MATHEMATICS – Scope and sequence P–6

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number and algebra							
Number and place value	Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point	Develop confidence with number sequences to and from 100 by ones from any starting point. Skip count by twos, fives and tens starting from zero	Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and tens from any starting point, then moving to other sequences	Investigate the conditions required for a number to be odd or even and identify odd and even numbers	Investigate and use the properties of odd and even numbers	Identify and describe factors and multiples of whole numbers and use them to solve problems	Identify and describe properties of prime, composite, square and triangular numbers
	Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond	Recognise, model, read, write and order numbers to at least 100. Locate these numbers on a number line	Recognise, model, represent and order numbers to at least 1000	Recognise, model, represent and order numbers to at least 10 000	Recognise, represent and order numbers to at least tens of thousands	Use estimation and rounding to check the reasonableness of answers to calculations	
	Subitise small collections of objects	Count collections to 100 by partitioning numbers using place value	Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting	Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems	Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems		
	Compare, order and make correspondences between collections, initially to 20, and explain reasoning	Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts	Explore the connection between addition and subtraction	Recognise and explain the connection between addition and subtraction	Investigate number sequences involving multiples of 3, 4, 6, 7, 8, and 9		Investigate everyday situations that use integers. Locate and represent these numbers on a number line

MATHEMATICS – Scope and sequence P–6

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number and place value	Represent practical situations to model addition and sharing		Solve simple addition and subtraction problems using a range of efficient mental and written strategies	Recall addition facts for single-digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation			
			Recognise and represent multiplication as repeated addition, groups and arrays	Recall multiplication facts of two, three, five and ten and related division facts	Recall multiplication facts up to 10 × 10 and related division facts		
			Recognise and represent division as grouping into equal sets and solve simple problems using these representations			Solve problems involving division by a one digit number, including those that result in a remainder	
				Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies	Develop efficient mental and written strategies and use appropriate digital technologies for multiplication and for division where there is no remainder	Use efficient mental and written strategies and apply appropriate digital technologies to solve problems Solve problems involving multiplication of large numbers by one- or two-digit numbers using efficient mental, written strategies and appropriate digital technologies	Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers
Fractions and decimals		Recognise and describe one-half as one of two equal parts of a whole	Recognise and interpret common uses of halves, quarters and eighths of shapes and collections	Model and represent unit fractions including 1/2, 1/4, 1/3, 1/5 and their multiples to a complete whole	Investigate equivalent fractions used in contexts	Compare and order common unit fractions and locate and represent them on a number line	Compare fractions with related denominators and locate and represent them on a number line

MATHEMATICS – Scope and sequence P–6

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Fractions and decimals					Count by quarters, halves and thirds, including with mixed numerals. Locate and represent these fractions on a number line	Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator	Solve problems involving addition and subtraction of fractions with the same or related denominators
					Recognise that the place value system can be extended to tenths and hundredths. Make connections between fractions and decimal notation	Recognise that the place value system can be extended beyond hundredths	Find a simple fraction of a quantity where the result is a whole number, with and without digital technologies
						Compare, order and represent decimals	Add and subtract decimals, with and without digital technologies, and use estimation and rounding to check the reasonableness of answers
							Multiply decimals by whole numbers and perform divisions by non-zero whole numbers where the results are terminating decimals, with and without digital technologies
							Multiply and divide decimals by powers of 10
							Make connections between equivalent fractions, decimals and percentages
Real numbers	This sequence starts at Year 7						

MATHEMATICS – Scope and sequence P–6

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Money and financial mathematics		Recognise, describe and order Australian coins according to their value	Count and order small collections of Australian coins and notes according to their value	Represent money values in multiple ways and count the change required for simple transactions to the nearest five cents	Solve problems involving purchases and the calculation of change to the nearest five cents with and without digital technologies	Create simple financial plans	Investigate and calculate percentage discounts of 10%, 25% and 50% on sale items, with and without digital technologies
Patterns and algebra	Sort and classify familiar objects and explain the basis for these classifications. Copy, continue and create patterns with objects and drawings	Investigate and describe number patterns formed by skip-counting and patterns with objects	Describe patterns with numbers and identify missing elements	Describe, continue, and create number patterns resulting from performing addition or subtraction	Explore and describe number patterns resulting from performing multiplication	Describe, continue and create patterns with fractions, decimals and whole numbers resulting from addition and subtraction	Continue and create sequences involving whole numbers, fractions and decimals. Describe the rule used to create the sequence
			Solve problems by using number sentences for addition or subtraction		Solve word problems by using number sentences involving multiplication or division where there is no remainder		Explore the use of brackets and order of operations to write number sentences
					Find unknown quantities in number sentences involving addition and subtraction and identify equivalent number sentences involving addition and subtraction	Find unknown quantities in number sentences involving multiplication and division and identify equivalent number sentences involving multiplication and division	
Linear and non-linear relationships	This sequence starts at Year 7						

MATHEMATICS – Scope and sequence P–6

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 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 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, 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 masses of objects using balance scales		Compare objects using familiar metric units of area and volume	Calculate perimeter and area of rectangles using familiar metric units	Convert between common metric units of length, mass and capacity Solve problems involving the comparison of lengths and areas using appropriate units
							Connect volume and capacity and their units of measurement
	Compare and order duration of events using everyday language of time Connect days of the week to familiar events and actions	Tell time to the half-hour Describe duration using months, weeks, days and hours	Tell time to the quarter-hour, using the language of 'past' and 'to' Name and order months and seasons Use a calendar to identify the date and determine the number of days in each month	Tell time to the minute and investigate the relationship between units of time	Convert between units of time Use 'am' and 'pm' notation and solve simple time problems	Compare 12- and 24-hour time systems and convert between them	Interpret and use timetables

MATHEMATICS – Scope and sequence P–6

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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		
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 combinations of translations, reflections and rotations, with and without the use of digital technologies
			Investigate the effect of one-step slides and flips with and without digital technologies Identify and describe half and quarter turns	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
						Apply the enlargement transformation to familiar two-dimensional shapes and explore the properties of the resulting image compared with the original	
Geometric reasoning	This sequence starts at Year 3			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

MATHEMATICS – Scope and sequence P–6

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Pythagoras and trigonometry	This sequence starts at Year 9						
Statistics and probability							
Chance		Identify outcomes of familiar events involving chance and describe them using everyday language such as 'will happen', 'won't happen' or 'might happen'	Identify practical activities and everyday events that involve chance. Describe outcomes as 'likely' or 'unlikely' and identify some events as 'certain' or 'impossible'	Conduct chance experiments, identify and describe possible outcomes and recognise variation in results	Describe possible everyday events and order their chances of occurring	List outcomes of chance experiments involving equally likely outcomes and represent probabilities of those outcomes using fractions	Describe probabilities using fractions, decimals and percentages
					Identify everyday events where one cannot happen if the other happens	Recognise that probabilities range from 0 to 1	Conduct chance experiments with both small and large numbers of trials using appropriate digital technologies
					Identify events where the chance of one will not be affected by the occurrence of the other		Compare observed frequencies across experiments with expected frequencies
Data representation and interpretation	Answer yes/no questions to collect information and make simple inferences	Choose simple questions and gather responses and make simple inferences	Identify a question of interest based on one categorical variable. Gather data relevant to the question	Identify questions or issues for categorical variables. Identify data sources and plan methods of data collection and recording	Select and trial methods for data collection, including survey questions and recording sheets	Pose questions and collect categorical or numerical data by observation or survey	Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables
		Represent data with objects and drawings where one object or drawing represents one data value. Describe the displays	Collect, check and classify data	Collect data, organise into categories and create displays using lists, tables, picture graphs and simple column graphs, with and without the use of digital technologies	Construct suitable data displays, with and without the use of digital technologies, from given or collected data. Include tables, column graphs and picture graphs where one picture can represent many data values	Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies	Interpret secondary data presented in digital media and elsewhere

MATHEMATICS – Scope and sequence P–6

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Data representation and interpretation			Create displays of data using lists, table and picture graphs and interpret them	Interpret and compare data displays	Evaluate the effectiveness of different displays in illustrating data features including variability	Describe and interpret different data sets in context	