National Curriculum Links

Australian Curriculum for Mathematics

This maps entries in the **Australian Mathematics Curriculum (from Foundation Stage to Year 7)** to the content of chapters of Haylock & Manning, *Mathematics Explained for Primary Teachers*, Australian edition.

# Chapters 23–25: Angle, transformations and symmetry, classifying shapes

## Foundation Year

* Sort, describe and name familiar two-dimensional shapes and three-dimensional objects in the environment
* Describe position and movement

## Year 1

* Recognize and classify familiar two-dimensional shapes and three-dimensional objects using obvious features
* Give and follow directions to familiar locations

## Year 2

* Describe and draw two-dimensional shapes, with and without digital technologies
* Describe the features of three-dimensional objects
* Interpret simple maps of familiar locations and identify the relative positions of key features
* Investigate the effect of one-step slides and flips with and without digital technologies
* Identify and describe half and quarter turns

## Year 3

* Make models of three-dimensional objects and describe key features
* Create and interpret simple grid maps to show position and pathways
* Identify symmetry in the environment
* Identify angles as measures of turn and compare angle sizes in everyday situations

## Year 4

* Compare and describe two-dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies
* Use simple scales, legends and directions to interpret information contained in basic maps
* Create symmetrical patterns, pictures and shapes with and without digital technologies
* Compare angles and classify them as equal to, greater than or less than a right angle

## Year 5

* Connect three-dimensional objects with their nets and other two-dimensional representations
* Use a grid reference system to describe locations
* Describe routes using landmarks and directional language
* Describe translations, reflections and rotations of two-dimensional shapes
* Identify line and rotational symmetries
* Apply the enlargement transformation to familiar two-dimensional shapes and explore the properties of the resulting image compared with the original
* Estimate, measure and compare angles using degrees
* Construct angles using a protractor

## Year 6

* Construct simple prisms and pyramids
* Investigate combinations of translations, reflections and rotations, with and without the use of digital technologies
* Introduce the Cartesian coordinate system using all four quadrants
* Investigate, with and without digital technologies, angles on a straight line, angles at a point and vertically opposite angles
* Use results to find unknown angles

## Year 7

* Establish the formulas for areas of rectangles, triangles and parallelograms and use these in problem solving
* Calculate volumes of rectangular prisms
* Draw different views of prisms and solids formed from combinations of prisms
* Describe translations, reflections in an axis, and rotations of multiples of 90° on the Cartesian plane using coordinates
* Identify line and rotational symmetries
* Identify corresponding, alternate and co-interior angles when two straight lines are crossed by a transversal
* Investigate conditions for two lines to be parallel and solve simple numerical problems using reasoning
* Classify triangles according to their side and angle properties and describe quadrilaterals
* Demonstrate that the angle sum of a triangle is 180° and use this to find the angle sum of a quadrilateral