CAMS Plus, STAMS Plus & Solve
Australian Curriculum: Mathematics

Hawker Brownlow EDUCATION

Each book in the *CAMS® Plus, STAMS® Plus* and *Solve® Series* covers a range of Australian Curriculum content descriptions spread across two year levels. This allows teachers to select lessons for remediation or extension based on each student's needs. Each lesson across all eight levels of the *CAMS® Plus, STAMS® Plus* and *Solve® Series* has been meticulously aligned to the Australian Curriculum: Mathematics, and the tables presented in this pamphlet demonstrate which content descriptions can be found in each level and lesson. For more information on the Australian Curriculum go to: www.australiancurriculum.edu.au/

	CAMS & STAMS PLUS — **LEVEL A** **AUSTRALIAN CURRICULUM: MATHEMATICS CONTENT DESCRIPTIONS**		**Relevant Lesson(s)**
YEAR 1	ACMNA012	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	6 7 9
	ACMNA013	Recognise, model, read, write and order numbers to at least 100. Locate these numbers on a number line	1 6 7 8
	ACMNA014	Count collections to 100 by partitioning numbers using place value	7 8 9 10 11
	ACMNA015	Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts	1 2 3 4 5 9 10 11
	ACMNA016	Recognise and describe one-half as one of two equal parts of a whole	13
	ACMMG022	Recognise and classify familiar two-dimensional shapes and three-dimensional objects using obvious features	12
	ACMMG019	Measure and compare the lengths and capacities of pairs of objects using uniform informal units	14
	ACMMG020	Tell time to the half-hour	15
	ACMMG021	Describe duration using months, weeks, days and hours	15
	ACMSP263	Represent data with objects and drawings where one object or drawing represents one data value. Describe the displays	16
YEAR 2	ACMNA026	Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and ten from any starting point, then moving to other sequences	6 7 9
	ACMNA027	Recognise, model, represent and order numbers to at least 1000	8
	ACMNA028	Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting	7
	ACMNA029	Explore the connection between addition and subtraction	1 2 3 4 5
	ACMNA030	Solve simple addition and subtraction problems using a range of efficient mental and written strategies	2 3 4 5 9 10 11
	ACMNA033	Recognise and interpret common uses of halves, quarters and eighths of shapes and collections	13
	ACMMG037	Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units	14
	ACMMG039	Tell time to the quarter-hour, using the language of 'past' and 'to'	15
	ACMMG042	Describe and draw two-dimensional shapes, with and without digital technologies	12
	ACMSP049	Collect, check and classify data	16
	ACMSP050	Create displays of data using lists, table and picture graphs and interpret them	16

CAMS & STAMS PLUS — **LEVEL B** **AUSTRALIAN CURRICULUM: MATHEMATICS CONTENT DESCRIPTIONS**			**Relevant Lesson(s)**
YEAR 2	ACMNA026	Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and ten from any starting point, then moving to other sequences	1 4
	ACMNA027	Recognise, model, represent and order numbers to at least 1000	2 3 8
	ACMNA028	Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting	2 3 8
	ACMNA029	Explore the connection between addition and subtraction	4 5 6 7
	ACMNA030	Solve simple addition and subtraction problems using a range of efficient mental and written strategies	4 5 6 7 8 12
	ACMNA031	Recognise and represent multiplication as repeated addition, groups and arrays	9
	ACMNA033	Recognise and interpret common uses of halves, quarters and eighths of shapes and collections	10
	ACMNA034	Count and order small collections of Australian coins and notes according to their value	14
	ACMNA035	Describe patterns with numbers and identify missing elements	1
	ACMNA036	Solve problems by using number sentences for addition or subtraction	5 6 7 9 12
	ACMMG037	Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units	11 12
	ACMMG039	Tell time to the quarter-hour, using the language of 'past' and 'to'	13
	ACMSP049	Collect, check and classify data	15 16
	ACMSP050	Create displays of data using lists, table and picture graphs and interpret them	15 16
YEAR 3	ACMNA051	Investigate the conditions required for a number to be odd or even and identify odd and even numbers	1
	ACMNA053	Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems	8
	ACMNA054	Recognise and explain the connection between addition and subtraction	6 7
	ACMNA055	Recall addition facts for single-digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation	4 5 6 7 12
	ACMNA058	Model and represent unit fractions including 1/2, 1/4, 1/3, 1/5 and their multiples to a complete whole	10
	ACMNA059	Represent money values in multiple ways and count the change required for simple transactions to the nearest five cents	14
	ACMMG061	Measure, order and compare objects using familiar metric units of length, mass and capacity	11 12
	ACMMG062	Tell time to the minute and investigate the relationship between units of time	13
	ACMSP069	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	15 16
	ACMSP070	Interpret and compare data displays	15 16

CAMS & STAMS PLUS — **LEVEL C** **AUSTRALIAN CURRICULUM: MATHEMATICS CONTENT DESCRIPTIONS**			**Relevant Lesson(s)**
YEAR 3	ACMNA052	Recognise, model, represent and order numbers to at least 10 000	1
	ACMNA053	Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems	1
	ACMNA054	Recognise and explain the connection between addition and subtraction	2
	ACMNA055	Recall addition facts for single-digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation	2 5 6
	ACMNA056	Recall multiplication facts of two, three, five and ten and related division facts	3 4 5 6 7
	ACMNA057	Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies	3 4 5 6 7
	ACMNA058	Model and represent unit fractions including 1/2, 1/4, 1/3, 1/5 and their multiples to a complete whole	8 9 10 11 14
	ACMMG061	Measure, order and compare objects using familiar metric units of length, mass and capacity	14 15
	ACMMG066	Identify symmetry in the environment	13
	ACMSP069	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	16
	ACMSP070	Interpret and compare data displays	16
YEAR 4	ACMNA072	Recognise, represent and order numbers to at least tens of thousands	1
	ACMNA073	Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems	1 2
	ACMNA074	Investigate number sequences involving multiples of 3, 4, 6, 7, 8, and 9	4
	ACMNA075	Recall multiplication facts up to 10 × 10 and related division facts	3 4 5 6 7
	ACMNA076	Develop efficient mental and written strategies and use appropriate digital technologies for multiplication and for division where there is no remainder	4 5 6 7
	ACMNA077	Investigate equivalent fractions used in contexts	9 10 11
	ACMNA078	Count by quarters halves and thirds, including with mixed numerals. Locate and represent these fractions on a number line	8 9 10 11 12 14
	ACMNA082	Solve word problems by using number sentences involving multiplication or division where there is no remainder	3
	ACMNA083	Use equivalent number sentences involving addition and subtraction to find unknown quantities	2
	ACMMG084	Use scaled instruments to measure and compare lengths, masses, capacities and temperatures	14 15
	ACMMG087	Compare the areas of regular and irregular shapes by informal means	**17**
	ACMMG088	Compare and describe two dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies	13
	ACMMG091	Create symmetrical patterns, pictures and shapes with and without digital technologies	13
	ACMSP096	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	16

CAMS & STAMS PLUS — LEVEL D AUSTRALIAN CURRICULUM: MATHEMATICS CONTENT DESCRIPTIONS			Relevant Lesson(s)
YEAR 4	ACMNA073	Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems	2 4 6 7 **17**
	ACMNA075	Recall multiplication facts up to 10 x 10 and related division facts	2 3 4 5 6 7 **17 18**
	ACMNA076	Develop efficient mental and written strategies and use appropriate digital technologies for multiplication and for division where there is no remainder	1 2 3 4 5 6 7 **17 18**
	ACMNA077	Investigate equivalent fractions used in contexts	8 9 **19**
	ACMNA078	Count by quarters halves and thirds, including with mixed numerals. Locate and represent these fractions on a number line	8 9 **19**
	ACMNA079	Recognise that the place value system can be extended to tenths and hundredths. Make connections between fractions and decimal notation	10 11 12
	ACMNA080	Solve problems involving purchases and the calculation of change to the nearest five cents with and without digital technologies	10
	ACMNA081	Explore and describe number patterns resulting from performing multiplication	2
	ACMNA082	Solve word problems by using number sentences involving multiplication or division where there is no remainder	1 2 3 4 5 6 7
	ACMMG087	Compare the areas of regular and irregular shapes by informal means	14 15
	ACMMG089	Compare angles and classify them as equal to, greater than or less than a right angle	13
	ACMSP096	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	16
YEAR 5	ACMNA098	Identify and describe factors and multiples of whole numbers and use them to solve problems	1 2 3 4 8 9 12
	ACMNA099	Use estimation and rounding to check the reasonableness of answers to calculation	**17**
	ACMNA100	Solve problems involving multiplication of large numbers by one- or two-digit numbers using efficient mental, written strategies and appropriate digital technologies	3 4 15 **17**
	ACMNA101	Solve problems involving division by a one digit number, including those that result in a remainder	5 6 7 **18**
	ACMNA103	Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator	**19**
	ACMNA105	Compare, order and represent decimals	10 11 12
	ACMNA121	Use equivalent number sentences involving multiplication and division to find unknown quantities	15
	ACMNA291	Use efficient mental and written strategies and apply appropriate digital technologies to solve problems	1 2 5 6 7 8 9 **17 18 19**
	ACMMG109	Calculate the perimeter and area of rectangles using familiar metric units	14 15
	ACMMG112	Estimate, measure and compare angles using degrees. Construct angles using a protractor	13
	ACMSP119	Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies	16

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CAMS & STAMS PLUS — **LEVEL E** AUSTRALIAN CURRICULUM: MATHEMATICS CONTENT DESCRIPTIONS			**Relevant Lesson(s)**
YEAR 5	ACMNA098	Identify and describe factors and multiples of whole numbers and use them to solve problems	2 7 8 9 10 11
	ACMNA099	Use estimation and rounding to check the reasonableness of answers to calculations	1 3 5 6 12 **21 22 23**
	ACMNA100	Solve problems involving multiplication of large numbers by one- or two-digit numbers using efficient mental, written strategies and appropriate digital technologies	1 **21**
	ACMNA101	Solve problems involving division by a one-digit number, including those that result in a remainder	2 3 4 5 **22 23**
	ACMNA102	Compare and order common unit fractions and locate and represent them on a number line.	9
	ACMNA103	Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator	7 8 10 11 **17**
	ACMNA104	Recognise that the place value system can be extended beyond hundredths	12 **20 21 22**
	ACMMG108	Choose appropriate units of measurement for length, area, volume, capacity and mass	13 14 15
	ACMMG109	Calculate the perimeter and area of rectangles using familiar metric units	13 14 15
	ACMMG111	Connect three-dimensional objects with their nets and other two-dimensional representations	14 15
	ACMSP119	Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies	16
	ACMSP120	Describe and interpret different data sets in context	16
	ACMNA291	Use efficient mental and written strategies and apply appropriate digital technologies to solve problems	1 2 3 4 5 6 8 **17 18 19 20 21 22 23**
YEAR 6	ACMNA123	Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers.	1 2 3 4 5 6
	ACMNA125	Compare fractions with related denominators and locate and represent them on a number line.	7 9
	ACMNA126	Solve problems involving addition and subtraction of fractions with the same or related denominators	7 8 10 11 **17**
	ACMNA127	Find a simple fraction of a quantity where the result is a whole number, with and without digital technologies	**19**
	ACMNA128	Add and subtract decimals, with and without digital technologies, and use estimation and rounding to check the reasonableness of answers	12
	ACMNA129	Multiply decimals by whole numbers and perform divisions by non-zero whole numbers where the results are terminating decimals, with and without digital technologies	**20 21 22 23**
	ACMNA130	Multiply and divide decimals by powers of 10	**20 21 23**
	ACMMG137	Solve problems involving the comparison of lengths and areas using appropriate units.	13 14
	ACMMG140	Construct simple prisms and pyramids	14 15
	ACMSP147	Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables	16

CAMS & STAMS PLUS — **LEVEL F** AUSTRALIAN CURRICULUM: MATHEMATICS CONTENT DESCRIPTIONS			**Relevant Lesson(s)**
YEAR 6	ACMNA123	Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers	13 15 **18**
	ACMNA124	Investigate everyday situations that use integers. Locate and represent these numbers on a number line	**17**
	ACMNA125	Compare fractions with related denominators and locate and represent them on a number line	11
	ACMNA126	Solve problems involving addition and subtraction of fractions with the same or related denominators	1
	ACMNA127	Find a simple fraction of a quantity where the result is a whole number, with and without digital technologies	3
	ACMNA129	Multiply decimals by whole numbers and perform divisions by non-zero whole numbers where the results are terminating decimals, with and without digital technologies	5 6 7 8 10 15
	ACMNA130	Multiply and divide decimals by powers of 10	5 6 8 10
	ACMNA131	Make connections between equivalent fractions, decimals and percentages	9 10
	ACMNA133	Continue and create sequences involving whole numbers, fractions and decimals. Describe the rule used to create the sequence	12
	ACMMG137	Solve problems involving the comparison of lengths and areas using appropriate units	16
YEAR 7	ACMNA149	Investigate index notation and represent whole numbers as products of powers of prime numbers	5
	ACMNA152	Compare fractions using equivalence. Locate and represent positive and negative fractions and mixed numbers on a number line	10 11
	ACMNA154	Multiply and divide fractions and decimals using efficient written strategies and digital technologies	1 2 3 4 5 6 7 8 9 15
	ACMNA155	Express one quantity as a fraction of another, with and without the use of digital technologies	9 10
	ACMNA156	Round decimals to a specified number of decimal places	6 7 8
	ACMNA157	Connect fractions, decimals and percentages and carry out simple conversions	10
	ACMNA158	Find percentages of quantities and express one quantity as a percentage of another, with and without digital technologies	10
	ACMMG159	Establish the formulas for areas of rectangles, triangles and parallelograms and use these in problem solving	15 16
	ACMMG160	Calculate volumes of rectangular prisms	16
	ACMSP171	Calculate mean, median, mode and range for sets of data. Interpret these statistics in the context of data	**18**
	ACMSP172	Describe and interpret data displays using median, mean and range	**18**
	ACMNA173	Recognise and solve problems involving simple ratios	9 10 11 12
	ACMNA175	Introduce the concept of variables as a way of representing numbers using letters	12 13 14 15
	ACMNA176	Create algebraic expressions and evaluate them by substituting a given value for each variable	13 15 16
	ACMNA179	Solve simple linear equations	13 14 15 16
	ACMNA280	Compare, order, add and subtract integers	**17**

CAMS & STAMS PLUS — **LEVEL G** AUSTRALIAN CURRICULUM: MATHEMATICS CONTENT DESCRIPTIONS			**Relevant Lesson(s)**
YEAR 7	ACMNA151	Apply the associative, commutative and distributive laws to aid mental and written computation	4 5
	ACMNA157	Connect fractions, decimals and percentages and carry out simple conversions	11 15
	ACMNA158	Find percentages of quantities and express one quantity as a percentage of another, with and without digital technologies	10 11
	ACMNA173	Recognise and solve problems involving simple ratios	7 8 12 15
	ACMNA174	Investigate and calculate 'best buys', with and without digital technologies	9
	ACMNA175	Introduce the concept of variables as a way of representing numbers using letters	5 6
	ACMNA176	Create algebraic expressions and evaluate them by substituting a given value for each variable	5 6
	ACMNA177	Extend and apply the laws and properties of arithmetic to algebraic terms and expressions	4 6
	ACMNA179	Solve simple linear equations	5 6 7
	ACMNA280	Compare, order , add and subtract integers	1 2
	ACMMG159	Establish the formulas for areas of rectangles, triangles and parallelograms and use these in problem solving	13 14
	ACMMG160	Calculate volumes of rectangular prisms	14
	ACMMG166	Demonstrate that the angle sum of a triangle is 180° and use this to find the angle sum of a quadrilateral	**17**
	ACMSP167	Construct sample spaces for single-step experiments with equally likely outcomes	16
	ACMSP168	Assign probabilities to the outcomes of events and determine probabilities for events	16
	ACMSP170	Construct and compare a range of data displays including stem-and-leaf plots and dot plots	15
YEAR 8	ACMNA183	Carry out the four operations with rational numbers and integers, using efficient mental and written strategies and appropriate digital technologies	1 2 3 6
	ACMNA187	Solve problems involving the use of percentages, including percentage increases and decreases, with and without digital technologies	10 11
	ACMNA188	Solve a range of problems involving rates and ratios, with and without digital technologies	7 8 9 12 15
	ACMNA189	Solve problems involving profit and loss, with and without digital technologies	11
	ACMNA192	Simplify algebraic expressions involving the four operations	4 5
	ACMNA193	Plot linear relationships on the Cartesian plane with and without the use of digital technologies	7
	ACMNA194	Solve linear equations using algebraic and graphical techniques. Verify solutions by substitution	6 7 8
	ACMMG197	Investigate the relationship between features of circles such as circumference, area, radius and diameter. Use formulas to solve problems involving circumference and area	13 14
	ACMMG202	Establish properties of quadrilaterals using congruent triangles and angle properties, and solve related numerical problems using reasoning	**17**

CAMS & STAMS PLUS — **LEVEL H** AUSTRALIAN CURRICULUM: MATHEMATICS CONTENT DESCRIPTIONS			**Relevant Lesson(s)**
YEAR 8	ACMNA182	Use index notation with numbers to establish the index laws with positive integral indices and the zero index	1
	ACMNA183	Carry out the four operations with rational numbers and integers, using efficient mental and written strategies and appropriate digital technologies	4
	ACMNA186	Investigate the concept of irrational numbers, including π	2
	ACMNA190	Extend and apply the distributive law to the expansion of algebraic expressions	1
	ACMNA191	Factorise algebraic expressions by identifying numerical factors	1
	ACMNA193	Plot linear relationships on the Cartesian plane with and without the use of digital technologies	5 7 8
	ACMNA194	Solve linear equations using algebraic and graphical techniques. Verify solutions by substitution	5 7 8 9
	ACMMG201	Develop the conditions for congruence of triangles	12
	ACMMG202	Establish properties of quadrilaterals using congruent triangles and angle properties, and solve related numerical problems using reasoning	10 11
	ACMSP207	Investigate the effect of individual data values, including outliers, on the mean and median	15
YEAR 9	ACMNA209	Apply index laws to numerical expressions with integer indices	1
	ACMNA212	Extend and apply the index laws to variables, using positive integer indices and the zero index	1
	ACMNA213	Apply the distributive law to the expansion of algebraic expressions, including binomials, and collect like terms where appropriate	3
	ACMNA214	Find the distance between two points located on a Cartesian plane using a range of strategies, including graphing software	14
	ACMNA294	Find the midpoint and gradient of a line segment (interval) on the Cartesian plane using a range of strategies, including graphing software	6
	ACMNA215	Sketch linear graphs using the coordinates of two points and solve linear equations	5 7 8 9
	ACMNA296	Graph simple non-linear relations with and without the use of digital technologies and solve simple related equations	5
	ACMMG220	Use the enlargement transformation to explain similarity and develop the conditions for triangles to be similar	12
	ACMMG222	Investigate Pythagoras' Theorem and its application to solving simple problems involving right angled triangles	13 14
	ACMMG224	Apply trigonometry to solve right-angled triangle problems	14
	ACMSP283	Compare data displays using mean, median and range to describe and interpret numerical data sets in terms of location (centre) and spread	15 16