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|  | Measurement and Geometry Scope & SequenceThe Australian Curriculum v4.0 |
| Using Units of Measurement | **Foundation** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** | **Year 7** | **Year 8** | **Year 9** | **Year 10** | **Year 10 A** |
|  | [Use direct and indirect comparisons to decide which is longer, heavier or holds more, and explain reasoning in everyday language](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=F&s=MG&layout=1" \o "Elaborations: 1) comparing objects directly, by placing one object against another to determine which is longer or by pouring from one container into the other to see which one holds more, 2) using suitable language associated with measurement attributes, )[(ACMMG006)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=F&s=MG&layout=1" \o "Elaborations: 1) comparing objects directly, by placing one object against another to determine which is longer or by pouring from one container into the other to see which one holds more, 2) using suitable language associated with measurement attributes, )[Compare and order the duration of events using the everyday language of time (ACMMG007)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=F&s=MG&layout=1)[*TIMESMG03*](http://www.amsi.org.au/teacher_modules/time.html)[Connect days of the week to familiar events and actions (ACMMG008)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=F&s=MG&layout=1) | [Measure and compare the lengths and capacities of pairs of objects using uniform informal units (ACMMG019)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=1&s=MG&layout=1)[Tell time to the half-our (ACMMG020)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=1&s=MG&layout=1)[*TIMESMG03*](http://www.amsi.org.au/teacher_modules/time.html)[Describe duration using months, weeks, days and hours (ACMMG021)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=1&s=MG&layout=1)[*TIMESMG03*](http://www.amsi.org.au/teacher_modules/time.html) | [Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units (ACMMG037)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=2&s=MG&layout=1)[Compare masses of objects using balance scales (ACMMG038)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=2&s=MG&layout=1)[Tell time to the quarter-hour, using the language of 'past' and 'to' (ACMMG039)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=2&s=MG&layout=1)[*TIMESMG03*](http://www.amsi.org.au/teacher_modules/time.html)[Name and order months and seasons (ACMMG040)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=2&s=MG&layout=1)[*TIMESMG03*](http://www.amsi.org.au/teacher_modules/time.html)[Use a calendar to identify the date and determine the number of days in each month(ACMMG041)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=2&s=MG&layout=1)[TIMESMG03](http://www.amsi.org.au/teacher_modules/time.html) | [Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=3&s=MG&layout=1)[Tell time to the minute and investigate the relationship between units of time(ACMMG062)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=3&s=MG&layout=1)[*TIMESMG03*](http://www.amsi.org.au/teacher_modules/time.html) | [Use scaled instruments to measure and compare lengths, masses, capacities and temperatures (ACMMG084)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=4&s=MG&layout=1" \o "Elaborations: reading and interpreting the graduated scales on a range of measuring instruments to the nearest graduation)[Compare objects using familiar metric units of area and volume (ACMMG290)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=4&s=MG&layout=1" \o "Elaborations: 1) comparing areas using grid paper, 2) comparing volume using centicubes, 3) recognising that metric units are not the only units used throughout the world)[Converts between units of time (ACMMG085)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=4&s=MG&layout=1" \o "Elaborations: identifying and using the correct operation for converting units of time)[*TIMESMG03*](http://www.amsi.org.au/teacher_modules/time.html)[Uses am and pm notation and solve simple time problems (ACMMG086)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=4&s=MG&layout=1" \o "Elaborations: 1) calculating the time spent at school during a normal school day, 2) calculating the time required to travel between two locations, 3) determining arrival time given departure time)[*TIMESMG03*](http://www.amsi.org.au/teacher_modules/time.html) | [Choose appropriate units of measurement for length, area, volume, capacity and mass(ACMMG108)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=5&s=MG&layout=1)*SAMMYMG03*[Calculate the perimeter and area of rectangles using familiar metric units (ACMMG109)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=5&s=MG&layout=1)[Compare 12- and 24-hour time systems and convert between them (ACMMG110)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=5&s=MG&layout=1)[*TIMESMG03*](http://www.amsi.org.au/teacher_modules/time.html) | [Connect decimal representations to the metric system (ACMMG135)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=6&s=MG&layout=1)[Convert between common metric units of length, mass and capacity (ACMMG136)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=6&s=MG&layout=1)[*TIMESMG10*](http://www.amsi.org.au/teacher_modules/introduction_to_measurement.html)[Solve problems involving the comparison of lengths and areas using appropriate units(ACMMG137)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=6&s=MG&layout=1)[Connect volume and capacity and their units of measurement (ACMMG138)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=6&s=MG&layout=1)*SAMMYMG05*[Interpret and use timetables (ACMMG139)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=6&s=MG&layout=1) | [Establish the formulas for areas of rectangles, triangles and parallelograms and use these in problem solving (ACMMG159)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=7&s=MG&layout=1" \o "Elaborations: 1) build on understanding of area of rectangles to develop formulas for area of triangles, 2) establishing that area of a triangle is half area of an appropriate rectangle, 3) using area formulas for rectangles and triangles to solve problems)[*TIMESMG10*](http://www.amsi.org.au/teacher_modules/introduction_to_measurement.html)[Calculate volumes of rectangular prisms (ACMMG160)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=7&s=MG&layout=1" \o "Elaborations: 1) investigating volumes of cubes and rectangular prisms and establishing and using the formula V = l × b × h, 2) understanding and using cubic units when interpreting and finding volumes of cubes and rectangular prisms)[*TIMESMG11*](http://www.amsi.org.au/teacher_modules/area_volume_surface_area.html) | [Choose appropriate units of measurement for area and volume and convert from one unit to another (ACMMG195)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=8&s=MG&layout=1)[Find perimeters and areas of parallelograms, trapeziums, rhombuses and kites (ACMMG196)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=8&s=MG&layout=1)[*TIMESMG11*](http://www.amsi.org.au/teacher_modules/area_volume_surface_area.html)[Investigate the relationship between features of circles such as circumference, area, radius and diameter. Use formulas to solve problems involving circumference and area (ACMMG197)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=8&s=MG&layout=1)[*TIMESMG17*](http://www.amsi.org.au/teacher_modules/the_circle.html)[*SAMMYMG12*](http://www.amsi.org.au/ESA_middle_years/Year8/Year8_md/Year8_2c.html#intro)[Develop the formulas for volumes of rectangular and triangular prisms and prisms in general. Use formulas to solve problems involving volume(ACMMG198)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=8&s=MG&layout=1)[*TIMESMG11*](http://www.amsi.org.au/teacher_modules/area_volume_surface_area.html)[*SAMMYMG10*](http://www.amsi.org.au/ESA_middle_years/Year8/Year8_md/Year8_2a.html#intro)[Solve problems involving duration, including using 12- and 24-hour time within a single time zone (ACMMG199)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=8&s=MG&layout=1)[*TIMESMG03*](http://www.amsi.org.au/teacher_modules/time.html) | [Calculate the areas of composite shapes (ACMMG216)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=9&s=MG&layout=1)[Calculate the surface area and volume of cylinders and solve related problems(ACMMG217)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=9&s=MG&layout=1)[*TIMESMG12*](http://www.amsi.org.au/teacher_modules/Cones_Pyramids_and_Spheres.html)[*SAMMYMG11*](http://www.amsi.org.au/ESA_middle_years/Year9/Year9_md/Year9_2a.html#intro)[Solve problems involving the surface area and volume of right prisms (ACMMG218)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=9&s=MG&layout=1)[*TIMESMG12*](http://www.amsi.org.au/teacher_modules/Cones_Pyramids_and_Spheres.html)[*SAMMYMG11*](http://www.amsi.org.au/ESA_middle_years/Year9/Year9_md/Year9_2a.html#intro)[Investigate very small and very large time scales and intervals (ACMMG219)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=9&s=MG&layout=1)[*SAMMYMG10*](http://www.amsi.org.au/ESA_middle_years/Year9/Year9_md/Year9_1e.html#intro) | [Solve problems involving surface area and volume for a range of prisms, cylinders and composite solids (ACMMG242)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=10&s=MG&layout=1)[*TIMESMG12*](http://www.amsi.org.au/teacher_modules/Cones_Pyramids_and_Spheres.html) | [Solve problems involving surface area and volume of right pyramids, right cones, spheres and related composite solids (ACMMG271)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=10A&s=MG&layout=1)[*TIMESMG12*](http://www.amsi.org.au/teacher_modules/Cones_Pyramids_and_Spheres.html) |

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|  | **Prep** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** | **Year 7** | **Year 8** | **Year 9** | **Year 10** | **Year 10 A** |
| Shape | [Describe position and movement (ACMMG010)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=F&s=MG&layout=1) | [Recognise and classify familiar two-dimensional shapes and three-dimensional objects using obvious features (ACMMG022)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=1&s=MG&layout=1) | [Describe and draw two-dimensional shapes, with and without digital technologies(ACMMG042)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=2&s=MG&layout=1)[Describe the features of three-dimensional objects (ACMMG043)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=2&s=MG&layout=1) | [Make models of three-dimensional objects and describe key features (ACMMG063)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=3&s=MG&layout=1) | [Compares the areas of regular and irregular shapes by informal means (ACMMG087)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=4&s=MG&layout=1" \o "Elaborations: comparing areas using metric units, such as counting the number of square centimetres required to cover two areas by overlaying the areas with a grid of centimetre squares) [Compares and describes two dimensional shapes that result from combining and splitting common shapes, with and without digital technologies (ACMMG088)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=4&s=MG&layout=1" \o "Elaborations: 1) composite shape by re-creating it from these shapes, 2) creating a two-dimensional shapes from verbal or written instructions) | Connect three-dimensional objects with their nets and other two-dimensional representations (ACMMG111) | [Construct simple prisms and pyramids (ACMMG140)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=6&s=MG&layout=1)[*SAMMYMG05*](http://www.amsi.org.au/ESA_middle_years/Year6/Year6_md/Year6_2b.html#intro) | [Draw different views of prisms and solids formed from combinations of prisms (ACMMG161)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=7&s=MG&layout=1" \o "Elaborations: using aerial views of buildings and other 3-D structures to visualise the structure of the building or prism) |  |  |  |  |

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| Location and Transformation | [Describe position and movement (ACMMG010)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=F&s=MG&layout=1) | [Give and follow directions to familiar locations (ACMMG023)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=1&s=MG&layout=1) | [Interpret simple maps of familiar locations and identify the relative positions of key features (ACMMG044)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=2&s=MG&layout=1)[Investigate the effect of one-step slides and flips with and without digital technologies(ACMMG045)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=2&s=MG&layout=1)[Identify and describe half and quarter turns (ACMMG046)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=2&s=MG&layout=1) | [Create and interpret simple grid maps to show position and pathways (ACMMG065)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=3&s=MG&layout=1)[Identify symmetry in the environment (ACMMG066)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=3&s=MG&layout=1) | [Uses simple scales, legends and directions to interpret information contained in basic maps (ACMMG090)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=4&s=MG&layout=1)[Creates symmetrical patterns, pictures and shapes with and without digital technologies (ACMMG091)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=4&s=MG&layout=1" \o "Elaborations: using stimulus materials such as the motifs in Central Asian textiles, Tibetan artefacts, Indian lotus designs and symmetry in Yolngu or Central and Western Desert art) | [Use a grid reference system to describe locations. Describe routes using landmarks and directional language (ACMMG113)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=5&s=MG&layout=1)[Describe translations, reflections and rotations of two-dimensional shapes. Identify line and rotational symmetries (ACMMG114)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=5&s=MG&layout=1)[Apply the enlargement transformation to familiar two dimensional shapes and explore the properties of the resulting image compared with the original (ACMMG115)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=5&s=MG&layout=1)*SAMMYMG02* | [Investigate combinations of translations, reflections and rotations, with and without the use of digital technologies (ACMMG142)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=6&s=MG&layout=1)[Introduce the Cartesian coordinate system using all four quadrants (ACMMG143)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=6&s=MG&layout=1)*SAMMYMG04* | [Describe translations, reflections in an axis, and rotations of multiples of 90° on the Cartesian plane using coordinates. Identify line and rotational symmetries (ACMMG181)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=7&s=MG&layout=1" \o "Elaborations: 1) describing patterns and investigating different ways to produce same transformation eg using two successive reflections to provide same result as a translation, 2) experimenting/creating/recreating patterns using combinations of transforms)[*SAMMYMG09*](http://www.amsi.org.au/ESA_middle_years/Year7/Year7_md/Year7_2d.html#intro) |  |  |  |  |

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| Geometric Reasoning |  |  |  | [Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=3&s=MG&layout=1) | [Compare angles and classify them as equal to, greater than or less than a right angle (ACMMG089)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=4&s=MG&layout=1" \o "Elaborations: creating angles and comparing them to a right angle using digital technologies) | [Estimate, measure and compare angles using degrees. Construct angles using a protractor (ACMMG112)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=5&s=MG&layout=1)*SAMMYG01* | [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 (ACMMG141)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=6&s=MG&layout=1)[*TIMESMG09*](http://www.amsi.org.au/teacher_modules/introduction_to_plane_geometry.html) | [Identify corresponding, alternate and co-interior angles when two straight lines are crossed by a transversal (ACMMG163)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=7&s=MG&layout=1" \o "Elaborations: defining and classifying pairs of angles as complementary, supplementary, adjacent and vertically opposite)[*TIMESMG09*](http://www.amsi.org.au/teacher_modules/introduction_to_plane_geometry.html)[*SAMMYMG08*](http://www.amsi.org.au/ESA_middle_years/Year7/Year7_md/Year7_2c.html#intro)[Investigate conditions for two lines to be parallel and solve simple numerical problems using reasoning (ACMMG164)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=7&s=MG&layout=1" \o "Elaborations: 1) constructing parallel & perpendicular lines using their properties, a pair of compasses & a ruler, & dynamic geometry software, 2) define/identify rel'ships betw'n altenate/corresponding/co-interior angles for parallel ines & tranversal)[*TIMESMG09*](http://www.amsi.org.au/teacher_modules/introduction_to_plane_geometry.html)[Demonstrate that the angle sum of a triangle is 180° and use this to find the angle sum of a quadrilateral (ACMMG166)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=7&s=MG&layout=1" \o "Elaborations: using concrete materials and digital technologies to investigate the angle sum of a triangle and quadrilatera)[*TIMESMG09*](http://www.amsi.org.au/teacher_modules/introduction_to_plane_geometry.html)[Classify triangles according to their side and angle properties and describe quadrilaterals (ACMMG165)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=7&s=MG&layout=1" \o "Elaborations: 1) identifying side and angle properties of scalene, isosceles, right-angled and obtuse-angled triangles, 2) describing squares, rectangles, rhombuses, parallelograms, kites and trapeziums)[*TIMESMG13*](http://www.amsi.org.au/teacher_modules/Construction.html)[*TIMESMG20*](http://www.amsi.org.au/teacher_modules/Parallelograms_and_rectangles.html)[*TIMESMG21*](http://www.amsi.org.au/teacher_modules/Rhombuses_Kites_and_Trapezia.html) | [Define congruence of plane shapes using transformations (ACMMG200)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=8&s=MG&layout=1)[*TIMESMG14*](http://www.amsi.org.au/teacher_modules/Congruence.html)[*SAMMYMG11*](http://www.amsi.org.au/ESA_middle_years/Year8/Year8_md/Year8_2b.html#intro)[Develop the conditions for congruence of triangles (ACMMG201)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=8&s=MG&layout=1)[*TIMESMG14*](http://www.amsi.org.au/teacher_modules/Congruence.html)[*TIMESMG22*](http://www.amsi.org.au/teacher_modules/Scale_drawings_and_similarity.html)[Establish properties of quadrilaterals using congruent triangles and angle properties, and solve related numerical problems using reasoning (ACMMG202)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=8&s=MG&layout=1)[*TIMESMG14*](http://www.amsi.org.au/teacher_modules/Congruence.html)[*TIMESMG20*](http://www.amsi.org.au/teacher_modules/Parallelograms_and_rectangles.html)[*TIMESMG22*](http://www.amsi.org.au/teacher_modules/Scale_drawings_and_similarity.html) | [Use the enlargement transformation to explain similarity and develop the conditions for triangles to be similar (ACMMG220)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=9&s=MG&layout=1)[*TIMESMG22*](http://www.amsi.org.au/teacher_modules/Scale_drawings_and_similarity.html)[*SAMMYMG12*](http://www.amsi.org.au/ESA_middle_years/Year9/Year9_md/Year9_2b.html#intro)[Solve problems using ratio and scale factors in similar figures (ACMMG221)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=9&s=MG&layout=1)[*TIMESMG22*](http://www.amsi.org.au/teacher_modules/Scale_drawings_and_similarity.html) | [Formulate proofs involving congruent triangles and angle properties (ACMMG243)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=10&s=MG&layout=1)[*TIMESMG22*](http://www.amsi.org.au/teacher_modules/Scale_drawings_and_similarity.html)[Apply logical reasoning, including the use of congruence and similarity, to proofs and numerical exercises involving plane shapes (ACMMG244)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=10&s=MG&layout=1)[*TIMESMG20*](http://www.amsi.org.au/teacher_modules/Parallelograms_and_rectangles.html)[*TIMESMG21*](http://www.amsi.org.au/teacher_modules/Rhombuses_Kites_and_Trapezia.html)[*TIMESMG22*](http://www.amsi.org.au/teacher_modules/Scale_drawings_and_similarity.html) | [Prove and apply angle and chord properties of circles (ACMMG272)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=10A&s=MG&layout=1)[*TIMESMG26*](http://www.amsi.org.au/teacher_modules/Circle_Geometry.html) |

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|  | **Prep** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** | **Year 7** | **Year 8** | **Year 9** | **Year 10** | **Year 10 A** |
| Pythagoras and Trigonometry  |  |  |  |  |  |  |  |  |  | [Investigate Pythagoras’ Theorem and its application to solving simple problems involving right angled triangles (ACMMG222)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=9&s=MG&layout=1)[*TIMESMG15*](http://www.amsi.org.au/teacher_modules/pythagoras_theorem.html)[Use similarity to investigate the constancy of the sine, cosine and tangent ratios for a given angle in right-angled triangles (ACMMG223)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=9&s=MG&layout=1)[*TIMESMG22*](http://www.amsi.org.au/teacher_modules/Scale_drawings_and_similarity.html)[*TIMESMG23*](http://www.amsi.org.au/teacher_modules/introductory_trigonometry.html)[*SAMMYMG13*](http://www.amsi.org.au/ESA_middle_years/Year9/Year9_md/Year9_2c.html#intro)[Apply trigonometry to solve right-angled triangle problems (ACMMG224)](http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10?y=9&s=MG&layout=1)[*TIMESMG23*](http://www.amsi.org.au/teacher_modules/introductory_trigonometry.html) | [Solve right-angled triangle problems including those involving direction and angles of elevation and depression (ACMMG245)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=10&s=MG&layout=1)[*TIMESMG23*](http://www.amsi.org.au/teacher_modules/introductory_trigonometry.html) | [Establish the sine, cosine and area rules for any triangle and solve related problems (ACMMG273)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=10A&s=MG&layout=1)[*TIMESMG24*](http://www.amsi.org.au/teacher_modules/further_trigonometry.html)[Use the unit circle to define trigonometric functions, and graph them with and without the use of digital technologies (ACMMG274)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=10A&s=MG&layout=1)[*TIMESMG25*](http://www.amsi.org.au/teacher_modules/The_trigonometric_functions.html)[Solve simple trigonometric equations (ACMMG275)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=10A&s=MG&layout=1)[*TIMESMG25*](http://www.amsi.org.au/teacher_modules/The_trigonometric_functions.html)Use [Pythagoras' theorem and trigonometry to solving three-dimensional problems in right-angled triangles (ACMMG276)](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=10A&s=MG&layout=1)[*TIMESMG24*](http://www.amsi.org.au/teacher_modules/further_trigonometry.html) |