Mathematics – Measurement and Geometry: Foundation – Level 6

Foundation Level	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Measurement and Geometry						
Using units of measurement						
Use direct and indirect comparisons to decide which is longer, heavier or holds more, and explain reasoning in everyday language	Measure and compare the lengths, masses and capacities of pairs of objects using uniform informal units	Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units	Measure, order and compare objects using familiar metric units of length, area, mass and capacity	Use scaled instruments to measure and compare lengths, masses, capacities and temperatures	Choose appropriate units of measurement for length, area, volume, capacity and mass	Connect decimal representations to the metric system
Compare and order the duration of events using the everyday language of time	Tell time to the half-hour	Compare masses of objects using balance scales	Tell time to the minute and investigate the relationship between units of time	Compare objects using familiar metric units of area and volume	Calculate the perimeter and area of rectangles and the volume and capacity of prisms using familiar metric units	Convert between common metric units of length, mass and capacity
Connect days of the week to familiar events and actions	Describe duration using months, weeks, days and hours	Tell time to the quarter-hour, using the language of 'past' and 'to'		Convert between units of time	Compare 12- and 24-hour time systems and convert between them	Solve problems involving the comparison of lengths and areas using appropriate units
		Name and order months and seasons		Use am and pm notation and solve simple time problems		Connect volume and capacity and their units of measurement
		Use a calendar to identify the date and determine the number of days in each month				Interpret and use timetables
						Measure, calculate and compare elapsed time
Shape						
Sort, describe and name familiar two-dimensional shapes and three-dimensional objects in the environment	Recognise and classify familiar two-dimensional shapes and three-dimensional objects using obvious features	Describe and draw two-dimensional shapes, with and without digital technologies	Make models of three-dimensional objects and describe key features	Compare the areas of regular and irregular shapes by informal means	Connect three-dimensional objects with their nets and other two-dimensional representations	Construct simple prisms and pyramids
		Describe the features of three-dimensional objects		Compare and describe two dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies		
				Explain and compare the geometric properties of two-dimensional shapes and three-dimensional objects		
Location and transformation						
Describe position and movement	Give and follow directions to familiar locations	Interpret simple maps of familiar locations and identify the relative positions of key features	Create and interpret simple grid maps to show position and pathways	Use simple scales, legends and directions to interpret information contained in basic maps	Use a grid reference system to describe locations. Describe routes using landmarks and directional language	Investigate the effect of combinations of transformations on simple and composite shapes, including creating tessellations, with and without the use of digital technologies
		Investigate the effect of one-step slides and flips with and without digital technologies	Identify symmetry in the environment	Create symmetrical patterns, pictures and shapes with and without digital technologies	Describe translations, reflections and rotations of two-dimensional shapes. Identify line and rotational symmetries	Introduce the Cartesian coordinate system using all four quadrants
		Identify and describe half and quarter turns	Identify and describe slides and turns found in the natural and built environment		Apply the enlargement transformation to familiar two dimensional shapes and explore the properties of the resulting image compared with the original	
			Geometric reasoning			
			Identify angles as measures of turn and compare angle sizes in everyday situations	Compare angles and classify them as equal to, greater than or less than a right angle	Estimate, measure and compare angles using degrees. Construct angles using a protractor	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
Achievement Standard						
Students identify measurement attributes in practical situations and compare lengths, masses and capacities of familiar objects. They order events, explain their duration, and match days of the week to familiar events. Students identify simple shapes in their environment and sort shapes by their common and distinctive features. They use simple statements and gestures to describe location.	Students use informal units of measurement to order objects based on length, mass and capacity. They tell time to the half-hour and explain time durations. Students describe two-dimensional shapes and three-dimensional objects. They use the language of distance and direction to move from place to place.	Students order shapes and objects, using informal units for a range of measures. They tell time to the quarter hour and use a calendar to identify the date, days, weeks and months included in seasons and other events. Students draw two-dimensional shapes, specify their features and explain the effects of one-step transformations. They recognise the features of three-dimensional objects. They interpret simple maps of familiar locations.	Students use metric units for length, area, mass and capacity. They tell time to the nearest minute. Students identify symmetry in natural and constructed environments. They use angle size as a measure of turn in real situations and make models of three-dimensional objects. Students match positions on maps with given information and create simple maps.	Students compare areas of regular and irregular shapes, using informal units. They solve problems involving time duration. Students use scaled instruments to measure length, angle, area, mass, capacity and temperature of shapes and objects. They convert between units of time. Students create symmetrical simple and composite shapes and patterns, with and without the use of digital technology. They classify angles in relation to a right angle. Students interpret information contained in maps.	Students use appropriate units of measurement for length, area, volume, capacity and mass, and calculate perimeter and area of rectangles and volume, and capacity of rectangular prisms. They convert between 12 and 24-hour time. Students use a grid reference system to locate landmarks. They estimate angles, and use protractors and digital technology to construct and measure angles. Students connect three-dimensional objects with their two-dimensional representations. They describe transformations of two-dimensional shapes and identify line and rotational symmetry.	Students relate decimals to the metric system and choose appropriate units of measurement to perform a calculation. They solve problems involving time, length and area, and make connections between capacity and volume. Students interpret a variety of everyday timetables. They solve problems using the properties of angles and investigate simple combinations of transformations in the plane, with and without the use of digital technology. Students construct simple prisms and pyramids.