



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

There are currently no progress steps given for year 7 so it is essential to look at the progress outcomes for year 8 and consider the types of learning experiences that students require to build up to achieving the progress outcomes at the end of year 8. The learning experiences are taken from book 4A and work towards the progress outcomes as written for year 8.

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 geometric ideas and geometric problems

Phase 3: Year 7

Understand: (big ideas)	Do (practices)
<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Investigate situations Represent situations Connect situations Generalise findings Explain and justify findings
Know: Context of Space (Geometry)	
Maths Literacy Development	
<ul style="list-style-type: none"> Confidently use specialist vocabulary associated with shape, space, position and orientation Confidently read & understand math texts involving geometric language and concepts 	
Concepts being developed	Key knowledge being developed
<ul style="list-style-type: none"> Angle properties of geometric shapes Spatial awareness by thinking and asking Which way? How far? Proportional thinking Importance of symmetry to different cultures Variant and invariant properties of shapes 	<ul style="list-style-type: none"> Know the sum of the interior angles of a triangle is 180° Knowledge of direction Know the sum of the interior angles of a quadrilateral is 360° Whole number scale factors - enlargements Fractional scale factors - reductions

<p style="text-align: center;">Maths Aotearoa Book 4A</p>	<p style="text-align: center;">Support Material available from Wilkie Way website wilkieWAY.co.nz: membership area (subscription)</p>
<p>Unit 4 Geometric Properties</p>	
<p>Chapter 13 Constructing Geometric Shapes</p> <ul style="list-style-type: none"> • Classify polygons based on their geometric properties • Construct triangles and regular hexagons using a ruler and compass <p>Chapter 14 Lines and Angles <i>This chapter was included in the measurement plan as it involves measuring angles.</i></p> <ul style="list-style-type: none"> • Use the language of angles- acute, obtuse, reflex • Use the language of straight lines - vertical, horizontal, diagonal, parallel, perpendicular, intersection • Draw conclusions about angles at an intersection • Use a protractor to measure angles accurately 	<p>Teacher Professional Resources: Curriculum Knowledge: Geometry Pocket Guide: Further developing Geometric Thinking</p> <p>Geometric Progressions</p> <p>Moderation Using Curriculum Progress Tools Geometric Progressions 3 - 5</p>
<p>Unit 5 Position and Orientation</p>	
<p>Chapter 15 Maps and Plans</p> <ul style="list-style-type: none"> • Use points of the compass • Use knowledge of simple ratios to find equivalent ratios • Select and interpret scales on maps and plans • Investigate scales on a variety of maps (including Google Maps) • Investigate plan view drawings • Draw a plan to a self selected scale 	
<p>Unit 6 Transformations</p>	
<p>Chapter 16 Rotational and Reflective Symmetry</p> <ul style="list-style-type: none"> • Use terminology order of reflective symmetry and rotational symmetry with understanding • Investigate symmetrical and angle properties of parallelograms <p>Chapter 17 Enlargements</p> <ul style="list-style-type: none"> • Enlarge a simple shape by a specific scale factor • Know a fractional scale factor results in a reduction • Identify the invariant properties of an enlargement 	