BitMaths

Western Australian Curriculum Match

Years 7–8

06/21

BitMaths covers all strands and sub-strands for Years 7–8. Refer to the tables to match content descriptions to the relevant BitMaths modules.

Note: NA701 The Four Operations covers the Year 6 content description 'Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123)'.

Year 7 Curriculum Match

Strand	Sub-strand	Content Description	Module/s
Number and Algebra	**Number and place value**	Investigate index notation and represent whole numbers as products of powers of prime numbers (ACMNA149)	**NA702** Index Notation **NA703** Prime Factorisation
		Investigate and use square roots of perfect square numbers (ACMNA150)	**NA704** Square and Cube Numbers
		Apply the associative, commutative and distributive laws to aid mental and written computation (ACMNA151)	**NA705** Laws of Arithmetic
		Compare, order, add and subtract integers (ACMNA280)	**NA706** Adding and Subtracting Integers
	Real numbers	Compare fractions using equivalence. Locate and represent positive and negative fractions and mixed numbers on a number line (ACMNA152)	**NA707** Equivalent Fractions
		Solve problems involving addition and subtraction of fractions, including those with unrelated denominators (ACMNA153)	**NA708** Adding and Subtracting Fractions
		Multiply and divide fractions and decimals using efficient written strategies and digital technologies (ACMNA154)	**NA709** Multiplying and Dividing Fractions and Decimals
		Express one quantity as a fraction of another, with and without the use of digital technologies (ACMNA155)	**NA710** Expressing Quantities as Fractions
		Round decimals to a specified number of decimal places (ACMNA156)	**NA711** Rounding Decimals
		Connect fractions, decimals and percentages and carry out simple conversions (ACMNA157)	**NA712** Converting Between Fractions, Decimals and Percentages
		Find percentages of quantities and express one quantity as a percentage of another, with and without digital technologies (ACMNA158)	**NA713** Finding Percentages
		Recognise and solve problems involving simple ratios (ACMNA173)	**NA714** Ratios
	Money and financial mathematics	Investigate and calculate 'best buys', with and without digital technologies (ACMNA174)	**NA715** Discounts
	Patterns and algebra	Introduce the concept of variables as a way of representing numbers using letters (ACMNA175)	**NA716** Variables in Algebra
		Create algebraic expressions and evaluate them by substituting a given value for each variable (ACMNA176)	**NA717** Substitution in Algebra
		Extend and apply the laws and properties of arithmetic to algebraic terms and expressions (ACMNA177)	**NA718** Applying Laws of Arithmetic to Algebra
	Linear and non-linear relationships	Given coordinates, plot points on the Cartesian plane, and find coordinates for a given point (ACMNA178)	**NA719** The Cartesian Plane
		Solve simple linear equations (ACMNA179)	**NA720** Solving Simple Linear Equations
		Investigate, interpret and analyse graphs from authentic data (ACMNA180)	**NA721** Travel Graphs

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Year 7 Curriculum Match			
Strand	**Sub-strand**	**Content Description**	**Module/s**
Measurement and Geometry	**Using units of measurement**	Establish the formulas for areas of rectangles, triangles and parallelograms, and use these in problem-solving (ACMMG159)	**MG701** Formulas for Areas
		Calculate volumes of rectangular prisms (ACMMG160)	**MG702** Calculating the Volume of Rectangular Prisms
	Shape	Draw different views of prisms and solids formed from combinations of prisms (ACMMG161)	**MG703** Views of Prisms and Solids
	Location and transformation	Describe translations, reflections in an axis and rotations of multiples of 90° on the Cartesian plane using coordinates. Identify line and rotational symmetries (ACMMG181)	**MG704** Reflections and Translations **MG705** Rotations
	Geometric reasoning	Classify triangles according to their side and angle properties and describe quadrilaterals (ACMMG165)	**MG706** Classifying Triangles and Quadrilaterals
		Demonstrate that the angle sum of a triangle is 180° and use this to find the angle sum of a quadrilateral (ACMMG166)	**MG707** Angle Sums of Triangles and Quadrilaterals
		Identify corresponding, alternate and co-interior angles when two straight lines are crossed by a transversal (ACMMG163)	**MG708** Defining and Identifying Angles
		Investigate conditions for two lines to be parallel and solve simple numerical problems using reasoning (ACMMG164)	**MG709** Investigating Parallel Lines
Statistics and Probability	**Chance**	Construct sample spaces for single-step experiments with equally likely outcomes (ACMSP167)	**SP701** Sample Spaces
		Assign probabilities to the outcomes of events and determine probabilities for events (ACMSP168)	**SP702** Assigning Probabilities
	Data representation and interpretation	Identify and investigate issues involving numerical data collected from primary and secondary sources (ACMSP169)	**SP703** Primary and Secondary Data
		Construct and compare a range of data displays including stem-and-leaf plots and dot plots (ACMSP170)	**SP704** Data Displays
		Calculate mean, median, mode and range for sets of data. Interpret these statistics in the context of data (ACMSP171)	**SP705** Calculating Mean, Median, Mode and Range
		Describe and interpret data displays using median, mean and range (ACMSP172)	**SP706** Interpreting Data Displays

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Year 8 Curriculum Match			
Strand	**Sub-strand**	**Content Description**	**Module/s**
Number and Algebra	**Number and place value**	Use index notation with numbers to establish the index laws with positive integral indices and the zero index (ACMNA182)	**NA801** Index Laws
		Carry out the four operations with rational numbers and integers, using efficient mental and written strategies and appropriate digital technologies (ACMNA183)	**NA802** Operations with Integers and Fractions
	Real numbers	Investigate terminating and recurring decimals (ACMNA184)	**NA803** Terminating and Recurring Decimals
		Investigate the concept of irrational numbers, including π (ACMNA186)	**NA804** Rational and Irrational Numbers
		Solve problems involving the use of percentages, including percentage increases and decreases, with and without digital technologies (ACMNA187)	**NA805** Using Percentages **NA806** GST
		Solve a range of problems involving rates and ratios, with and without digital technologies (ACMNA188)	**NA807** Ratios and Rates
	Money and financial mathematics	Solve problems involving profit and loss, with and without digital technologies (ACMNA189)	**NA808** Profit and Loss
	Patterns and algebra	Extend and apply the distributive law to the expansion of algebraic expressions (ACMNA190)	**NA809** Expanding Algebraic Expressions
		Factorise algebraic expressions by identifying numerical factors (ACMNA191)	**NA810** Factorising Algebraic Expressions
		Simplify algebraic expressions involving the four operations (ACMNA192)	**NA811** Simplifying Algebraic Expressions
	Linear and non-linear relationships	Plot linear relationships on the Cartesian plane with and without the use of digital technologies (ACMNA193)	**NA812** Linear Relationships
		Solve linear equations using algebraic and graphical techniques. Verify solutions by substitution (ACMNA194)	**NA813** Solving Linear Equations
Measurement and Geometry	**Using units of measurement**	Choose appropriate units of measurement for area and volume and convert from one unit to another (ACMMG195)	**MG801** Units of Area and Volume
		Find perimeters and areas of parallelograms, trapeziums, rhombuses and kites (ACMMG196)	**MG802** Perimeter of Quadrilaterals **MG803** Area of Quadrilaterals
		Investigate the relationship between features of circles such as circumference, area, radius and diameter. Use formulas to solve problems involving circumference and area (ACMMG197)	**MG804** Circumference of Circles **MG805** Area of Circles
		Develop formulas for volumes of rectangular and triangular prisms and prisms in general. Use formulas to solve problems involving volume (ACMMG198)	**MG806** Volume of Prisms
		Solve problems involving duration, including using 12- and 24-hour time within a single time zone (ACMMG199)	**MG807** Solving Time Problems
		Additional content	**MG808** International Time
	Geometric reasoning	Define congruence of plane shapes using transformations (ACMMG200)	**MG809** Congruence
		Develop the conditions for congruence of triangles (ACMMG201)	**MG810** Congruence of Triangles
		Establish properties of quadrilaterals using congruent triangles and angle properties, and solve related numerical problems using reasoning (ACMMG202)	**MG811** Congruence of Quadrilaterals

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Year 8 Curriculum Match			
Strand	**Sub-strand**	**Content Description**	**Module/s**
Statistics and Probability	**Chance**	Identify complementary events and use the sum of probabilities to solve problems (ACMSP204)	**SP801** Complementary Events
		Describe events using language of 'at least', exclusive 'or' (A or B but not both), inclusive 'or' (A or B or both) and 'and' (ACMSP205)	**SP802** Probability Events
		Represent events in two-way tables and Venn diagrams and solve related problems (ACMSP292)	**SP803** Venn Diagrams and Two-way Tables
	Data representation and interpretation	Investigate techniques for collecting data, including census, sampling and observation (ACMSP284)	**SP804** Census and Sampling
		Explore the practicalities and implications of obtaining data through sampling using a variety of investigative processes (ACMSP206)	**SP805** Data and Sampling
		Explore the variation of means and proportions of random samples drawn from the same population (ACMSP293)	**SP806** Variation in Data
		Investigate the effect of individual data values, including outliers, on the mean and median (ACMSP207)	**SP807** The Effect of Individual Data Values

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