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

The Maths Aotearoa teacher books provide a sequenced approach to developing key number knowledge, skills and concepts. Likewise the knowledge, skills and concepts for space (geometry) are also built up over the series.

Book 2A provides activities to meet the progress outcomes for end of phase 1 (Year 3) and chooses to explore circles and spheres more closely. Alot of the work at this phase in student learning is practical. Students need access to physical 3D shapes; to handle them, turn, stack and generally explore. Digital versions and pictures of 3D shapes are insufficent to fully understand the attributes of these shapes.
A couple of chapters have also been included in the measurement plan as the knowledge and concepts involved are as much measurement as they are geometry.

Maths Aotearoa teacher books and student books are available from edify.co.nz
Wilkie Way members also have access to Professional and Classroom Resources on the teaching of geometric ideas
Further Figure it Out activities are referenced in the Maths Aotearoa teacher book

Phase 1: Year 3

Understand: (big ideas)	Do (practices)
• Maths is about seeking patterns • Maths is about change and variation • Maths involves reasoning - from observations • Maths develops within different cultures • Maths is created by humans and therefore has a history and continues to evolve.	Students will have learning opportunities, and be guided to: • Investigate situations • Represent situations • Connect situations • Generalise findings • Explain and justify findings

Know: Context of Space (Geometry)

Maths Literacy Development

- Assistance with learning and using specialist vocabulary.
- Assistance with reading & understanding math texts.

Concepts being developed	Key knowledge being developed
• Direction (which way?) ,Distance (how far?) Location (where?) • Angle as a turn around a fixed point • Reflective symmetry • Equality as a balance between two halves • Classification by attribute • Spatial thinking • Spatial reasoning	• Direction left and right • Rotation, clockwise and anti clockwise • Full, half and quarter turns • Half as two equal parts • Quarter as four equal parts • Language of geometry to describe attributes • Identify and name a wider range of shapes

Maths Aotearoa Book 2A	Support Material available from Wilkie Way website wilkieway.co.nz: membership area (subscription)
Unit 6 Geometric Shapes **Chapter 18 3-D Shapes** • Confidently name common 2 dimensional and 3 dimensional shapes • Explore a wider range of 2D and 3D shapes • Describe specific features of 3 dimensional shapes using increasing geometric language • Use attributes to identify a shape **Chapter 19 Circles, Cones and Spheres** • Explore circles, cones and spheres • Appreciate the importance of circles in our world	**Teacher Professional Resources:** **Curriculum Knowledge:** Geometry Pocket Guide: Geometric Thinking Geometric Progressions **Classroom Resources** **Geometry** Name my shape
Unit 7 Transformations **Chapter 20 Reflective Symmetry** • Recognise reflective symmetry in everyday objects and geometric shapes • Create reflective symmetrical patterns • Understand terminology “lines of symmetry” • Explore shapes, patterns and objects with multiple lines of symmetry **Chapter 21 Tessellation** *(This chapter was also included in the measurement plan as foundational to the concept of measuring area)* • Tessellate shapes through exploration with different shapes • Understand to tessellate requires no gaps or overlaps (BLM 6 - 10 provide outlines for shapes to explore tessellation)	

Unit 8 Position and Orientation	Support Material available from Wilkie Way website wilkieway.co.nz: membership area (subscription)
Chapter 22 Giving Directions *(This chapter was also included in the measurement plan as foundational to the concept of measuring angles)* • Identify left and right on themselves • Give directions using left and right • Turn themselves clockwise or anticlockwise • Use pepeha to descibe location by referring to environmental features *(Not included in Maths Aotearoa, use other resources)* **Chapter 23 Viewpoints and Plans** • Visualise perspectives other than their own • Create a simple plan of a 3 dimensional situation • Interpret simple plans • Give directions based on a simple plan	**Video Lesson** Geometric thinking GT 2 Left and Right Turns