



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

Maths Aotearoa Book 3B provides a range of learning opportunities building onto knowledge and concepts developed in year 5. These learning opportunities enable students to achieve the outcomes expected in year 6. The teacher book also provides links to further learning opportunities in the MOE Figure it Out series available in all schools

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 geometric ideas and further classroom resources

Phase 2: Year 6

Understand: (big ideas)	Do (practices)
<p>As students build knowledge through their use of the mathematical and statistical processes, they begin to understand:</p> <ul style="list-style-type: none"> • Patterns and variation • Logic and reasoning • Visualisation and application 	<p>Students will have learning opportunities to:</p> <ul style="list-style-type: none"> • Investigate situations • Represent situations • Connect situations • Generalise findings • Explain and justify findings

Know: Context of Geometry

Shapes	Spatial reasoning	Pathways
<p>Identify, classify, and explain similarities and differences between:</p> <ul style="list-style-type: none"> • 2D shapes, including different types of triangle • prism & pyramids <p>Identify and describe interior angles of triangles and quadrilaterals</p>	<p>Visualise and draw nets for rectangular prisms. Visualise and create 2D geometric patterns and tessellations, using rotation, reflection, and translation and identifying the properties of shapes that do not change.</p>	<p>Interpret and create grid references and simple scales on maps. Use directional language, including four main compass points, turn (in degrees) and distance in m, km) to locate and describe position and pathways.</p>

Maths Literacy Development

- Use specialist vocabulary associated with shape, space, position and orientation with increasing confidence - See vocabulary list in curriculum document.
- Read & understand math texts involving geometric language and concepts

Concepts being developed	Key knowledge being developed
<ul style="list-style-type: none"> • Direction (which way?) ,Distance (how far?) Location (where?), representation (object) • Reflective and Rotational symmetry • Transformations • Spatial thinking • Spatial reasoning • Spatial visualisation • Multiplicative and proportional thinking 	<ul style="list-style-type: none"> • Names for different sorts of triangles: equilateral, isosceles, scalene, right angle • Know terms polygon and polyhedron (plural polyhedra) • Read and interpret scales on a map • Know the convention of labelling corners of shapes and describing the lengths of the sides using the corner labels • Know position of major cities within New Zealand

Maths Aotearoa Book 3B	Support Material available from Wilkie Way website wilkieway.co.nz: membership area (subscription)
Unit 6 Geometric Properties	Teacher Professional Resources: Curriculum Knowledge: Measurement Pocket Guide: Further Developing Geometric Thinking Geometric Progressions Student Resources: Geometric problems Video Lessons Lines angles and triangles Drawing plane shapes
Chapter 16 Triangles and Angles <ul style="list-style-type: none"> • Describe and name different sorts of triangles • Discover angles in a triangle always add to 180° • Investigate side length relationships in right angle triangles • Investigate angles within a square 	
Chapter 17 Parallel and Perpendicular lines <ul style="list-style-type: none"> • Use language parallel and perpendicular in meaningful contexts • Introduce parallelogram and rhombus • Extend the description of properties to identify specific quadrilaterals 	
Chapter 18 Prisms and Pyramids <ul style="list-style-type: none"> • Describe the attributes of prisms and pyramids using correct geometric language • Explore building pyramids and prisms (e.g. using polydron) • Design nets for specific prisms 	
Unit 7 Transformations	
Chapter 19 Rotations, Reflections and Translations <ul style="list-style-type: none"> • Recognise reflective and rotational symmetry • Understand the difference between reflective and rotational symmetry • Describe translation on a grid • Design patterns involving reflection, rotation and translation 	
Unit 8 Position and Orientation	
Chapter 20 Maps and Pathways <ul style="list-style-type: none"> • Interpret and use scales to give actual distances • Use compass points to describe direction • Use co-ordinates or grid references to describe position and pathways • Investigate flight paths 	