# Using Maths Aotearoa and Wilkie Way to deliver the refreshed New Zealand Curriculum

**Maths Aotearoa Book 3A provides a range of learning opportunities building onto knowledge and concepts developed in year 4. These learning opportunities enable students to achieve the outcomes expected in year 5. The teacher book also provides links to further learning opportunities in the MOE Figure it Out series available in all schools. Statistical investigations are used in inquiry situations across the curriculum and further learning opportunities should be explored throughout the school year.**

*Maths Aotearoa teacher books and student books are available from edify.co.nz*

*Wilkie Way members also have access to Professional Resources on the teaching of statistical thinking*

## Phase 2: Year 5

| Understand: (big ideas) | Do (practices) |
|---|---|
| As students build knowledge through their use of the mathematical and statistical processes, they begin to understand:<br>• Patterns and variation<br>• Logic and reasoning<br>• Visualisation and application | Students will have learning opportunities to:<br>• Investigate situations<br>• Represent situations<br>• Connect situations<br>• Generalise findings<br>• Explain and justify findings |

## Know: Context of Statistics

**Problem:** Use multivariate data to investigate summary and comparison situations with categorical and discrete numerical data by:
• posing an investigative question that can be answered with data
• making conjectures or assertions about expected findings

**Plan:** Plan how to collect primary data to support answering the investigative question, including:
• deciding on the group of interest
• deciding on the variable or variables for which the data will be collected
• taking account of ethical practices in data collection

**Data:** Use a variety of tools to collect data, check for errors in it, and correct them by re-collecting the data if possible.

**Analysis:** Create and describe data visualisations to make meaning from the data, with statements including the names of the variable and group of interest.

**Conclusion**: Answer the investigative question, comparing findings with initial conjectures or assertions and their existing knowledge of the world.

**Statistical Literacy:** Check and, if necessary, improve the statements others make about the data, including data from two or more sources.

## Maths Literacy Development

• Assistance with learning to use specialist vocabulary
• Assistance with reading & understanding math texts
• Assistance with creating and interpreting visual displays
• See vocabulary list in curriculum document

| Concepts being developed | Key knowledge being developed |
|---|---|
| • Statistical inquiry cycle<br>• Multi-variate data<br>• Quantitative data (number data) | • Data displays - dot plot, stem and leaf graph, data cards |

| Maths Aotearoa Book 3A | Support Material available from Wilkie Way website wilkieway.co.nz: membership area (subscription) |
|---|---|
| **Unit 12: Statistics** | **Teacher Professional Resources:** |
| **Chapter 30 Collecting and Displaying Data**<br>• Interpret information on a dot plot<br>• Understand and use range, cluster, gap and outlier<br>• Collect data ensuring the data is "clean"<br>• Create a dot plot from their data<br>• Interpret information from a stem and leaf graph<br>• Create a stem and leaf graph<br>• Ask and answer questions based on the data display<br>• Consider questions that can be answered from a data set<br>• Consider data that would need to be collected to answer questions that can't be answered from the given data. | **Curriculum Knowledge:**<br>**Statistics**<br>Pocket Guide: Further Developing Statistical Thinking |