time to carefully review all of the data you have collected from your research:

- Use charts and graphs to help you analyse the data and patterns.

- Did you get the results you had expected?

- What did you find out from your research?

- Really think about what you have discovered and use your data to help you explain in your blog why you think certain things happened.

Calculations and Summarising Data

Graphs are often an excellent way to display your results.

For any type of graph:

- Generally, you should place your independent variable on the x-axis of your graph and the dependent variable on the y-axis.

- Be sure to label the axes of your graph — don't forget to include the units of measurement (eg number, type of responses, quantities and preferences).

- If you have more than one set of data, show each series in a different color or symbol and include a legend with clear labels.

Data Analysis Checklist:

	Question	What to do
1	Is there sufficient data to know whether your assumptions are correct?	Yes/No
2	Is your data accurate?	Yes/No
3	Have you summarised your data?	Yes/No
4	Does your chart specify units of measurement?	Yes/No

Graph Checklist:

	Question	What to do
1	Have you selected the appropriate graph type for the data you are displaying?	Yes/No
2	Does your graph have a title?	Yes/No
3	Have you placed the independent variable on the x-axis and the dependent variable on the y-axis?	Yes/No
4	Have you labelled the axis correctly and specified the units of measurement?	Yes/No
5	Does your graph have the proper scale (the appropriate high and low values on the axis)?	Yes/No
6	Is your data plotted correctly and clearly?	Yes/No

You should answer "Yes" to every question on this page.