Primer

	Australian Curriculum Year Level								
Math U See Level	**F**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Primer	●	●	●	●					

Primer is the beginning level in the Math-U-See program and heavily covers the **Number and Algebra** strand in the Australian Curriculum Mathematics Learning Area across Foundation and Year 1. The major focus is on the content descriptors located in *Number and Place Value* and *Patterns and Algebra.*

Primer introduces students to the concept of number by making connections between number names, numerals and counting up to 20. Once students are confident with number recognition they are introduced to place value, simple addition and skip counting by using common everyday examples/objects (fingers, toes, coins).

Primer also covers content in the **Measurement and Geometry** strand relating to the content descriptors focused on *Shape* and *Using units of Measurement.* Students are required to group objects based on common characteristics and sort shapes and objects (rectangles, circles, triangles and squares). The unit of measurement introduced at the Primer level is time. With Math-U-See based on foundational mastery and sequential learning the approach to teaching students the concept of time is different to the sequence suggested in the Australian Curriculum. The Primer level demonstrates that once a student has mastered skip counting by fives, they are ready to learn how to tell the time with minutes and hours.

Primer also touches on the **Statistics and Probability** strand as a lesson is provided on tally marks, preparing students to collect, check and classify data.

Number and Algebra	**Measurement and Geometry**
• Number recognition • Writing numerals • Place value • Counting to 20 • Missing numbers in a pattern • Comparison of amount (longer, shorter, lighter, heavier, bigger, smaller, more, less) • Vertical Addition of single-digit numbers • Counting to 100 • Skip counting by 5s and 10s • Addition of 10s and 100s • Number bonds to 10 • Introduction to Subtraction	• Common 2D Shapes: - circles - triangles - squares - rectangles • Telling time with minutes and hours • Area (brief introduction) **Statistics and Probability** • Tally marks

FOUNDATION

Primer Lessons

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	X
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 (ACMNA001)	●	●	●		●		●	●						●				●													●
Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond (ACMNA002)	●	●	●		●		●	●						●				●													●
Subitise small collections of objects (ACMNA003)																							●								
Compare, order and make correspondences between collections, initially to 20, and explain reasoning (ACMNA289)		●	●		●		●	●			●		●	●	●	●															●
Represent practical situations to model addition and sharing (ACMNA004)												●	●		●	●		●													
Patterns and algebra																															
Sort and classify familiar objects and explain the basis for these classifications. Copy, continue and create patterns with objects and drawings (ACMNA005)																															●
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 (ACMMG006)																															●

Compare and order the duration of events using the everyday language of time (ACMMG007)																															
Connect days of the week to familiar events and actions (ACMMG008)																															
Shape																															
Sort, describe and name familiar two dimensional shapes and three dimensional objects in the environment (ACMMG009)				●		●										●														●
Location and transformation																															
Describe position and movement (ACMMG010)																															
Statistics and Probability																															
Data representation and interpretation																															
Answer yes/no questions to collect information (ACMSP011)																															

X – represents extra activity sheets

Highlight yellow – represents areas not addressed (gaps)

Highlight blue – means the content is not sufficient enough to address the area in depth

Year 1	Primer Lessons																													
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**X**
Number and Algebra																															
Number and Place Value																															
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 (ACMNA012)																	●	●	●			●	●		●	●					●
Recognise, model, read, write and order numbers to at least 100. Locate these numbers on a number line (ACMNA013)									●									●					●			●	●				●
Count collections to 100 by partitioning numbers using place value (ACMNA014)									●									●					●								
Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts (ACMNA015)																	●		●			●			●				●	●	●
Fractions and decimals																															
Recognise and describe one-half as one of two equal parts of a whole. (ACMNA016)																															
Money and financial mathematics																															
Recognise, describe and order Australian coins according to their value (ACMNA017)																			●												
Patterns and algebra																															
Investigate and describe number patterns formed by skip counting and patterns with objects (ACMNA018)																	●	●	●			●	●		●						

Measurement and Geometry																															
Using units of measurement																															
Measure and compare the lengths and capacities of pairs of objects using uniform informal units (ACMMG019)																															
Tell time to the half-hour (ACMMG020)																													●		
Describe duration using months, weeks, days and hours (ACMMG021)																															
Shape																															
Recognise and classify familiar two dimensional shapes and three-dimensional objects using obvious features (ACMMG022)				●		●		●								●										●					
Location and transformation																															
Give and follow directions to familiar locations (ACMMG023)																															
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’ (ACMSP024)																															
Data representation and interpretation																															
Choose simple questions and gather responses (ACMSP262)																															
Represent data with objects and drawings where one object or drawing represents one data value. Describe the displays (ACMSP263)																															

X – represents extra activity sheets

Year 2	Primer Lessons																													
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**X**
Number and Algebra																															
Number and Place Value																															
Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and ten from any starting point, then moving to other sequences. (ACMNA026)																															
Recognise, model, represent and order numbers to at least 1000 (ACMNA027)										●																					
Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting (ACMNA028)										●										●											
Explore the connection between addition and subtraction (ACMNA029)																					●								●	●	●
Solve simple addition and subtraction problems using a range of efficient mental and written strategies (ACMNA030)																				●	●			●							●
Recognise and represent multiplication as repeated addition, groups and arrays (ACMNA031)																															
Recognise and represent division as grouping into equal sets and solve simple problems using these representations (ACMNA032)																															
Fractions and decimals																															
Recognise and interpret common uses of halves, quarters and eighths of shapes and collections (ACMNA033)																															

Money and financial mathematics																														
Count and order small collections of Australian coins and notes according to their value (ACMNA034)																		●			●									
Patterns and algebra																														
Describe patterns with numbers and identify missing elements (ACMNA035)																	●		●			●			●					
Solve problems by using number sentences for addition or subtraction (ACMNA036)																					●									
Measurement and Geometry																														
Using units of measurement																														
Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units (ACMMG037)																														
Compare masses of objects using balance scales (ACMMG038)																														
Tell time to the quarter-hour, using the language of 'past' and 'to' (ACMMG039)																														
Name and order months and seasons (ACMMG040)																														
Use a calendar to identify the date and determine the number of days in each month(ACMMG041)																														
Shape																														
Describe and draw two-dimensional shapes, with and without digital technologies (ACMMG042)																														
Describe the features of three-dimensional objects (ACMMG043)																														
Location and transformation																														

Interpret simple maps of familiar locations and identify the relative positions of key features (ACMMG044)																															
Investigate the effect of one-step slides and flips with and without digital technologies (ACMMG045)																															
Identify and describe half and quarter turns (ACMMG046)																															
Statistics and Probability																															
Chance																															
Identify practical activities and everyday events that involve chance. Describe outcomes as 'likely' or 'unlikely' and identify some events as 'certain' or 'impossible' (ACMSP047)																															
Data representation and interpretation																															
Identify a question of interest based on one categorical variable. Gather data relevant to the question (ACMSP048)																															
Collect, check and classify data (ACMSP049)																							●								●
Create displays of data using lists, table and picture graphs and interpret them (ACMSP050)																															

X – represents extra activity sheets

Year 3	Primer Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Investigate the conditions required for a number to be odd or even and identify odd and even numbers (ACMNA051)																														
Recognise, model, represent and order numbers to at least 10 000 (ACMNA052)																														
Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems (ACMNA053)																														
Recognise and explain the connection between addition and subtraction (ACMNA054)																														
Recall addition facts for single digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation (ACMNA055)																														
Recall multiplication facts of two, three, five and ten and related division facts (ACMNA056)																														
Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies (ACMNA057)																														
Fractions and decimals																														
Model and represent unit fractions including 1/2, 1/4, 1/3, 1/5 and their multiples to a complete whole (ACMNA058)																														

Money and financial mathematics																														
Represent money values in multiple ways and count the change required for simple transactions to the nearest five cents (ACMNA059)																														
Patterns and algebra																														
Describe, continue, and create number patterns resulting from performing addition or subtraction (ACMNA060)																														
Measurement and Geometry																														
Using units of measurement																														
Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061)																														
Tell time to the minute and investigate the relationship between units of time (ACMMG062)																										●		●		
Shape																														
Make models of three dimensional objects and describe key features (ACMMG063)																														
Location and transformation																														
Create and interpret simple grid maps to show position and pathways (ACMMG065)																														
Identify symmetry in the environment (ACMMG066)																														
Geometric reasoning																														
Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064)																														
Statistics and Probability																														
Chance																														
Conduct chance experiments, identify and describe possible outcomes and recognise variation in results (ACMSP067)																														

Data representation and interpretation																														
Identify questions or issues for categorical variables. Identify data sources and plan methods of data collection and recording (ACMSP068)																														
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 (ACMSP069)																														
Interpret and compare data displays (ACMSP070)																														

Alpha

Math U See Level	Australian Curriculum Year Level								
	F	1	2	3	4	5	6	7	8
Alpha	●	●	●	●					

Alpha level heavily covers the **Number and Algebra** strand in the Australian Curriculum Mathematics Learning Area across Foundation, Year 1 and Year 2. The major focus is on the content descriptors located in *Number and Place Value* and *Patterns and Algebra.*

Alpha level has a heavy focus on developing student's understanding of place value and partitioning, which is a necessity to function in the decimal system. The program's manipulatives are introduced at this level and student's are taught to develop confidence with number sequences to and from 100, including skip counting by 2s, 5s and 10s. Along with teaching students single-digit addition and subtraction and how they relate to one another, this level is very explicit in developing student's skills and strategies to problem solve, such as, understanding commutative properties, doubling and identifying the number bonds of 10.

Alpha also covers content in the **Measurement and Geometry** strand relating to the content descriptor focused on *Shape.* Students are introduced and are able to explore the obvious features of common 2D shapes; circles, triangles, rectangles and squares.

Number and Algebra	Measurement and Geometry
• Place value • Partitioning • Counting to 20 • Addition of single-digit numbers • Counting on • Commutative properties of addition • Counting to 100 • Subtraction of single-digit numbers • Relationship between addition and subtraction • Identify the missing element • Skip counting by 2s, 5s and 10s • Number bonds to 10 • Problem solving strategies • Doubling	• Common 2D Shapes: - circles - triangles - squares - rectangles

FOUNDATION	Alpha Lessons																														
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**X**
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 (ACMNA001)		●	●																												●
Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond (ACMNA002)		●	●																												●
Subitise small collections of objects (ACMNA003)			●																												●
Compare, order and make correspondences between collections, initially to 20, and explain reasoning (ACMNA289)			●																												
Represent practical situations to model addition and sharing (ACMNA004)				●	●		●		●	●																					●
Patterns and algebra																															
Sort and classify familiar objects and explain the basis for these classifications. Copy, continue and create patterns with objects and drawings (ACMNA005)																															
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 (ACMMG006)																															

Compare and order the duration of events using the everyday language of time (ACMMG007)																															
Connect days of the week to familiar events and actions (ACMMG008)																															
Shape																															
Sort, describe and name familiar two dimensional shapes and three dimensional objects in the environment (ACMMG009)											●																				
Location and transformation																															
Describe position and movement (ACMMG010)																															
Statistics and Probability																															
Data representation and interpretation																															
Answer yes/no questions to collect information (ACMSP011)																															

X – represents extra activity sheets

Year 1	Alpha Lessons																														
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**X**
Number and Algebra																															
Number and Place Value																															
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 (ACMNA012)						●					●		●																		●
Recognise, model, read, write and order numbers to at least 100. Locate these numbers on a number line (ACMNA013)	●		●			●																									●
Count collections to 100 by partitioning numbers using place value (ACMNA014)	●					●			●	●																					●
Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts (ACMNA015)				●	●		●	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Fractions and decimals																															
Recognise and describe one-half as one of two equal parts of a whole. (ACMNA016)																															
Money and financial mathematics																															
Recognise, describe and order Australian coins according to their value (ACMNA017)																															
Patterns and algebra																															
Investigate and describe number patterns formed by skip counting and patterns with objects (ACMNA018)						●					●		●																		●

Measurement and Geometry																														
Using units of measurement																														
Measure and compare the lengths and capacities of pairs of objects using uniform informal units (ACMMG019)																														
Tell time to the half-hour (ACMMG020)																														
Describe duration using months, weeks, days and hours (ACMMG021)																														
Shape																														
Recognise and classify familiar two dimensional shapes and three-dimensional objects using obvious features (ACMMG022)										●		●																		●
Location and transformation																														
Give and follow directions to familiar locations (ACMMG023)																														
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Identify outcomes of familiar events involving chance and describe them using everyday language such as ‘will happen’, ‘won’t happen’ or ‘might happen’ (ACMSP024)																														
Data representation and interpretation																														
Choose simple questions and gather responses (ACMSP262)																														
Represent data with objects and drawings where one object or drawing represents one data value. Describe the displays (ACMSP263)																														

X – represents extra activity sheets

Year 2	Alpha Lessons																													
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**X**
Number and Algebra																															
Number and Place Value																															
Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and ten from any starting point, then moving to other sequences. (ACMNA026)						●					●		●																		●
Recognise, model, represent and order numbers to at least 1000 (ACMNA027)	●																														
Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting (ACMNA028)	●								●	●			●		●																
Explore the connection between addition and subtraction (ACMNA029)								●										●	●	●	●	●	●	●	●	●	●	●	●	●	●
Solve simple addition and subtraction problems using a range of efficient mental and written strategies (ACMNA030)					●		●	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Recognise and represent multiplication as repeated addition, groups and arrays (ACMNA031)																															
Recognise and represent division as grouping into equal sets and solve simple problems using these representations (ACMNA032)																															
Fractions and decimals																															
Recognise and interpret common uses ofhalves, quarters and eighths of shapes and collections (ACMNA033)																															
Money and financial mathematics																															

Count and order small collections of Australian coins and notes according to their value (ACMNA034)																														
Patterns and algebra																														
Describe patterns with numbers and identify missing elements (ACMNA035)						●					●		●																	
Solve problems by using number sentences for addition or subtraction (ACMNA036)																														●
Measurement and Geometry																														
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Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units (ACMMG037)																														
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Describe the features of three-dimensional objects (ACMMG043)																														
Location and transformation																														
Interpret simple maps of familiar locations and identify the relative																														

positions of key features (ACMMG044)																															
Investigate the effect of one-step slides and flips with and without digital technologies (ACMMG045)																															
Identify and describe half and quarter turns (ACMMG046)																															
Statistics and Probability																															
Chance																															
Identify practical activities and everyday events that involve chance. Describe outcomes as 'likely' or 'unlikely' and identify some events as 'certain' or 'impossible' (ACMSP047)																															
Data representation and interpretation																															
Identify a question of interest based on one categorical variable. Gather data relevant to the question (ACMSP048)																															
Collect, check and classify data (ACMSP049)																															
Create displays of data using lists, table and picture graphs and interpret them (ACMSP050)																															

X – represents extra activity sheets

Year 3	Alpha Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Investigate the conditions required for a number to be odd or even and identify odd and even numbers (ACMNA051)							●																							
Recognise, model, represent and order numbers to at least 10 000 (ACMNA052)																														
Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems (ACMNA053)																														
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Recall multiplication facts of two, three, five and ten and related division facts (ACMNA056)																														
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Model and represent unit fractions including 1/2, 1/4, 1/3, 1/5 and their multiples to a complete whole (ACMNA058)																														

Money and financial mathematics																													
Represent money values in multiple ways and count the change required for simple transactions to the nearest five cents (ACMNA059)																													
Patterns and algebra																													
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Measurement and Geometry																													
Using units of measurement																													
Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061)																													
Tell time to the minute and investigate the relationship between units of time (ACMMG062)																													
Shape																													
Make models of three dimensional objects and describe key features (ACMMG063)																													
Location and transformation																													
Create and interpret simple grid maps to show position and pathways (ACMMG065)																													
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Geometric reasoning																													
Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064)																													
Statistics and Probability																													
Chance																													
Conduct chance experiments, identify and describe possible outcomes and recognise variation in results (ACMSP067)																													

Data representation and interpretation																														
Identify questions or issues for categorical variables. Identify data sources and plan methods of data collection and recording (ACMSP068)																														
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 (ACMSP069)																														
Interpret and compare data displays (ACMSP070)																														

Beta

Math U See Level	Australian Curriculum Year Level								
	F	1	2	3	4	5	6	7	8
Beta	●	●	●	●	●	●	●		

Beta level continues to cover the **Number and Algebra** strand in the Australian Curriculum Mathematics Learning Area mainly addressing concepts across Year 2, Year 3 and Year 4. The major focus is on the content descriptors located in *Number and Place Value* and *Money and Financial Mathematics.*

Beta level has a heavy focus on further developing student's understanding of the relationship between addition and subtraction, whilst introducing the concepts of regrouping (carrying and borrowing). Skip counting continues to be developed at this level, but this time with an emphasis on working with money. The decimal point is also introduced in conjunction with dollars and cents. Students are made aware of the important strategy of rounding and estimating and are encouraged to continue to utilise this skill throughout the program.

Beta also covers content in the **Measurement and Geometry** strand relating to the content descriptor focused on *Using units of measurement.* The measurement of time, length and temperature are explored, exposing students to the different units of measurement that are used and raising their awareness of conversion between units.

The **Statistics and Probability** strand is also covered with a focus on *Data representation and interpretation,* introducing students to the concept of collecting information and representing this through a graph for ease of interpretation.

Number and Algebra	Measurement and Geometry
• Place value (thousands) • Word problems • Rounding • Estimation • Addition of multiple digits • Regrouping (carrying and borrowing) • Money • Decimal point • Subtraction of multiple digits • Relationship between addition and subtraction • Skip counting by 2s, 5s and 10s • Problem solving strategies	• Time (hours and minutes) • Temperature • Length (centimetre and metre) (perimeter and millimetre) **Statistics and Probability** • Bar graphs • Line graphs • Tally marks

FOUNDATION	Beta Lessons																														
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**X**
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 (ACMNA001)																															
Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond (ACMNA002)																															
Subitise small collections of objects (ACMNA003)																															
Compare, order and make correspondences between collections, initially to 20, and explain reasoning (ACMNA289)																									●						
Represent practical situations to model addition and sharing (ACMNA004)																															
Patterns and algebra																															
Sort and classify familiar objects and explain the basis for these classifications. Copy, continue and create patterns with objects and drawings (ACMNA005)																															
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 (ACMMG006)																															

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**X**
Compare and order the duration of events using the everyday language of time (ACMMG007)																									●						
Connect days of the week to familiar events and actions (ACMMG008)																									●						
Shape																															
Sort, describe and name familiar two dimensional shapes and three dimensional objects in the environment (ACMMG009)																															
Location and transformation																															
Describe position and movement (ACMMG010)																															
Statistics and Probability																															
Data representation and interpretation																															
Answer yes/no questions to collect information (ACMSP011)																															

X – represents extra activity sheets

Year 1	Beta Lessons																														
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**X**
Number and Algebra																															
Number and Place Value																															
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 (ACMNA012)		●																													
Recognise, model, read, write and order numbers to at least 100. Locate these numbers on a number line (ACMNA013)		●																													
Count collections to 100 by partitioning numbers using place value (ACMNA014)																															
Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts (ACMNA015)																															
Fractions and decimals																															
Recognise and describe one-half as one of two equal parts of a whole. (ACMNA016)																															
Money and financial mathematics																															
Recognise, describe and order Australian coins according to their value (ACMNA017)																															
Patterns and algebra																															
Investigate and describe number patterns formed by skip counting and patterns with objects (ACMNA018)																															

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	X
Measurement and Geometry																															
Using units of measurement																															
Measure and compare the lengths and capacities of pairs of objects using uniform informal units (ACMMG019)																															
Tell time to the half-hour (ACMMG020)																							*								
Describe duration using months, weeks, days and hours (ACMMG021)																									●						
Shape																															
Recognise and classify familiar two dimensional shapes and three-dimensional objects using obvious features (ACMMG022)																															
Location and transformation																															
Give and follow directions to familiar locations (ACMMG023)																															
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’ (ACMSP024)																															
Data representation and interpretation																															
Choose simple questions and gather responses (ACMSP262)																															
Represent data with objects and drawings where one object or drawing represents one data value. Describe the displays (ACMSP263)																															

Year 2	Beta Lessons																														
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**X**
Number and Algebra																															
Number and Place Value																															
Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and ten from any starting point, then moving to other sequences. (ACMNA026)						●		●													●										
Recognise, model, represent and order numbers to at least 1000 (ACMNA027)	●	●																													
Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting (ACMNA028)	●	●			●		●						●							●		●		●							
Explore the connection between addition and subtraction (ACMNA029)					●		●						●							●		●		●							
Solve simple addition and subtraction problems using a range of efficient mental and written strategies (ACMNA030)							●						●							●		●		●							
Recognise and represent multiplication as repeated addition, groups and arrays (ACMNA031)																															
Recognise and represent division as grouping into equal sets and solve simple problems using these representations (ACMNA032)																															
Fractions and decimals																															
Recognise and interpret common uses of halves, quarters and eighths of shapes and collections (ACMNA033)																															

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	X
Money and financial mathematics																															
Count and order small collections of Australian coins and notes according to their value (ACMNA034)								●					●																		
Patterns and algebra																															
Describe patterns with numbers and identify missing elements (ACMNA035)						●																									
Solve problems by using number sentences for addition or subtraction (ACMNA036)		●																													
Measurement and Geometry																															
Using units of measurement																															
Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units (ACMMG037)																															
Compare masses of objects using balance scales (ACMMG038)																															
Tell time to the quarter-hour, using the language of 'past' and 'to' (ACMMG039)																							●								
Name and order months and seasons (ACMMG040)																									●						
Use a calendar to identify the date and determine the number of days in each month(ACMMG041)																									●						
Shape																															
Describe and draw two-dimensional shapes, with and without digital technologies (ACMMG042)																															
Describe the features of three-dimensional objects (ACMMG043)																															

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**X**
Location and transformation																															
Interpret simple maps of familiar locations and identify the relative positions of key features (ACMMG044)																															
Investigate the effect of one-step slides and flips with and without digital technologies (ACMMG045)																															
Identify and describe half and quarter turns (ACMMG046)																															
Statistics and Probability																															
Chance																															
Identify practical activities and everyday events that involve chance. Describe outcomes as ‘likely’ or ‘unlikely’ and identify some events as ‘certain’ or ‘impossible’ (ACMSP047)																															
Data representation and interpretation																															
Identify a question of interest based on one categorical variable. Gather data relevant to the question (ACMSP048)																															
Collect, check and classify data (ACMSP049)																									●						
Create displays of data using lists, table and picture graphs and interpret them (ACMSP050)																															

X – represents extra activity sheets

Year 3	Beta Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Investigate the conditions required for a number to be odd or even and identify odd and even numbers (ACMNA051)						●		●	●																					
Recognise, model, represent and order numbers to at least 10 000 (ACMNA052)																●		●												
Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems (ACMNA053)							●									●		●				●		●		●		●		
Recognise and explain the connection between addition and subtraction (ACMNA054)																				●		●		●		●		●		
Recall addition facts for single digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation (ACMNA055)																				●		●		●		●		●		
Recall multiplication facts of two, three, five and ten and related division facts (ACMNA056)																														
Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies (ACMNA057)																														
Fractions and decimals																														
Model and represent unit fractions including 1/2, 1/4, 1/3, 1/5 and their multiples to a complete whole (ACMNA058)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Money and financial mathematics																														
Represent money values in multiple ways and count the change required for simple transactions to the nearest five cents (ACMNA059)						●		●	●	●		●	●														●			
Patterns and algebra																														
Describe, continue, and create number patterns resulting from performing addition or subtraction (ACMNA060)																														
Measurement and Geometry																														
Using units of measurement																														
Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061)														●					●											
Tell time to the minute and investigate the relationship between units of time (ACMMG062)																					●									
Shape																														
Make models of three dimensional objects and describe key features (ACMMG063)																														
Location and transformation																														
Create and interpret simple grid maps to show position and pathways (ACMMG065)																														
Identify symmetry in the environment (ACMMG066)																														
Geometric reasoning																														
Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Statistics and Probability																														
Chance																														
Conduct chance experiments, identify and describe possible outcomes and recognise variation in results (ACMSP067)																														
Data representation and interpretation																														
Identify questions or issues for categorical variables. Identify data sources and plan methods of data collection and recording (ACMSP068)																														
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 (ACMSP069)																														●
Interpret and compare data displays (ACMSP070)																														

NOTE – Lesson 30; resource states ‘bar graph’, curriculum states ‘column graph’

Year 4	Beta Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Investigate and use the properties of odd and even numbers (ACMNA071)																														
Recognise, represent and order numbers to at least tens of thousands (ACMNA072)																														
Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems (ACMNA073)																●		●		●								●		
Investigate number sequences involving multiples of 3, 4, 6, 7, 8, and 9 (ACMNA074)																														
Recall multiplication facts up to 10 × 10 and related division facts (ACMNA075)																														
Develop efficient mental and written strategies and use appropriate digital technologies for multiplication and for division where there is no remainder (ACMNA076)																														
Fractions and decimals																														
Investigate equivalent fractions used in contexts (ACMNA077)																														
Count by quarters halves and thirds, including with mixed numerals. Locate and represent these fractions on a number line (ACMNA078)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Recognise that the place value system can be extended to tenths and hundredths. Make connections between fractions and decimal notation (ACMNA079)												●		●													●			
Money and financial mathematics																														
Solve problems involving purchases and the calculation of change to the nearest five cents with and without digital technologies (ACMNA080)												●																		
Patterns and algebra																														
Explore and describe number patterns resulting from performing multiplication (ACMNA081)																														
Solve word problems by using number sentences involving multiplication or division where there is no remainder (ACMNA082)																														
Use equivalent number sentences involving addition and subtraction to find unknown quantities (ACMNA083)																														
Measurement and Geometry																														
Using units of measurement																														
Use scaled instruments to measure and compare lengths, masses, capacities and temperatures (ACMMG084)														●	●			●											●	
Compare objects using familiar metric units of area and volume (ACMMG290)																														
Convert between units of time (ACMMG085)																														
Use am and pm notation and solve simple time problems (ACMMG086)																														

Australian Curriculum	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Content Descriptors																													
Shape																													
Compare the areas of regular and irregular shapes by informal means (ACMMG087)																													
Compare and describe two dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies (ACMMG088)																													
Location and transformation																													
Use simple scales, legends and directions to interpret information contained in basic maps (ACMMG090)																													
Create symmetrical patterns, pictures and shapes with and without digital technologies (ACMMG091)																													
Geometric reasoning																													
Compare angles and classify them as equal to, greater than or less than a right angle (ACMMG089)																													
Statistics and Probability																													
Chance																													
Describe possible everyday events and order their chances of occurring (ACMSP092)																													
Identify everyday events where one cannot happen if the other happens (ACMSP093)																													
Identify events where the chance of one will not be affected by the occurrence of the other (ACMSP094)																													

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**

Data representation and interpretation																														
Select and trial methods for data collection, including survey questions and recording sheets (ACMSP095)																														
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 (ACMSP096)																														
Evaluate the effectiveness of different displays in illustrating data features including variability(ACMSP097)																														

Year 5	Beta Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Identify and describe factors and multiples of whole numbers and use them to solve problems (ACMNA098)																														
Use estimation and rounding to check the reasonableness of answers to calculations (ACMNA099)				●							●						●	●	●											
Solve problems involving multiplication of large numbers by one- or two-digit numbers using efficient mental, written strategies and appropriate digital technologies (ACMNA100)																														
Solve problems involving division by a one digit number, including those that result in a remainder (ACMNA101)																														
Use efficient mental and written strategies and apply appropriate digital technologies to solve problems (ACMNA291)																														
Fractions and decimals																														
Compare and order common unit fractions and locate and represent them on a number line (ACMNA102)																														
Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator (ACMNA103)																														
Recognise that the place value system can be extended beyond hundredths (ACMNA104)																														
Compare, order and represent decimals (ACMNA105)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Money and financial mathematics																														
Create simple financial plans (ACMNA106)																														
Patterns and algebra																														
Describe, continue and create patterns with fractions, decimals and whole numbers resulting from addition and subtraction (ACMNA107)																														
Use equivalent number sentences involving multiplication and division to find unknown quantities (ACMNA121)																														
Measurement and Geometry																														
Using units of measurement																														
Choose appropriate units of measurement for length, area, volume, capacity and mass (ACMMG108)															●															
Calculate the perimeter and area of rectangles using familiar metric units (ACMMG109)															●															
Compare 12- and 24-hour time systems and convert between them (ACMMG110)																														
Shape																														
Connect three-dimensional objects with their nets and other two-dimensional representations(ACMMG111)																														
Location and transformation																														
Use a grid reference system to describe locations. Describe routes using landmarks and directional language (ACMMG113)																														
Describe translations, reflections and rotations of two-dimensional shapes. Identify line and rotational symmetries (ACMMG114)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Apply the enlargement transformation to familiar two dimensional shapes and explore the properties of the resulting image compared with the original (ACMMG115)																														
Geometric reasoning																														
Estimate, measure and compare angles using degrees. Construct angles using a protractor(ACMMG112)																														
Statistics and Probability																														
Chance																														
List outcomes of chance experiments involving equally likely outcomes and represent probabilities of those outcomes using fractions (ACMSP116)																														
Recognise that probabilities range from 0 to 1 (ACMSP117)																														
Data representation and interpretation																														
Pose questions and collect categorical or numerical data by observation or survey (ACMSP118)																														
Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies (ACMSP119)																														●
Describe and interpret different data sets in context (ACMSP120)																														

Year 6	Beta Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Identify and describe properties of prime, composite, square and triangular numbers (ACMNA122)																														
Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123)																														
Investigate everyday situations that use integers. Locate and represent these numbers on a number line (ACMNA124)																														
Fractions and decimals																														
Compare fractions with related denominators and locate and represent them on a number line(ACMNA125)																														
Solve problems involving addition and subtraction of fractions with the same or related denominators(ACMNA126)																														
Find a simple fraction of a quantity where the result is a whole number, with and without digital technologies (ACMNA127)																														
Add and subtract decimals, with and without digital technologies, and use estimation and rounding to check the reasonableness of answers (ACMNA128)																														
Multiply decimals by whole numbers and perform divisions by non-zero whole numbers where the results are terminating decimals, with and without digital technologies (ACMNA129)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Multiply and divide decimals by powers of 10 (ACMNA130)																														
Make connections between equivalent fractions, decimals and percentages (ACMNA131)																														
Money and financial mathematics																														
Investigate and calculate percentage discounts of 10%, 25% and 50% on sale items, with and without digital technologies (ACMNA132)																														
Patterns and algebra																														
Continue and create sequences involving whole numbers, fractions and decimals. Describe the rule used to create the sequence (ACMNA133)																														
Explore the use of brackets and order of operations to write number sentences (ACMNA134)																														
Measurement and Geometry																														
Using units of measurement																														
Connect decimal representations to the metric system (ACMMG135)																			*											
Convert between common metric units of length, mass and capacity (ACMMG136)															●				●											
Solve problems involving the comparison of lengths and areas using appropriate units (ACMMG137)																														
Connect volume and capacity and their units of measurement (ACMMG138)																														
Interpret and use timetables (ACMMG139)																														
Shape																														
Construct simple prisms and pyramids (ACMMG140)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Location and transformation																														
Investigate combinations of translations, reflections and rotations, with and without the use of digital technologies (ACMMG142)																														
Introduce the Cartesian coordinate system using all four quadrants (ACMMG143)																														
Geometric reasoning																														
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)																														
Statistics and Probability																														
Chance																														
Describe probabilities using fractions, decimals and percentages (ACMSP144)																														
Conduct chance experiments with both small and large numbers of trials using appropriate digital technologies (ACMSP145)																														
Compare observed frequencies across experiments with expected frequencies (ACMSP146)																														
Data representation and interpretation																														
Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables (ACMSP147)																														
Interpret secondary data presented in digital media and elsewhere (ACMSP148)																														

Gamma

Math U See Level	Australian Curriculum Year Level								
	F	1	2	3	4	5	6	7	8
Gamma									

Gamma level is the 'multiplication level' as it heavily focuses on the **Number and Algebra** strand in the Australian Curriculum Mathematics Learning Area mainly addressing concepts across Year 3, Year 4 and Year 5. The major focus is on the content descriptors located in *Number and Place Value* and *Patterns and Algebra.*

Gamma introduces the concept of multiplication with an approach that covers the proficiency strands *Understanding* and *Fluency.* Although multiplication facts are introduced independent of each other it is unlike the old rote 'times tables approach'. The concept of skip counting is the foundation, along with the understanding of the connection between repeated addition and multiplication facts. The more familiar and confident students become with these approaches the more fluent they will become with recalling multiplication facts. The concept of commutative properties also assists students to not become overwhelmed with learning multiplication facts. The use of the Math-U-See manipulatives and the factors/products rectangle concept adds another dimension of understanding and builds depth to ensure the *Reasoning* proficiency strand is also covered. As does the concept of equivalent fractions along-side multiplication/skip counting).

Mathematical terms are introduced to students from the very beginning (eg. factors, products, commutative property, distributive properties) which assists with students having the ability to explain their reasoning and provides opportunities to use the language in everyday relevant circumstances (rather than just for testing preparation).

Gamma also covers content in the **Measurement and Geometry** strand relating to the content descriptor focused on *Using units of measurement.* The Year 4-5 concepts of area are introduced (in relation to multiplication facts) which again lends to the proficiency strands *Understanding* and *Reasoning.* Relating mathematical understandings across mathematical strands is very important. The units of measurement Litre, Centimetre, Metre, Kilometre, Kilogram and Tonne are explored along with connecting decimal representations to the metric system.

Number and Algebra	
• Multiplication facts • Skip counting • Factors and products • Commutative properties • Solving for the unknown (preparing for division and basic algebra) • Equivalent fractions • Double digit • Multiple digit multiplication (2 by 1 digits) – distributive properties • Multiplication by multiples of 100	• Australian currency (100 cents to a dollar) • Multiple digit multiplication • Prime and composite numbers • Rounding • Place value through to the millions
	Measurement and Geometry
	• Area of a rectangle • Litres • Converting units of measurement (cm-m, kg-t) • Kilo = 1000

Year 1	Gamma Lessons																													
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**X**
Number and Algebra																															
Number and Place Value																															
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 (ACMNA012)																															
Recognise, model, read, write and order numbers to at least 100. Locate these numbers on a number line (ACMNA013)																															
Count collections to 100 by partitioning numbers using place value (ACMNA014)																															
Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts (ACMNA015)																															
Fractions and decimals																															
Recognise and describe one-half as one of two equal parts of a whole. (ACMNA016)																															
Money and financial mathematics																															
Recognise, describe and order Australian coins according to their value (ACMNA017)																															
Patterns and algebra																															
Investigate and describe number patterns formed by skip counting and patterns with objects (ACMNA018)																															

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	X
Measurement and Geometry																															
Using units of measurement																															
Measure and compare the lengths and capacities of pairs of objects using uniform informal units (ACMMG019)																															
Tell time to the half-hour (ACMMG020)																															
Describe duration using months, weeks, days and hours (ACMMG021)																															
Shape																															
Recognise and classify familiar two dimensional shapes and three-dimensional objects using obvious features (ACMMG022)	●																														
Location and transformation																															
Give and follow directions to familiar locations (ACMMG023)																															
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’ (ACMSP024)																															
Data representation and interpretation																															
Choose simple questions and gather responses (ACMSP262)																															
Represent data with objects and drawings where one object or drawing represents one data value. Describe the displays (ACMSP263)																															

Year 2	Gamma Lessons																														
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**X**
Number and Algebra																															
Number and Place Value																															
Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and ten from any starting point, then moving to other sequences. (ACMNA026)			●	●	●	●																									
Recognise, model, represent and order numbers to at least 1000 (ACMNA027)																															
Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting (ACMNA028)																															
Explore the connection between addition and subtraction (ACMNA029)																															
Solve simple addition and subtraction problems using a range of efficient mental and written strategies (ACMNA030)																															
Recognise and represent multiplication as repeated addition, groups and arrays (ACMNA031)	●	●	●	●	●	●																									
Recognise and represent division as grouping into equal sets and solve simple problems using these representations (ACMNA032)																															
Fractions and decimals																															
Recognise and interpret common uses of halves, quarters and eighths of shapes and collections (ACMNA033)																															

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	X
Money and financial mathematics																															
Count and order small collections of Australian coins and notes according to their value (ACMNA034)					●	●																				●					
Patterns and algebra																															
Describe patterns with numbers and identify missing elements (ACMNA035)			●		●	●																									
Solve problems by using number sentences for addition or subtraction (ACMNA036)																															
Measurement and Geometry																															
Using units of measurement																															
Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units (ACMMG037)																															
Compare masses of objects using balance scales (ACMMG038)																															
Tell time to the quarter-hour, using the language of 'past' and 'to' (ACMMG039)																															
Name and order months and seasons (ACMMG040)																															
Use a calendar to identify the date and determine the number of days in each month(ACMMG041)																															
Shape																															
Describe and draw two-dimensional shapes, with and without digital technologies (ACMMG042)	●																														
Describe the features of three-dimensional objects (ACMMG043)																															

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**X**
Location and transformation																															
Interpret simple maps of familiar locations and identify the relative positions of key features (ACMMG044)																															
Investigate the effect of one-step slides and flips with and without digital technologies (ACMMG045)																															
Identify and describe half and quarter turns (ACMMG046)																															
Statistics and Probability																															
Chance																															
Identify practical activities and everyday events that involve chance. Describe outcomes as ‘likely’ or ‘unlikely’ and identify some events as ‘certain’ or ‘impossible’ (ACMSP047)																															
Data representation and interpretation																															
Identify a question of interest based on one categorical variable. Gather data relevant to the question (ACMSP048)																															
Collect, check and classify data (ACMSP049)																															
Create displays of data using lists, table and picture graphs and interpret them (ACMSP050)																															

X – represents extra activity sheets

Year 3	Gamma Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Investigate the conditions required for a number to be odd or even and identify odd and even numbers (ACMNA051)																														
Recognise, model, represent and order numbers to at least 10 000 (ACMNA052)																														
Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems (ACMNA053)																														
Recognise and explain the connection between addition and subtraction (ACMNA054)																														
Recall addition facts for single digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation (ACMNA055)																														
Recall multiplication facts of two, three, five and ten and related division facts (ACMNA056)			●	●	●	●																								
Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies (ACMNA057)		●	●	●	●	●																								
Fractions and decimals																														
Model and represent unit fractions including 1/2, 1/4, 1/3, 1/5 and their multiples to a complete whole (ACMNA058)													●																	

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Money and financial mathematics																														
Represent money values in multiple ways and count the change required for simple transactions to the nearest five cents (ACMNA059)																										●				
Patterns and algebra																														
Describe, continue, and create number patterns resulting from performing addition or subtraction (ACMNA060)		●	●	●	●	●			●				●	●	●	●	●	●	●	●										
Measurement and Geometry																														
Using units of measurement																														
Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061)				●	●											●														
Tell time to the minute and investigate the relationship between units of time (ACMMG062)																														
Shape																														
Make models of three dimensional objects and describe key features (ACMMG063)																														
Location and transformation																														
Create and interpret simple grid maps to show position and pathways (ACMMG065)																														
Identify symmetry in the environment (ACMMG066)																														
Geometric reasoning																														
Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Statistics and Probability																														
Chance																														
Conduct chance experiments, identify and describe possible outcomes and recognise variation in results (ACMSP067)																														
Data representation and interpretation																														
Identify questions or issues for categorical variables. Identify data sources and plan methods of data collection and recording (ACMSP068)																														
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 (ACMSP069)																														
Interpret and compare data displays (ACMSP070)																														

Year 4	Gamma Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Investigate and use the properties of odd and even numbers (ACMNA071)																														
Recognise, represent and order numbers to at least tens of thousands (ACMNA072)																											●			
Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems (ACMNA073)																	●	●			●									
Investigate number sequences involving multiples of 3, 4, 6, 7, 8, and 9 (ACMNA074)										●	●	●	●	●	●	●	●	●	●	●										
Recall multiplication facts up to 10 × 10 and related division facts (ACMNA075)										●	●	●	●	●	●	●	●	●	●	●										
Develop efficient mental and written strategies and use appropriate digital technologies for multiplication and for division where there is no remainder (ACMNA076)				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●										
Fractions and decimals																														
Investigate equivalent fractions used in contexts (ACMNA077)									●				●																	
Count by quarters halves and thirds, including with mixed numerals. Locate and represent these fractions on a number line (ACMNA078)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Recognise that the place value system can be extended to tenths and hundredths. Make connections between fractions and decimal notation (ACMNA079)					●																									
Money and financial mathematics																														
Solve problems involving purchases and the calculation of change to the nearest five cents with and without digital technologies (ACMNA080)																														
Patterns and algebra																														
Explore and describe number patterns resulting from performing multiplication (ACMNA081)																														
Solve word problems by using number sentences involving multiplication or division where there is no remainder (ACMNA082)																														
Use equivalent number sentences involving addition and subtraction to find unknown quantities (ACMNA083)																														
Measurement and Geometry																														
Using units of measurement																														
Use scaled instruments to measure and compare lengths, masses, capacities and temperatures (ACMMG084)																														
Compare objects using familiar metric units of area and volume (ACMMG290)																														
Convert between units of time (ACMMG085)																														
Use am and pm notation and solve simple time problems (ACMMG086)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Shape																														
Compare the areas of regular and irregular shapes by informal means (ACMMG087)	●			●	●	●	●																							
Compare and describe two dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies (ACMMG088)																														
Location and transformation																														
Use simple scales, legends and directions to interpret information contained in basic maps (ACMMG090)																														
Create symmetrical patterns, pictures and shapes with and without digital technologies (ACMMG091)																														
Geometric reasoning																														
Compare angles and classify them as equal to, greater than or less than a right angle (ACMMG089)																														
Statistics and Probability																														
Chance																														
Describe possible everyday events and order their chances of occurring (ACMSP092)																														
Identify everyday events where one cannot happen if the other happens (ACMSP093)																														
Identify events where the chance of one will not be affected by the occurrence of the other (ACMSP094)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Data representation and interpretation																														
Select and trial methods for data collection, including survey questions and recording sheets (ACMSP095)																														
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 (ACMSP096)																														
Evaluate the effectiveness of different displays in illustrating data features including variability(ACMSP097)																														

Year 5	Gamma Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																													
Number and Place Value																													
Identify and describe factors and multiples of whole numbers and use them to solve problems (ACMNA098)	●			●	●	●	●	●									●	●								●			
Use estimation and rounding to check the reasonableness of answers to calculations (ACMNA099)																						●							
Solve problems involving multiplication of large numbers by one- or two-digit numbers using efficient mental, written strategies and appropriate digital technologies (ACMNA100)	●			●	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●		●	●	●			●	
Solve problems involving division by a one digit number, including those that result in a remainder (ACMNA101)																													
Use efficient mental and written strategies and apply appropriate digital technologies to solve problems (ACMNA291)																					●		●	●	●			●	
Fractions and decimals																													
Compare and order common unit fractions and locate and represent them on a number line (ACMNA102)																													
Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator (ACMNA103)																													
Recognise that the place value system can be extended beyond hundredths (ACMNA104)																													
Compare, order and represent decimals (ACMNA105)																													

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Money and financial mathematics																														
Create simple financial plans (ACMNA106)																														
Patterns and algebra																														
Describe, continue and create patterns with fractions, decimals and whole numbers resulting from addition and subtraction (ACMNA107)																														
Use equivalent number sentences involving multiplication and division to find unknown quantities (ACMNA121)								●																						
Measurement and Geometry																														
Using units of measurement																														
Choose appropriate units of measurement for length, area, volume, capacity and mass (ACMMG108)																														
Calculate the perimeter and area of rectangles using familiar metric units (ACMMG109)	●			●	●	●	●																							
Compare 12- and 24-hour time systems and convert between them (ACMMG110)																														
Shape																														
Connect three-dimensional objects with their nets and other two-dimensional representations(ACMMG111)																														
Location and transformation																														
Use a grid reference system to describe locations. Describe routes using landmarks and directional language (ACMMG113)																														
Describe translations, reflections and rotations of two-dimensional shapes. Identify line and rotational symmetries (ACMMG114)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Apply the enlargement transformation to familiar two dimensional shapes and explore the properties of the resulting image compared with the original (ACMMG115)																														
Geometric reasoning																														
Estimate, measure and compare angles using degrees. Construct angles using a protractor(ACMMG112)																														
Statistics and Probability																														
Chance																														
List outcomes of chance experiments involving equally likely outcomes and represent probabilities of those outcomes using fractions (ACMSP116)																														
Recognise that probabilities range from 0 to 1 (ACMSP117)																														
Data representation and interpretation																														
Pose questions and collect categorical or numerical data by observation or survey (ACMSP118)																														
Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies (ACMSP119)																														
Describe and interpret different data sets in context (ACMSP120)																														

Year 6	Gamma Lessons																													
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Identify and describe properties of prime, composite, square and triangular numbers (ACMNA122)																													●	
Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123)																	●	●												
Investigate everyday situations that use integers. Locate and represent these numbers on a number line (ACMNA124)																														
Fractions and decimals																														
Compare fractions with related denominators and locate and represent them on a number line(ACMNA125)																														
Solve problems involving addition and subtraction of fractions with the same or related denominators(ACMNA126)																														
Find a simple fraction of a quantity where the result is a whole number, with and without digital technologies (ACMNA127)																														
Add and subtract decimals, with and without digital technologies, and use estimation and rounding to check the reasonableness of answers (ACMNA128)																														
Multiply decimals by whole numbers and perform divisions by non-zero whole numbers where the results are terminating decimals, with and without digital technologies (ACMNA129)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Multiply and divide decimals by powers of 10 (ACMNA130)																														
Make connections between equivalent fractions, decimals and percentages (ACMNA131)																														
Money and financial mathematics																														
Investigate and calculate percentage discounts of 10%, 25% and 50% on sale items, with and without digital technologies (ACMNA132)																														
Patterns and algebra																														
Continue and create sequences involving whole numbers, fractions and decimals. Describe the rule used to create the sequence (ACMNA133)																														
Explore the use of brackets and order of operations to write number sentences (ACMNA134)																														
Measurement and Geometry																														
Using units of measurement																														
Connect decimal representations to the metric system (ACMMG135)					●													●									●			●
Convert between common metric units of length, mass and capacity (ACMMG136)					●													●									●			●
Solve problems involving the comparison of lengths and areas using appropriate units (ACMMG137)																														
Connect volume and capacity and their units of measurement (ACMMG138)																														
Interpret and use timetables (ACMMG139)																														
Shape																														
Construct simple prisms and pyramids (ACMMG140)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Location and transformation																														
Investigate combinations of translations, reflections and rotations, with and without the use of digital technologies (ACMMG142)																														
Introduce the Cartesian coordinate system using all four quadrants (ACMMG143)																														
Geometric reasoning																														
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)																														
Statistics and Probability																														
Chance																														
Describe probabilities using fractions, decimals and percentages (ACMSP144)																														
Conduct chance experiments with both small and large numbers of trials using appropriate digital technologies (ACMSP145)																														
Compare observed frequencies across experiments with expected frequencies (ACMSP146)																														
Data representation and interpretation																														
Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables (ACMSP147)																														
Interpret secondary data presented in digital media and elsewhere (ACMSP148)																														

Year 7	Gamma Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Investigate index notation and represent whole numbers as products of powers of prime numbers (ACMNA149)																														
Investigate and use square roots of perfect square numbers (ACMNA150)																														
Apply the associative, commutative and distributive laws to aid mental and written computation (ACMNA151)																														
Compare, order, add and subtract integers (ACMNA280)																														
Real numbers																														
Compare fractions using equivalence. Locate and represent positive and negative fractions and mixed numbers on a number line (ACMNA152)																														
Solve problems involving addition and subtraction of fractions, including those with unrelated denominators (ACMNA153)																														
Multiply and divide fractions and decimals using efficient written strategies and digital technologies (ACMNA154)																														
Express one quantity as a fraction of another, with and without the use of digital technologies (ACMNA155)																														
Round decimals to a specified number of decimal places (ACMNA156)																														
Connect fractions, decimals and percentages and carry out simple conversions (ACMNA157)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Find percentages of quantities and express one quantity as a percentage of another, with and without digital technologies. (ACMNA158)																														
Recognise and solve problems involving simple ratios (ACMNA173)																														
Money and financial mathematics																														
Investigate and calculate 'best buys', with and without digital technologies (ACMNA174)																														
Patterns and algebra																														
Introduce the concept of variables as a way of representing numbers using letters (ACMNA175)								●																						
Create algebraic expressions and evaluate them by substituting a given value for each variable (ACMNA176)								●																						
Extend and apply the laws and properties of arithmetic to algebraic terms and expressions (ACMNA177)																														
Linear and non-linear relationships																														
Given coordinates, plot points on the Cartesian plane, and find coordinates for a given point(ACMNA178)																														
Solve simple linear equations (ACMNA179)																														
Investigate, interpret and analyse graphs from authentic data (ACMNA180)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Measurement and Geometry																														
Using units of measurement																														
Establish the formulas for areas of rectangles, triangles and parallelograms and use these in problem solving (ACMMG159)																														
Calculate volumes of rectangular prisms (ACMMG160)																														
Shape																														
Draw different views of prisms and solids formed from combinations of prisms (ACMMG161)																														
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)																														
Geometric reasoning																														
Identify corresponding, alternate and co-interior angles when two straight lines are crossed by a transversal (ACMMG163)																														
Investigate conditions for two lines to be parallel and solve simple numerical problems using reasoning (ACMMG164)																														
Demonstrate that the angle sum of a triangle is 180° and use this to find the angle sum of a quadrilateral (ACMMG166)																														
Classify triangles according to their side and angle properties and describe quadrilaterals (ACMMG165)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Statistics and Probability																														
Chance																														
Construct sample spaces for single-step experiments with equally likely outcomes (ACMSP167)																														
Assign probabilities to the outcomes of events and determine probabilities for events (ACMSP168)																														
Data representation and interpretation																														
Identify and investigate issues involving numerical data collected from primary and secondary sources (ACMSP169)																														
Construct and compare a range of data displays including stem-and-leaf plots and dot plots (ACMSP170)																														
Calculate mean, median, mode and range for sets of data. Interpret these statistics in the context of data (ACMSP171)																														
Describe and interpret data displays using median, mean and range (ACMSP172)																														

Delta

Math U See Level	Australian Curriculum Year Level								
	F	1	2	3	4	5	6	7	8
Delta									

Delta level is the 'division level' as it heavily focuses on the **Number and Algebra** strand in the Australian Curriculum Mathematics Learning Area mainly addressing concepts across Year 4 and Year 5. The major focus is on the content descriptors located in *Number and Place Value* and *Patterns and Algebra.*

Delta introduces the concept of division building on from the multiplication lessons covered in the Gamma level. Division is described to students as trying to find the missing factor and it is most important that students have mastered multiplication facts before commencing with the Delta level. Along with the different symbols to represent division, this level ensures students also are familiar with the language that assists with recognising division is required (eg. Divided by, how many threes can I count in nine?, two times what is the same as twelve? etc). Toward the end of the level the notion of long division (referred to as dividing with double digit factors) is covered in a way that allows students to demonstrate their understanding, their ability to problem solve and explain their reasoning (all important *Proficiency strands* as required in the Australian Curriculum). The beginning level of fractions is also introduced in this level.

Delta also covers content in the **Measurement and Geometry** strand across Years 5-7 relating to the content descriptor focused on *Using units of measurement* by establishing the formulas for areas of rectangles, triangles and parallelograms and use these in problem solving. Another content descriptor covered is *Geometric reasoning* with a focus on parallel and perpendicular lines and the properties of triangles and parallelograms. Volume is also introduced at this level.

Number and Algebra	**Measurement and Geometry**
• Multiplication facts • Skip counting • Factors and products • Division facts • Solving for the unknown • Language and common terms • Long division • Expanded notation • Division with remainders • Fractions (basic concept) • Roman Numerals	• Area of a parallelogram, triangle, trapezium • Parallel and perpendicular lines • Volume • Converting (mm-cm)
	Statistics and Probability
	• Calculating the mean (average)

Year 2	Delta Lessons																														
Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	X
Number and Algebra																															
Number and Place Value																															
Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and ten from any starting point, then moving to other sequences. (ACMNA026)																															
Recognise, model, represent and order numbers to at least 1000 (ACMNA027)																															
Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting (ACMNA028)																															
Explore the connection between addition and subtraction (ACMNA029)																															
Solve simple addition and subtraction problems using a range of efficient mental and written strategies (ACMNA030)																															
Recognise and represent multiplication as repeated addition, groups and arrays (ACMNA031)																															
Recognise and represent division as grouping into equal sets and solve simple problems using these representations (ACMNA032)		●	●	●																											
Fractions and decimals																															
Recognise and interpret common uses of halves, quarters and eighths of shapes and collections (ACMNA033)																													●		

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**X**
Money and financial mathematics																															
Count and order small collections of Australian coins and notes according to their value (ACMNA034)																															
Patterns and algebra																															
Describe patterns with numbers and identify missing elements (ACMNA035)																															
Solve problems by using number sentences for addition or subtraction (ACMNA036)																															
Measurement and Geometry																															
Using units of measurement																															
Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units (ACMMG037)																															
Compare masses of objects using balance scales (ACMMG038)																															
Tell time to the quarter-hour, using the language of 'past' and 'to' (ACMMG039)																															
Name and order months and seasons (ACMMG040)																															
Use a calendar to identify the date and determine the number of days in each month(ACMMG041)																															
Shape																															
Describe and draw two-dimensional shapes, with and without digital technologies (ACMMG042)																															
Describe the features of three-dimensional objects (ACMMG043)																															

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	X
Location and transformation																															
Interpret simple maps of familiar locations and identify the relative positions of key features (ACMMG044)																															
Investigate the effect of one-step slides and flips with and without digital technologies (ACMMG045)																															
Identify and describe half and quarter turns (ACMMG046)																															
Statistics and Probability																															
Chance																															
Identify practical activities and everyday events that involve chance. Describe outcomes as ‘likely’ or ‘unlikely’ and identify some events as ‘certain’ or ‘impossible’ (ACMSP047)																															
Data representation and interpretation																															
Identify a question of interest based on one categorical variable. Gather data relevant to the question (ACMSP048)																															
Collect, check and classify data (ACMSP049)																															
Create displays of data using lists, table and picture graphs and interpret them (ACMSP050)																															

X – represents extra activity sheets

Year 3	Delta Lessons																													
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Investigate the conditions required for a number to be odd or even and identify odd and even numbers (ACMNA051)																														
Recognise, model, represent and order numbers to at least 10 000 (ACMNA052)																														
Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems (ACMNA053)																														
Recognise and explain the connection between addition and subtraction (ACMNA054)																														
Recall addition facts for single digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation (ACMNA055)																														
Recall multiplication facts of two, three, five and ten and related division facts (ACMNA056)		●	●	●																										
Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies (ACMNA057)		●	●	●																										
Fractions and decimals																														
Model and represent unit fractions including 1/2, 1/4, 1/3, 1/5 and their multiples to a complete whole (ACMNA058)																													●	

Money and financial mathematics																													
Represent money values in multiple ways and count the change required for simple transactions to the nearest five cents (ACMNA059)																													
Patterns and algebra																													
Describe, continue, and create number patterns resulting from performing addition or subtraction (ACMNA060)																													
Measurement and Geometry																													
Using units of measurement																													
Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061)																													
Tell time to the minute and investigate the relationship between units of time (ACMMG062)																													
Shape																													
Make models of three dimensional objects and describe key features (ACMMG063)																													
Location and transformation																													
Create and interpret simple grid maps to show position and pathways (ACMMG065)																													
Identify symmetry in the environment (ACMMG066)																													
Geometric reasoning																													
Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064)																													
Statistics and Probability																													
Chance																													
Conduct chance experiments, identify and describe possible outcomes and recognise variation in results (ACMSP067)																													

Data representation and interpretation																														
Identify questions or issues for categorical variables. Identify data sources and plan methods of data collection and recording (ACMSP068)																														
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 (ACMSP069)																														
Interpret and compare data displays (ACMSP070)																														

Year 4	Delta Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Investigate and use the properties of odd and even numbers (ACMNA071)																														
Recognise, represent and order numbers to at least tens of thousands (ACMNA072)														●	●															
Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems (ACMNA073)														●	●															
Investigate number sequences involving multiples of 3, 4, 6, 7, 8, and 9 (ACMNA074)																														
Recall multiplication facts up to 10 × 10 and related division facts (ACMNA075)		●	●	●				●		●		●																		
Develop efficient mental and written strategies and use appropriate digital technologies for multiplication and for division where there is no remainder (ACMNA076)		●	●	●				●		●		●					●													
Fractions and decimals																														
Investigate equivalent fractions used in contexts (ACMNA077)																														
Count by quarters halves and thirds, including with mixed numerals. Locate and represent these fractions on a number line (ACMNA078)		●																												

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Recognise that the place value system can be extended to tenths and hundredths. Make connections between fractions and decimal notation (ACMNA079)																														
Money and financial mathematics																														
Solve problems involving purchases and the calculation of change to the nearest five cents with and without digital technologies (ACMNA080)																														
Patterns and algebra																														
Explore and describe number patterns resulting from performing multiplication (ACMNA081)																														
Solve word problems by using number sentences involving multiplication or division where there is no remainder (ACMNA082)		●	●	●				●		●		●			●															
Use equivalent number sentences involving addition and subtraction to find unknown quantities (ACMNA083)																														
Measurement and Geometry																														
Using units of measurement																														
Use scaled instruments to measure and compare lengths, masses, capacities and temperatures (ACMMG084)																														
Compare objects using familiar metric units of area and volume (ACMMG290)																														
Convert between units of time (ACMMG085)																														
Use am and pm notation and solve simple time problems (ACMMG086)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Shape																														
Compare the areas of regular and irregular shapes by informal means (ACMMG087)																														
Compare and describe two dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies (ACMMG088)																														
Location and transformation																														
Use simple scales, legends and directions to interpret information contained in basic maps (ACMMG090)																														
Create symmetrical patterns, pictures and shapes with and without digital technologies (ACMMG091)																														
Geometric reasoning																														
Compare angles and classify them as equal to, greater than or less than a right angle (ACMMG089)																														
Statistics and Probability																														
Chance																														
Describe possible everyday events and order their chances of occurring (ACMSP092)																														
Identify everyday events where one cannot happen if the other happens (ACMSP093)																														
Identify events where the chance of one will not be affected by the occurrence of the other (ACMSP094)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Data representation and interpretation																														
Select and trial methods for data collection, including survey questions and recording sheets (ACMSP095)																														
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 (ACMSP096)																														
Evaluate the effectiveness of different displays in illustrating data features including variability(ACMSP097)																														

Year 5	Delta Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Identify and describe factors and multiples of whole numbers and use them to solve problems (ACMNA098)	●	●	●	●		●		●		●		●																		
Use estimation and rounding to check the reasonableness of answers to calculations (ACMNA099)																														
Solve problems involving multiplication of large numbers by one- or two-digit numbers using efficient mental, written strategies and appropriate digital technologies (ACMNA100)	●	●	●	●				●		●		●					●													
Solve problems involving division by a one digit number, including those that result in a remainder (ACMNA101)																●														
Use efficient mental and written strategies and apply appropriate digital technologies to solve problems (ACMNA291)																●	●	●	●	●	●	●	●	●						
Fractions and decimals																														
Compare and order common unit fractions and locate and represent them on a number line (ACMNA102)																											●			
Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator (ACMNA103)																														
Recognise that the place value system can be extended beyond hundredths (ACMNA104)																														
Compare, order and represent decimals (ACMNA105)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Money and financial mathematics																														
Create simple financial plans (ACMNA106)																														
Patterns and algebra																														
Describe, continue and create patterns with fractions, decimals and whole numbers resulting from addition and subtraction (ACMNA107)																														
Use equivalent number sentences involving multiplication and division to find unknown quantities (ACMNA121)	●																													
Measurement and Geometry																														
Using units of measurement																														
Choose appropriate units of measurement for length, area, volume, capacity and mass (ACMMG108)																														
Calculate the perimeter and area of rectangles using familiar metric units (ACMMG109)	●																													
Compare 12- and 24-hour time systems and convert between them (ACMMG110)																														
Shape																														
Connect three-dimensional objects with their nets and other two-dimensional representations(ACMMG111)																														
Location and transformation																														
Use a grid reference system to describe locations. Describe routes using landmarks and directional language (ACMMG113)																														
Describe translations, reflections and rotations of two-dimensional shapes. Identify line and rotational symmetries (ACMMG114)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Apply the enlargement transformation to familiar two dimensional shapes and explore the properties of the resulting image compared with the original (ACMMG115)																														
Geometric reasoning																														
Estimate, measure and compare angles using degrees. Construct angles using a protractor(ACMMG112)																														
Statistics and Probability																														
Chance																														
List outcomes of chance experiments involving equally likely outcomes and represent probabilities of those outcomes using fractions (ACMSP116)																														
Recognise that probabilities range from 0 to 1 (ACMSP117)																														
Data representation and interpretation																														
Pose questions and collect categorical or numerical data by observation or survey (ACMSP118)																														
Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies (ACMSP119)																														
Describe and interpret different data sets in context (ACMSP120)																														

Year 6	Delta Lessons																													
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Identify and describe properties of prime, composite, square and triangular numbers (ACMNA122)																														
Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123)																		●	●	●	●	●	●	●	●					
Investigate everyday situations that use integers. Locate and represent these numbers on a number line (ACMNA124)																														
Fractions and decimals																														
Compare fractions with related denominators and locate and represent them on a number line(ACMNA125)																														
Solve problems involving addition and subtraction of fractions with the same or related denominators(ACMNA126)																														
Find a simple fraction of a quantity where the result is a whole number, with and without digital technologies (ACMNA127)																											●			
Add and subtract decimals, with and without digital technologies, and use estimation and rounding to check the reasonableness of answers (ACMNA128)																														
Multiply decimals by whole numbers and perform divisions by non-zero whole numbers where the results are terminating decimals, with and without digital technologies (ACMNA129)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Multiply and divide decimals by powers of 10 (ACMNA130)																														
Make connections between equivalent fractions, decimals and percentages (ACMNA131)																														
Money and financial mathematics																														
Investigate and calculate percentage discounts of 10%, 25% and 50% on sale items, with and without digital technologies (ACMNA132)																														
Patterns and algebra																														
Continue and create sequences involving whole numbers, fractions and decimals. Describe the rule used to create the sequence (ACMNA133)																														
Explore the use of brackets and order of operations to write number sentences (ACMNA134)																														
Measurement and Geometry																														
Using units of measurement																														
Connect decimal representations to the metric system (ACMMG135)																														
Convert between common metric units of length, mass and capacity (ACMMG136)					●																									
Solve problems involving the comparison of lengths and areas using appropriate units (ACMMG137)																														
Connect volume and capacity and their units of measurement (ACMMG138)																														
Interpret and use timetables (ACMMG139)																														
Shape																														
Construct simple prisms and pyramids (ACMMG140)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Location and transformation																														
Investigate combinations of translations, reflections and rotations, with and without the use of digital technologies (ACMMG142)																														
Introduce the Cartesian coordinate system using all four quadrants (ACMMG143)																														
Geometric reasoning																														
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)																														
Statistics and Probability																														
Chance																														
Describe probabilities using fractions, decimals and percentages (ACMSP144)																														
Conduct chance experiments with both small and large numbers of trials using appropriate digital technologies (ACMSP145)																														
Compare observed frequencies across experiments with expected frequencies (ACMSP146)																														
Data representation and interpretation																														
Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables (ACMSP147)																														
Interpret secondary data presented in digital media and elsewhere (ACMSP148)																														

Year 7	Delta Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Investigate index notation and represent whole numbers as products of powers of prime numbers (ACMNA149)																														
Investigate and use square roots of perfect square numbers (ACMNA150)																														
Apply the associative, commutative and distributive laws to aid mental and written computation (ACMNA151)																														
Compare, order, add and subtract integers (ACMNA280)																														
Real numbers																														
Compare fractions using equivalence. Locate and represent positive and negative fractions and mixed numbers on a number line (ACMNA152)																														
Solve problems involving addition and subtraction of fractions, including those with unrelated denominators (ACMNA153)																														
Multiply and divide fractions and decimals using efficient written strategies and digital technologies (ACMNA154)																														
Express one quantity as a fraction of another, with and without the use of digital technologies (ACMNA155)																														
Round decimals to a specified number of decimal places (ACMNA156)																														
Connect fractions, decimals and percentages and carry out simple conversions (ACMNA157)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Find percentages of quantities and express one quantity as a percentage of another, with and without digital technologies. (ACMNA158)																														
Recognise and solve problems involving simple ratios (ACMNA173)																														
Money and financial mathematics																														
Investigate and calculate 'best buys', with and without digital technologies (ACMNA174)																														
Patterns and algebra																														
Introduce the concept of variables as a way of representing numbers using letters (ACMNA175)																														
Create algebraic expressions and evaluate them by substituting a given value for each variable (ACMNA176)																														
Extend and apply the laws and properties of arithmetic to algebraic terms and expressions (ACMNA177)																														
Linear and non-linear relationships																														
Given coordinates, plot points on the Cartesian plane, and find coordinates for a given point(ACMNA178)																														
Solve simple linear equations (ACMNA179)																														
Investigate, interpret and analyse graphs from authentic data (ACMNA180)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Measurement and Geometry																														
Using units of measurement																														
Establish the formulas for areas of rectangles, triangles and parallelograms and use these in problem solving (ACMMG159)									●																					
Calculate volumes of rectangular prisms (ACMMG160)																										●				
Shape																														
Draw different views of prisms and solids formed from combinations of prisms (ACMMG161)																														
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)																														
Geometric reasoning																														
Identify corresponding, alternate and co-interior angles when two straight lines are crossed by a transversal (ACMMG163)																														
Investigate conditions for two lines to be parallel and solve simple numerical problems using reasoning (ACMMG164)					●																									
Demonstrate that the angle sum of a triangle is 180° and use this to find the angle sum of a quadrilateral (ACMMG166)																														
Classify triangles according to their side and angle properties and describe quadrilaterals (ACMMG165)							●						●																	

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Statistics and Probability																														
Chance																														
Construct sample spaces for single-step experiments with equally likely outcomes (ACMSP167)																														
Assign probabilities to the outcomes of events and determine probabilities for events (ACMSP168)																														
Data representation and interpretation																														
Identify and investigate issues involving numerical data collected from primary and secondary sources (ACMSP169)																														
Construct and compare a range of data displays including stem-and-leaf plots and dot plots (ACMSP170)																														
Calculate mean, median, mode and range for sets of data. Interpret these statistics in the context of data (ACMSP171)											●																			
Describe and interpret data displays using median, mean and range (ACMSP172)																														

NOTE – Lesson 11 MUS terminology *average*
AC terminology *mean*

NOTE - Lesson 28 and 30 ROMAN NUMERALS – this is not directly addressed in the Mathematic Curriculum, although would recommend this lesson be aligned with Year 7 as the HISTORY learning area provides opportunity to explore Ancient Rome.

Year 8	Delta Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
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)																														
Carry out the four operations with rational numbers and integers, using efficient mental and written strategies and appropriate digital technologies (ACMNA183)																														
Real numbers																														
Investigate terminating and recurring decimals (ACMNA184)																														
Investigate the concept of irrational numbers, including π (ACMNA186)																														
Solve problems involving the use of percentages, including percentage increases and decreases, with and without digital technologies (ACMNA187)																														
Solve a range of problems involving rates and ratios, with and without digital technologies (ACMNA188)																														
Money and financial mathematics																														
Solve problems involving profit and loss, with and without digital technologies (ACMNA189)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Patterns and algebra																														
Extend and apply the distributive law to the expansion of algebraic expressions (ACMNA190)																														
Factorise algebraic expressions by identifying numerical factors (ACMNA191)																														
Simplify algebraic expressions involving the four operations (ACMNA192)																														
Linear and non-linear relationships																														
Plot linear relationships on the Cartesian plane with and without the use of digital technologies (ACMNA193)																														
Solve linear equations using algebraic and graphical techniques. Verify solutions by substitution (ACMNA194)																														
Measurement and Geometry																														
Using units of measurement																														
Choose appropriate units of measurement for area and volume and convert from one unit to another (ACMMG195)																														
Find perimeters and areas of parallelograms, trapeziums, rhombuses and kites (ACMMG196)								●					●																	
Investigate the relationship between features of circles such as circumference, area, radius and diameter. Use formulas to solve problems involving circumference and area (ACMMG197)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Develop the formulas for volumes of rectangular and triangular prisms and prisms in general. Use formulas to solve problems involving volume(ACMMG198)																														
Solve problems involving duration, including using 12- and 24-hour time within a single time zone(ACMMG199)																														
Geometric reasoning																														
Define congruence of plane shapes using transformations (ACMMG200)																														
Develop the conditions for congruence of triangles (ACMMG201)																														
Establish properties of quadrilaterals using congruent triangles and angle properties, and solve related numerical problems using reasoning (ACMMG202)																														
Statistics and Probability																														
Chance																														
Identify complementary events and use the sum of probabilities to solve problems (ACMSP204)																														
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)																														
Represent events in two-way tables and Venn diagrams and solve related problems (ACMSP292)																														
Data representation and interpretation																														
Investigate techniques for collecting data, including census, sampling and observation (ACMSP284)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Explore the practicalities and implications of obtaining data through sampling using a variety of investigative processes (ACMSP206)																														
Explore the variation of means and proportions of random samples drawn from the same population (ACMSP293)																														
Investigate the effect of individual data values, including outliers, on the mean and median(ACMSP207)																														

Epsilon

Math U See Level	Australian Curriculum Year Level								
	F	1	2	3	4	5	6	7	8
Epsilon									

Epsilon is the 'fractions' level and focuses on the **Number and Algebra** strand in the Australian Curriculum Mathematics Learning Area mainly addressing concepts across Year 5, Year 6 and Year 7. The major focus is on the content descriptors located in *Fractions and Decimals / Real Numbers.*

Epsilon begins with ensuring students understand that fractions are equal parts of a whole, and use the Math-U-See manipulatives to transfer this understanding. Students at this level should be very familiar with the concept that the green block represents *one*, so using this understanding Epsilon introduces the overlays (breaking the one block into equal parts). The important concept of understanding the line separating the numerator and denominator symbolises division, assists students to truly understand the function of fractions. Until students are competent with division they should not be introduced to fractions (hence the importance of students mastering the Delta level prior to commencing Epsilon).

This level then continues to demonstrate how to problem solve using fractions. Rather than just simply providing rules to follow when adding, subtracting, multiplying or dividing fractions, Epsilon level provides the visual breakdown to demonstrate not only the 'how' to work with fractions, but also develops students understanding of the 'why' we work it out this way. This builds an indepth understanding of the function of fractions, which then provides students with a solid base to move into working with decimals and percentages (covered in the next level, Zeta).

Although Epsilon is mainly focused on the concept of fractions there are a few levels that further introduced students to algebra. The areas covered address the *Patterns and Algebra* content descriptors at the Year 7 level.

Epsilon also covers content in the **Measurement and Geometry** strand reviewing some areas introduced at earlier levels. However, the Year 8 concept of investigating the relationship between features of circles such as circumference, area, radius and diameter is introduced.

Number and Algebra	
• Fractions • Addition and subtraction of fractions • Equivalent fractions • Multiplying and dividing fractions • Common factors • Simplifying fractions • Mixed numbers • Improper fractions • Addition of mixed numbers • Subtracting mixed numbers	• Dividing and multiplying missed numbers • Multiplication of three fractions • Solving for an unknown (algebra) • Fractions / Decimals / Percentages • Multiplicative inverse / additive inverse • Coefficient
	Measurement and Geometry
	• Area and circumference • Properties of a circle

Year 2	Epsilon Lessons																														
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**X**
Number and Algebra																															
Number and Place Value																															
Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and ten from any starting point, then moving to other sequences. (ACMNA026)																															
Recognise, model, represent and order numbers to at least 1000 (ACMNA027)																															
Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting (ACMNA028)																															
Explore the connection between addition and subtraction (ACMNA029)																															
Solve simple addition and subtraction problems using a range of efficient mental and written strategies (ACMNA030)																															
Recognise and represent multiplication as repeated addition, groups and arrays (ACMNA031)																															
Recognise and represent division as grouping into equal sets and solve simple problems using these representations (ACMNA032)																															
Fractions and decimals																															
Recognise and interpret common uses of halves, quarters and eighths of shapes and collections (ACMNA033)		●																													

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	X
Money and financial mathematics																															
Count and order small collections of Australian coins and notes according to their value (ACMNA034)																															
Patterns and algebra																															
Describe patterns with numbers and identify missing elements (ACMNA035)																															
Solve problems by using number sentences for addition or subtraction (ACMNA036)																															
Measurement and Geometry																															
Using units of measurement																															
Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units (ACMMG037)																															
Compare masses of objects using balance scales (ACMMG038)																															
Tell time to the quarter-hour, using the language of 'past' and 'to' (ACMMG039)																															
Name and order months and seasons (ACMMG040)																															
Use a calendar to identify the date and determine the number of days in each month(ACMMG041)																															
Shape																															
Describe and draw two-dimensional shapes, with and without digital technologies (ACMMG042)																															
Describe the features of three-dimensional objects (ACMMG043)																															

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	X
Location and transformation																															
Interpret simple maps of familiar locations and identify the relative positions of key features (ACMMG044)																															
Investigate the effect of one-step slides and flips with and without digital technologies (ACMMG045)																															
Identify and describe half and quarter turns (ACMMG046)																															
Statistics and Probability																															
Chance																															
Identify practical activities and everyday events that involve chance. Describe outcomes as ‘likely’ or ‘unlikely’ and identify some events as ‘certain’ or ‘impossible’ (ACMSP047)																															
Data representation and interpretation																															
Identify a question of interest based on one categorical variable. Gather data relevant to the question (ACMSP048)																															
Collect, check and classify data (ACMSP049)																															
Create displays of data using lists, table and picture graphs and interpret them (ACMSP050)																															

X – represents extra activity sheets

Year 3	Epsilon Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Investigate the conditions required for a number to be odd or even and identify odd and even numbers (ACMNA051)																														
Recognise, model, represent and order numbers to at least 10 000 (ACMNA052)																														
Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems (ACMNA053)																														
Recognise and explain the connection between addition and subtraction (ACMNA054)																														
Recall addition facts for single digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation (ACMNA055)																														
Recall multiplication facts of two, three, five and ten and related division facts (ACMNA056)																														
Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies (ACMNA057)																														
Fractions and decimals																														
Model and represent unit fractions including 1/2, 1/4, 1/3, 1/5 and their multiples to a complete whole (ACMNA058)		●																												

Money and financial mathematics																													
Represent money values in multiple ways and count the change required for simple transactions to the nearest five cents (ACMNA059)																													
Patterns and algebra																													
Describe, continue, and create number patterns resulting from performing addition or subtraction (ACMNA060)																													
Measurement and Geometry																													
Using units of measurement																													
Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061)																													
Tell time to the minute and investigate the relationship between units of time (ACMMG062)																													
Shape																													
Make models of three dimensional objects and describe key features (ACMMG063)																													
Location and transformation																													
Create and interpret simple grid maps to show position and pathways (ACMMG065)																													
Identify symmetry in the environment (ACMMG066)																													
Geometric reasoning																													
Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064)																													
Statistics and Probability																													
Chance																													
Conduct chance experiments, identify and describe possible outcomes and recognise variation in results (ACMSP067)																													

Data representation and interpretation																														
Identify questions or issues for categorical variables. Identify data sources and plan methods of data collection and recording (ACMSP068)																														
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 (ACMSP069)																														
Interpret and compare data displays (ACMSP070)																														

Year 4	Epsilon Lessons																													
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Investigate and use the properties of odd and even numbers (ACMNA071)																														
Recognise, represent and order numbers to at least tens of thousands (ACMNA072)																														
Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems (ACMNA073)																														
Investigate number sequences involving multiples of 3, 4, 6, 7, 8, and 9 (ACMNA074)																														
Recall multiplication facts up to 10 × 10 and related division facts (ACMNA075)											●	●													●					
Develop efficient mental and written strategies and use appropriate digital technologies for multiplication and for division where there is no remainder (ACMNA076)											●	●													●					
Fractions and decimals																														
Investigate equivalent fractions used in contexts (ACMNA077)				●	●			●				●					●	●	●	●	●	●								
Count by quarters halves and thirds, including with mixed numerals. Locate and represent these fractions on a number line (ACMNA078)													●		●															

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Recognise that the place value system can be extended to tenths and hundredths. Make connections between fractions and decimal notation (ACMNA079)																													●	
Money and financial mathematics																														
Solve problems involving purchases and the calculation of change to the nearest five cents with and without digital technologies (ACMNA080)																														
Patterns and algebra																														
Explore and describe number patterns resulting from performing multiplication (ACMNA081)																														
Solve word problems by using number sentences involving multiplication or division where there is no remainder (ACMNA082)																														
Use equivalent number sentences involving addition and subtraction to find unknown quantities (ACMNA083)																														
Measurement and Geometry																														
Using units of measurement																														
Use scaled instruments to measure and compare lengths, masses, capacities and temperatures (ACMMG084)														●		●														
Compare objects using familiar metric units of area and volume (ACMMG290)																														
Convert between units of time (ACMMG085)																														
Use am and pm notation and solve simple time problems (ACMMG086)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Shape																														
Compare the areas of regular and irregular shapes by informal means (ACMMG087)																														
Compare and describe two dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies (ACMMG088)																														
Location and transformation																														
Use simple scales, legends and directions to interpret information contained in basic maps (ACMMG090)																														
Create symmetrical patterns, pictures and shapes with and without digital technologies (ACMMG091)																														
Geometric reasoning																														
Compare angles and classify them as equal to, greater than or less than a right angle (ACMMG089)																														
Statistics and Probability																														
Chance																														
Describe possible everyday events and order their chances of occurring (ACMSP092)																														
Identify everyday events where one cannot happen if the other happens (ACMSP093)																														
Identify events where the chance of one will not be affected by the occurrence of the other (ACMSP094)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Data representation and interpretation																														
Select and trial methods for data collection, including survey questions and recording sheets (ACMSP095)																														
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 (ACMSP096)																														
Evaluate the effectiveness of different displays in illustrating data features including variability(ACMSP097)																														

Year 5	Epsilon Lessons																													
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Identify and describe factors and multiples of whole numbers and use them to solve problems (ACMNA098)											●	●													●					
Use estimation and rounding to check the reasonableness of answers to calculations (ACMNA099)																														
Solve problems involving multiplication of large numbers by one- or two-digit numbers using efficient mental, written strategies and appropriate digital technologies (ACMNA100)																														
Solve problems involving division by a one digit number, including those that result in a remainder (ACMNA101)																														
Use efficient mental and written strategies and apply appropriate digital technologies to solve problems (ACMNA291)																														
Fractions and decimals																														
Compare and order common unit fractions and locate and represent them on a number line (ACMNA102)	●													●		●														
Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator (ACMNA103)			●														●	●	●	●	●	●								
Recognise that the place value system can be extended beyond hundredths (ACMNA104)																													●	
Compare, order and represent decimals (ACMNA105)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Money and financial mathematics																														
Create simple financial plans (ACMNA106)																														
Patterns and algebra																														
Describe, continue and create patterns with fractions, decimals and whole numbers resulting from addition and subtraction (ACMNA107)																														
Use equivalent number sentences involving multiplication and division to find unknown quantities (ACMNA121)																														
Measurement and Geometry																														
Using units of measurement																														
Choose appropriate units of measurement for length, area, volume, capacity and mass (ACMMG108)																														
Calculate the perimeter and area of rectangles using familiar metric units (ACMMG109)																														
Compare 12- and 24-hour time systems and convert between them (ACMMG110)																														
Shape																														
Connect three-dimensional objects with their nets and other two-dimensional representations(ACMMG111)																														
Location and transformation																														
Use a grid reference system to describe locations. Describe routes using landmarks and directional language (ACMMG113)																														
Describe translations, reflections and rotations of two-dimensional shapes. Identify line and rotational symmetries (ACMMG114)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Apply the enlargement transformation to familiar two dimensional shapes and explore the properties of the resulting image compared with the original (ACMMG115)																														
Geometric reasoning																														
Estimate, measure and compare angles using degrees. Construct angles using a protractor(ACMMG112)																														
Statistics and Probability																														
Chance																														
List outcomes of chance experiments involving equally likely outcomes and represent probabilities of those outcomes using fractions (ACMSP116)																														
Recognise that probabilities range from 0 to 1 (ACMSP117)																														
Data representation and interpretation																														
Pose questions and collect categorical or numerical data by observation or survey (ACMSP118)																														
Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies (ACMSP119)																														
Describe and interpret different data sets in context (ACMSP120)																														

Year 6	Epsilon Lessons																													
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Identify and describe properties of prime, composite, square and triangular numbers (ACMNA122)											●	●	●												●					
Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123)																														
Investigate everyday situations that use integers. Locate and represent these numbers on a number line (ACMNA124)																														
Fractions and decimals																														
Compare fractions with related denominators and locate and represent them on a number line(ACMNA125)				●	●		●	●				●					●	●	●	●	●	●								
Solve problems involving addition and subtraction of fractions with the same or related denominators(ACMNA126)					●	●		●									●	●	●	●	●	●				●		●		●
Find a simple fraction of a quantity where the result is a whole number, with and without digital technologies (ACMNA127)	●																													
Add and subtract decimals, with and without digital technologies, and use estimation and rounding to check the reasonableness of answers (ACMNA128)																														
Multiply decimals by whole numbers and perform divisions by non-zero whole numbers where the results are terminating decimals, with and without digital technologies (ACMNA129)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Multiply and divide decimals by powers of 10 (ACMNA130)																														
Make connections between equivalent fractions, decimals and percentages (ACMNA131)																													●	
Money and financial mathematics																														
Investigate and calculate percentage discounts of 10%, 25% and 50% on sale items, with and without digital technologies (ACMNA132)																														
Patterns and algebra																														
Continue and create sequences involving whole numbers, fractions and decimals. Describe the rule used to create the sequence (ACMNA133)																														
Explore the use of brackets and order of operations to write number sentences (ACMNA134)																														
Measurement and Geometry																														
Using units of measurement																														
Connect decimal representations to the metric system (ACMMG135)																														
Convert between common metric units of length, mass and capacity (ACMMG136)																														
Solve problems involving the comparison of lengths and areas using appropriate units (ACMMG137)																														
Connect volume and capacity and their units of measurement (ACMMG138)																														
Interpret and use timetables (ACMMG139)																														
Shape																														
Construct simple prisms and pyramids (ACMMG140)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Location and transformation																														
Investigate combinations of translations, reflections and rotations, with and without the use of digital technologies (ACMMG142)																														
Introduce the Cartesian coordinate system using all four quadrants (ACMMG143)																														
Geometric reasoning																														
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)																														
Statistics and Probability																														
Chance																														
Describe probabilities using fractions, decimals and percentages (ACMSP144)																														
Conduct chance experiments with both small and large numbers of trials using appropriate digital technologies (ACMSP145)																														
Compare observed frequencies across experiments with expected frequencies (ACMSP146)																														
Data representation and interpretation																														
Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables (ACMSP147)																														
Interpret secondary data presented in digital media and elsewhere (ACMSP148)																														

Year 7	Epsilon Lessons																													
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Investigate index notation and represent whole numbers as products of powers of prime numbers (ACMNA149)													●																	
Investigate and use square roots of perfect square numbers (ACMNA150)																														
Apply the associative, commutative and distributive laws to aid mental and written computation (ACMNA151)																														
Compare, order, add and subtract integers (ACMNA280)																														
Real numbers																														
Compare fractions using equivalence. Locate and represent positive and negative fractions and mixed numbers on a number line (ACMNA152)																●														
Solve problems involving addition and subtraction of fractions, including those with unrelated denominators (ACMNA153)					●	●		●									●	●	●	●	●	●								
Multiply and divide fractions and decimals using efficient written strategies and digital technologies (ACMNA154)									●	●													●	●		●		●		●
Express one quantity as a fraction of another, with and without the use of digital technologies (ACMNA155)									●	●													●	●		●		●		●
Round decimals to a specified number of decimal places (ACMNA156)																														
Connect fractions, decimals and percentages and carry out simple conversions (ACMNA157)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Find percentages of quantities and express one quantity as a percentage of another, with and without digital technologies. (ACMNA158)																														
Recognise and solve problems involving simple ratios (ACMNA173)																														
Money and financial mathematics																														
Investigate and calculate 'best buys', with and without digital technologies (ACMNA174)																														
Patterns and algebra																														
Introduce the concept of variables as a way of representing numbers using letters (ACMNA175)																								●		●		●		●
Create algebraic expressions and evaluate them by substituting a given value for each variable (ACMNA176)																														
Extend and apply the laws and properties of arithmetic to algebraic terms and expressions (ACMNA177)																														
Linear and non-linear relationships																														
Given coordinates, plot points on the Cartesian plane, and find coordinates for a given point(ACMNA178)																														
Solve simple linear equations (ACMNA179)																														
Investigate, interpret and analyse graphs from authentic data (ACMNA180)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Measurement and Geometry																														
Using units of measurement																														
Establish the formulas for areas of rectangles, triangles and parallelograms and use these in problem solving (ACMMG159)																														
Calculate volumes of rectangular prisms (ACMMG160)																														
Shape																														
Draw different views of prisms and solids formed from combinations of prisms (ACMMG161)																														
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)																														
Geometric reasoning																														
Identify corresponding, alternate and co-interior angles when two straight lines are crossed by a transversal (ACMMG163)																														
Investigate conditions for two lines to be parallel and solve simple numerical problems using reasoning (ACMMG164)																														
Demonstrate that the angle sum of a triangle is 180° and use this to find the angle sum of a quadrilateral (ACMMG166)																														
Classify triangles according to their side and angle properties and describe quadrilaterals (ACMMG165)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Statistics and Probability																														
Chance																														
Construct sample spaces for single-step experiments with equally likely outcomes (ACMSP167)																														
Assign probabilities to the outcomes of events and determine probabilities for events (ACMSP168)																														
Data representation and interpretation																														
Identify and investigate issues involving numerical data collected from primary and secondary sources (ACMSP169)																														
Construct and compare a range of data displays including stem-and-leaf plots and dot plots (ACMSP170)																														
Calculate mean, median, mode and range for sets of data. Interpret these statistics in the context of data (ACMSP171)																														
Describe and interpret data displays using median, mean and range (ACMSP172)																														

Year 8	Epsilon Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
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)																														
Carry out the four operations with rational numbers and integers, using efficient mental and written strategies and appropriate digital technologies (ACMNA183)																														
Real numbers																														
Investigate terminating and recurring decimals (ACMNA184)																														
Investigate the concept of irrational numbers, including π (ACMNA186)																														
Solve problems involving the use of percentages, including percentage increases and decreases, with and without digital technologies (ACMNA187)																														
Solve a range of problems involving rates and ratios, with and without digital technologies (ACMNA188)																														
Money and financial mathematics																														
Solve problems involving profit and loss, with and without digital technologies (ACMNA189)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Patterns and algebra																														
Extend and apply the distributive law to the expansion of algebraic expressions (ACMNA190)																														
Factorise algebraic expressions by identifying numerical factors (ACMNA191)																														
Simplify algebraic expressions involving the four operations (ACMNA192)																														
Linear and non-linear relationships																														
Plot linear relationships on the Cartesian plane with and without the use of digital technologies (ACMNA193)																														
Solve linear equations using algebraic and graphical techniques. Verify solutions by substitution (ACMNA194)																														
Measurement and Geometry																														
Using units of measurement																														
Choose appropriate units of measurement for area and volume and convert from one unit to another (ACMMG195)																														
Find perimeters and areas of parallelograms, trapeziums, rhombuses and kites (ACMMG196)																														
Investigate the relationship between features of circles such as circumference, area, radius and diameter. Use formulas to solve problems involving circumference and area (ACMMG197)																											●			

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Develop the formulas for volumes of rectangular and triangular prisms and prisms in general. Use formulas to solve problems involving volume(ACMMG198)																														
Solve problems involving duration, including using 12- and 24-hour time within a single time zone(ACMMG199)																														
Geometric reasoning																														
Define congruence of plane shapes using transformations (ACMMG200)																														
Develop the conditions for congruence of triangles (ACMMG201)																														
Establish properties of quadrilaterals using congruent triangles and angle properties, and solve related numerical problems using reasoning (ACMMG202)																														
Statistics and Probability																														
Chance																														
Identify complementary events and use the sum of probabilities to solve problems (ACMSP204)																														
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)																														
Represent events in two-way tables and Venn diagrams and solve related problems (ACMSP292)																														
Data representation and interpretation																														
Investigate techniques for collecting data, including census, sampling and observation (ACMSP284)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Explore the practicalities and implications of obtaining data through sampling using a variety of investigative processes (ACMSP206)																														
Explore the variation of means and proportions of random samples drawn from the same population (ACMSP293)																														
Investigate the effect of individual data values, including outliers, on the mean and median(ACMSP207)																														

Zeta

Math U See Level	Australian Curriculum Year Level								
	F	1	2	3	4	5	6	7	8
Zeta									

Zeta level focuses on the **Number and Algebra** strand in the Australian Curriculum Mathematics Learning Area mainly addressing concepts across Year 6 and Year 7. The major focus is on the content descriptors located in *Fractions and Decimals / Real Numbers.*

Zeta begins with the concept of decimals and how they relate to the place value system. After the concept of tenths and hundredths is covered students are then introduced to decimals being expressed as fractions. This allows students to enhance their understanding of decimals and fractions both representing parts of a whole (building on the previous level Epsilon which focused heavily on fractions). Expanded notation is also introduced to assist with the partitioning of decimals and how they relate to fractions. Percentages are then introduced by using the Math-U-See overlays to assist students to understand that a whole can be divided into 100 equal parts. By relating percentages to fractions and then to decimals students begin to understand how the three can be applied, how they relate and the equivalents across all areas. Once understood students are then required to multiply and divide decimals and problem solve using fractions and percentages. Toward the end of this level Algebraic expressions are further explored, preparing students for the harder mathematical concepts in Years 8 -10.

Zeta level also covers content in the **Measurement and Geometry** strand across Years 6-7 relating to the content descriptor focused on *Using units of measurement* by delving further into the metric system by connecting decimal representation to the metric system and converting between units of measurement. The Year 8 concept of investigating the relationship between features of circles such as circumference, area, radius and diameter are also covered.

The **Statistics and Probability** strand is also covered by the Zeta level with a focus on data representation, probability and determining the mean, median and mode all concepts which are required to be covered in Year 6 and Year 7.

Number and Algebra	Measurement and Geometry
• Indices • Decimal place value • Expanded notation • Addition/subtraction of decimals • Decimals and fractions • Finding percentages • Multiplying decimals • Algebra (coefficient) • Division of and by decimals	• Origin of the metric system • Converting units of measurement • Angles • Area and circumference • Properties of a circle
	Statistics and Probability
	• Pie graph • Mean, median and mode • Probability

Year 3	Zeta Lessons																												
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Investigate the conditions required for a number to be odd or even and identify odd and even numbers (ACMNA051)																														
Recognise, model, represent and order numbers to at least 10 000 (ACMNA052)																														
Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems (ACMNA053)																														
Recognise and explain the connection between addition and subtraction (ACMNA054)																														
Recall addition facts for single digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation (ACMNA055)																														
Recall multiplication facts of two, three, five and ten and related division facts (ACMNA056)																														
Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies (ACMNA057)																														
Fractions and decimals																														
Model and represent unit fractions including 1/2, 1/4, 1/3, 1/5 and their multiples to a complete whole (ACMNA058)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Money and financial mathematics																														
Represent money values in multiple ways and count the change required for simple transactions to the nearest five cents (ACMNA059)				●	●	●																								
Patterns and algebra																														
Describe, continue, and create number patterns resulting from performing addition or subtraction (ACMNA060)																														
Measurement and Geometry																														
Using units of measurement																														
Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061)						●	●																							
Tell time to the minute and investigate the relationship between units of time (ACMMG062)																														
Shape																														
Make models of three dimensional objects and describe key features (ACMMG063)																														
Location and transformation																														
Create and interpret simple grid maps to show position and pathways (ACMMG065)																														
Identify symmetry in the environment (ACMMG066)																														
Geometric reasoning																														
Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Statistics and Probability																														
Chance																														
Conduct chance experiments, identify and describe possible outcomes and recognise variation in results (ACMSP067)																														
Data representation and interpretation																														
Identify questions or issues for categorical variables. Identify data sources and plan methods of data collection and recording (ACMSP068)																														
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 (ACMSP069)																														
Interpret and compare data displays (ACMSP070)																														

Year 4	Zeta Lessons																													
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Investigate and use the properties of odd and even numbers (ACMNA071)																														
Recognise, represent and order numbers to at least tens of thousands (ACMNA072)																														
Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems (ACMNA073)		●																												
Investigate number sequences involving multiples of 3, 4, 6, 7, 8, and 9 (ACMNA074)																														
Recall multiplication facts up to 10 × 10 and related division facts (ACMNA075)																														
Develop efficient mental and written strategies and use appropriate digital technologies for multiplication and for division where there is no remainder (ACMNA076)																														
Fractions and decimals																														
Investigate equivalent fractions used in contexts (ACMNA077)			●																											
Count by quarters halves and thirds, including with mixed numerals. Locate and represent these fractions on a number line (ACMNA078)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Recognise that the place value system can be extended to tenths and hundredths. Make connections between fractions and decimal notation (ACMNA079)			●	●	●		●		●	●	●																			
Money and financial mathematics																														
Solve problems involving purchases and the calculation of change to the nearest five cents with and without digital technologies (ACMNA080)				●	●	●																								
Patterns and algebra																														
Explore and describe number patterns resulting from performing multiplication (ACMNA081)																														
Solve word problems by using number sentences involving multiplication or division where there is no remainder (ACMNA082)	●	●				●																								
Use equivalent number sentences involving addition and subtraction to find unknown quantities (ACMNA083)																														
Measurement and Geometry																														
Using units of measurement																														
Use scaled instruments to measure and compare lengths, masses, capacities and temperatures (ACMMG084)							●																							
Compare objects using familiar metric units of area and volume (ACMMG290)																														
Convert between units of time (ACMMG085)																														
Use am and pm notation and solve simple time problems (ACMMG086)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Shape																														
Compare the areas of regular and irregular shapes by informal means (ACMMG087)																														
Compare and describe two dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies (ACMMG088)																														
Location and transformation																														
Use simple scales, legends and directions to interpret information contained in basic maps (ACMMG090)																														
Create symmetrical patterns, pictures and shapes with and without digital technologies (ACMMG091)																														
Geometric reasoning																														
Compare angles and classify them as equal to, greater than or less than a right angle (ACMMG089)																														●
Statistics and Probability																														
Chance																														
Describe possible everyday events and order their chances of occurring (ACMSP092)																														
Identify everyday events where one cannot happen if the other happens (ACMSP093)																														
Identify events where the chance of one will not be affected by the occurrence of the other (ACMSP094)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Data representation and interpretation																														
Select and trial methods for data collection, including survey questions and recording sheets (ACMSP095)																														
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 (ACMSP096)																														
Evaluate the effectiveness of different displays in illustrating data features including variability(ACMSP097)																														

Year 5	Zeta Lessons																													
Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Number and Algebra																														
Number and Place Value																														
Identify and describe factors and multiples of whole numbers and use them to solve problems (ACMNA098)		●																												
Use estimation and rounding to check the reasonableness of answers to calculations (ACMNA099)																														
Solve problems involving multiplication of large numbers by one- or two-digit numbers using efficient mental, written strategies and appropriate digital technologies (ACMNA100)																														
Solve problems involving division by a one digit number, including those that result in a remainder (ACMNA101)																					●									
Use efficient mental and written strategies and apply appropriate digital technologies to solve problems (ACMNA291)																														
Fractions and decimals																														
Compare and order common unit fractions and locate and represent them on a number line (ACMNA102)																														
Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator (ACMNA103)																														
Recognise that the place value system can be extended beyond hundredths (ACMNA104)			●							●																				
Compare, order and represent decimals (ACMNA105)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Money and financial mathematics																														
Create simple financial plans (ACMNA106)																														
Patterns and algebra																														
Describe, continue and create patterns with fractions, decimals and whole numbers resulting from addition and subtraction (ACMNA107)																														
Use equivalent number sentences involving multiplication and division to find unknown quantities (ACMNA121)																														
Measurement and Geometry																														
Using units of measurement																														
Choose appropriate units of measurement for length, area, volume, capacity and mass (ACMMG108)						●																								
Calculate the perimeter and area of rectangles using familiar metric units (ACMMG109)	●																													
Compare 12- and 24-hour time systems and convert between them (ACMMG110)																														
Shape																														
Connect three-dimensional objects with their nets and other two-dimensional representations(ACMMG111)																														
Location and transformation																														
Use a grid reference system to describe locations. Describe routes using landmarks and directional language (ACMMG113)																														

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Describe translations, reflections and rotations of two-dimensional shapes. Identify line and rotational symmetries (ACMMG114)																														
Apply the enlargement transformation to familiar two dimensional shapes and explore the properties of the resulting image compared with the original (ACMMG115)																														
Geometric reasoning																														
Estimate, measure and compare angles using degrees. Construct angles using a protractor(ACMMG112)																													●	
Statistics and Probability																														
Chance																														
List outcomes of chance experiments involving equally likely outcomes and represent probabilities of those outcomes using fractions (ACMSP116)																										●				
Recognise that probabilities range from 0 to 1 (ACMSP117)																										●				
Data representation and interpretation																														
Pose questions and collect categorical or numerical data by observation or survey (ACMSP118)																														
Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies (ACMSP119)																														
Describe and interpret different data sets in context (ACMSP120)																														

Year 6	Zeta Lessons																													
Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Number and Algebra																														
Number and Place Value																														
Identify and describe properties of prime, composite, square and triangular numbers (ACMNA122)	●																													
Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123)																														
Investigate everyday situations that use integers. Locate and represent these numbers on a number line (ACMNA124)																														
Fractions and decimals																														
Compare fractions with related denominators and locate and represent them on a number line(ACMNA125)																														
Solve problems involving addition and subtraction of fractions with the same or related denominators(ACMNA126)																		●												
Find a simple fraction of a quantity where the result is a whole number, with and without digital technologies (ACMNA127)																								●						
Add and subtract decimals, with and without digital technologies, and use estimation and rounding to check the reasonableness of answers (ACMNA128)				●	●	●																								
Multiply decimals by whole numbers and perform divisions by non-zero whole numbers where the results are terminating decimals, with and without digital technologies (ACMNA129)																	●	●		●	●		●							

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Multiply and divide decimals by powers of 10 (ACMNA130)			●											●			●	●	●	●										
Make connections between equivalent fractions, decimals and percentages (ACMNA131)			●				●		●	●	●		●	●			●	●			●		●	●						
Money and financial mathematics																														
Investigate and calculate percentage discounts of 10%, 25% and 50% on sale items, with and without digital technologies (ACMNA132)											●	●																		
Patterns and algebra																														
Continue and create sequences involving whole numbers, fractions and decimals. Describe the rule used to create the sequence (ACMNA133)			●																											
Explore the use of brackets and order of operations to write number sentences (ACMNA134)																														
Measurement and Geometry																														
Using units of measurement																														
Connect decimal representations to the metric system (ACMMG135)							●	●							●															
Convert between common metric units of length, mass and capacity (ACMMG136)							●	●							●															
Solve problems involving the comparison of lengths and areas using appropriate units (ACMMG137)																														
Connect volume and capacity and their units of measurement (ACMMG138)						●																								
Interpret and use timetables (ACMMG139)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Shape																														
Construct simple prisms and pyramids (ACMMG140)																														
Location and transformation																														
Investigate combinations of translations, reflections and rotations, with and without the use of digital technologies (ACMMG142)																														
Introduce the Cartesian coordinate system using all four quadrants (ACMMG143)																														
Geometric reasoning																														
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)																													●	
Statistics and Probability																														
Chance																														
Describe probabilities using fractions, decimals and percentages (ACMSP144)																										●				
Conduct chance experiments with both small and large numbers of trials using appropriate digital technologies (ACMSP145)																														
Compare observed frequencies across experiments with expected frequencies (ACMSP146)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Data representation and interpretation																														
Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables (ACMSP147)													●																	
Interpret secondary data presented in digital media and elsewhere (ACMSP148)																														

Year 7	Zeta Lessons																													
Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Number and Algebra																														
Number and Place Value																														
Investigate index notation and represent whole numbers as products of powers of prime numbers (ACMNA149)	●	●																												
Investigate and use square roots of perfect square numbers (ACMNA150)	●																													
Apply the associative, commutative and distributive laws to aid mental and written computation (ACMNA151)																														
Compare, order, add and subtract integers (ACMNA280)																														
Real numbers																														
Compare fractions using equivalence. Locate and represent positive and negative fractions and mixed numbers on a number line (ACMNA152)											●	●																		
Solve problems involving addition and subtraction of fractions, including those with unrelated denominators (ACMNA153)																			●			●								
Multiply and divide fractions and decimals using efficient written strategies and digital technologies (ACMNA154)									●	●	●	●		●			●	●	●	●	●	●	●	●						
Express one quantity as a fraction of another, with and without the use of digital technologies (ACMNA155)																														
Round decimals to a specified number of decimal places (ACMNA156)																		●			●									
Connect fractions, decimals and percentages and carry out simple conversions (ACMNA157)			●						●	●	●	●	●	●			●	●			●		●	●						

Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Find percentages of quantities and express one quantity as a percentage of another, with and without digital technologies. (ACMNA158)																														
Recognise and solve problems involving simple ratios (ACMNA173)																														
Money and financial mathematics																														
Investigate and calculate 'best buys', with and without digital technologies (ACMNA174)																														
Patterns and algebra																														
Introduce the concept of variables as a way of representing numbers using letters (ACMNA175)								●																						
Create algebraic expressions and evaluate them by substituting a given value for each variable (ACMNA176)								●											●			●								
Extend and apply the laws and properties of arithmetic to algebraic terms and expressions (ACMNA177)																			●			●								
Linear and non-linear relationships																														
Given coordinates, plot points on the Cartesian plane, and find coordinates for a given point(ACMNA178)																														
Solve simple linear equations (ACMNA179)																														
Investigate, interpret and analyse graphs from authentic data (ACMNA180)																														

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Measurement and Geometry																														
Using units of measurement																														
Establish the formulas for areas of rectangles, triangles and parallelograms and use these in problem solving (ACMMG159)																														
Calculate volumes of rectangular prisms (ACMMG160)	●																													
Shape																														
Draw different views of prisms and solids formed from combinations of prisms (ACMMG161)																														
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)																														
Geometric reasoning																														
Identify corresponding, alternate and co-interior angles when two straight lines are crossed by a transversal (ACMMG163)																														
Investigate conditions for two lines to be parallel and solve simple numerical problems using reasoning (ACMMG164)																														
Demonstrate that the angle sum of a triangle is 180° and use this to find the angle sum of a quadrilateral (ACMMG166)																														
Classify triangles according to their side and angle properties and describe quadrilaterals (ACMMG165)																														

Australian Curriculum Content Descriptors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Statistics and Probability																														
Chance																														
Construct sample spaces for single-step experiments with equally likely outcomes (ACMSP167)																														
Assign probabilities to the outcomes of events and determine probabilities for events (ACMSP168)																										●				
Data representation and interpretation																														
Identify and investigate issues involving numerical data collected from primary and secondary sources (ACMSP169)																														
Construct and compare a range of data displays including stem-and-leaf plots and dot plots (ACMSP170)																														
Calculate mean, median, mode and range for sets of data. Interpret these statistics in the context of data (ACMSP171)																									●					
Describe and interpret data displays using median, mean and range (ACMSP172)																									●					

Year 8	Zeta Lessons																													
Australian Curriculum Content Descriptors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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)	●	●																												
Carry out the four operations with rational numbers and integers, using efficient mental and written strategies and appropriate digital technologies (ACMNA183)																														
Real numbers																														
Investigate terminating and recurring decimals (ACMNA184)																					●									
Investigate the concept of irrational numbers, including π (ACMNA186)																														
Solve problems involving the use of percentages, including percentage increases and decreases, with and without digital technologies (ACMNA187)											●	●																		
Solve a range of problems involving rates and ratios, with and without digital technologies (ACMNA188)																														
Money and financial mathematics																														
Solve problems involving profit and loss, with and without digital technologies (ACMNA189)																														
Patterns and algebra																														
Extend and apply the distributive law to the expansion of algebraic expressions (ACMNA190)																														
Factorise algebraic expressions by identifying numerical factors ACMNA191)																														

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Simplify algebraic expressions involving the four operations (ACMNA192)																														
Linear and non-linear relationships																														
Plot linear relationships on the Cartesian plane with and without the use of digital technologies (ACMNA193)																														
Solve linear equations using algebraic and graphical techniques. Verify solutions by substitution (ACMNA194)																														
Measurement and Geometry																														
Using units of measurement																														
Choose appropriate units of measurement for area and volume and convert from one unit to another (ACMMG195)																														
Find perimeters and areas of parallelograms, trapeziums, rhombuses and kites (ACMMG196)																														
Investigate the relationship between features of circles such as circumference, area, radius and diameter. Use formulas to solve problems involving circumference and area (ACMMG197)																●								●						
Develop the formulas for volumes of rectangular and triangular prisms and prisms in general. Use formulas to solve problems involving volume (ACMMG198)																														
Solve problems involving duration, including using 12- and 24- hour time within a single time zone (ACMMG199)																														

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Geometric reasoning																														
Define congruence of plane shapes using transformations (ACMMG200)																												●		
Develop the conditions for congruence of triangles (ACMMG201)																														
Establish properties of quadrilaterals using congruent triangles and angle properties, and solve related numerical problems using reasoning (ACMMG202)																														
Statistics and Probability																														
Chance																														
Identify complementary events and use the sum of probabilities to solve problems (ACMSP204)																														
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)																														
Data representation and interpretation																														
Investigate techniques for collecting data, including census, sampling and observation (ACMSP284)																														
Explore the practicalities and implications of obtaining data through sampling using a variety of investigative processes (ACMSP206)																														
Explore the variation of means and proportions of random samples drawn from the same population (ACMSP293)																														
Investigate the effect of individual data values , including outliers, on the mean and median (ACMSP207)																														