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

The learning experiences taken from book 4A and 4B directly match with the progress outcomes as written for year 8. You may choose to use the mini projects from Book 4A as assessment tasks in year 8 for evidence of achievement of the progress outcomes. Some of the learning experiences in Book 4B go beyond the expected progress outcomes for year 8 and provide foundational work for progress during phase 4

There are many more learning opportunities to be found in Figure it Out. Links to Figure it out activities can be found in the Maths Aotearoa teacher books.

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 measurement and measurement problems

Phase 3: Year 8

Understand: (big ideas)	Do (practices)
• Use maths to seek and understand patterns and relationships • Use maths to work with and make sense of change and variation • Use maths logic & reasoning to explain relationships and justify conclusions • Make use of different cultural views and ideas about mathematics • Embrace the history and evolution of mathematics	Students will have learning opportunities to: • Investigate situations • Represent situations • Connect situations • Generalise findings • Explain and justify findings

Know: Context of Measurement

Maths Literacy Development

- Confidently use specialist vocabulary associated with measurement.
- Confidently read & understand math texts involving measurement language and concepts
- Understand the meaning of prefixes using in measurement units

Concepts being developed	Key knowledge being developed
• Understand the relationship between standard units of measure and use to convert fractions to whole numbers and vice versa • Understand time is not based on powers of ten except fractions of seconds • Understand the zero point for measuring time is determined by what needs measuring • Understand the degree of accuracy of measure is dependent on the context in which the measurement is to be used. • Understand any point on a scale can be used as a zero point	• Know the base metric units and the prefixes of other units describe the relationship to the base unit • Know shapes can be decomposed or recomposed to help find perimeters, areas and volumes • Specific vocabulary and ideas related to circles (foundational to Phase 4) • Know relationship between time, distance and speed (foundational to Phase 4)

Maths Aotearoa Book 4B	Support Material available from Wilkie Way website wilkieway.co.nz: membership area (subscription)
Unit 5: Chapter 12 Investigating with Angles *This chapter sits under the unit on Position and Orientation leading into work on bearing. The focus of the chapter is on angles in triangles to define different triangles and angles along stright lines and with intersecting lines leading toward using algebraic reasoning to explain rules for geometric shapes.* • Know the interior angles of a triangle add up to 180º • Know opposite angles of intersecting lines are equal • Know the angles on a straight line add up to 180º • Use knowledge of rotation to calculate unknown angles along a straight line • Use angle properties of triangles to calculate unknwn angles	**Teacher Professional Resources:** **Curriculum Knowledge: Measurement** • Pocket Guide: Using Standard Units of Measure • Measurement Progressions **Student Resources:** Measurement problems
Unit 7 Measurement **Chapter 17 Area and Perimeter** • Select appropriate units of measure • Calculate areas of complex shapes by creating simple shapes • calculate perimeters • Derive a formula for calculating the area of a triangle **Chapter 18 Working with Circles** *(Foundational work for Phase 4)* • Know the perimater of a circle is called a circumference • Know vocabulary associated with circles - diameter, radius • Draw cricles using a pair of compasses • Find out about a special number called pi (π) • FInd a formula to calculate the circumference of a circle • Find a formula to calculate the area of a circle **Chapter 19 Working with Volume and capacity** • Estimate capacity or volume • Use a formula to calculate the volume of a cuboid • Calculate the volume of other prisms using knowledge of finding the area of a triangle and a circle. **Chapter 20 Working with Time** • SOlve problems involving 24 hour clock • read a timetable • Use smaller units of time into fractions of seconds • Investigate timezones	

Chapter 21 Rates of Measure *(Foundational work for Phase 4)* • Recognise a realtionship between time, distance and speed • Calculate a measurement over a period of time • Calculate speed from distance and time measures • Use ratios and proportional reasoning to solve problems • Use calculators efficiently to solve problems	