Australian Curriculum Mathematics Alignment Document_V8.2		Year 5
Content Descriptors	**Elaborations**	**Math-U-See Linkages**
Number and Algebra		
Number and Place Value		
Identify and describe factors and multiples of whole numbers and use them to solve problems (ACMNA098)	• Exploring factors and multiples using number sequences • Using simple divisibility tests	Delta lesson 1, 2, 3, 4, 6, 8, 10, 12 Epsilon lesson 11, 12, 25 Gamma lesson 1, 4 – 8, 17, 18, 26 Zeta lesson 2 Pre-algebra lesson 21 *Honours pre-algebra lesson 22*
Use estimation and rounding to check the reasonableness of answers to calculations (ACMNA099)	• Recognising the usefulness of estimation to check calculations • Applying mental strategies to estimate the result of calculations, such as estimating the cost of a supermarket trolley load	Beta lesson 4, 11, 17, 18, 19 Gamma lesson 22
Solve problems involving multiplication of large numbers by one- or two-digit numbers using efficient mental, written strategies and appropriate digital technologies (ACMNA100)	• Exploring techniques for multiplication such as the area model, the Italian lattice method or the partitioning of numbers • Applying the distributive law and using arrays to model multiplication and explain calculation strategies	Delta lesson 1, 2, 3, 4, 8, 10, 12, 17 Gamma lesson 1, 4 – 7, 9, 11 – 21, 23, 24, 25, 28
Solve problems involving division by a one digit number, including those that result in a remainder (ACMNA101)	• Using the fact that equivalent division calculations result if both numbers are divided by the same factor • Interpreting and representing the remainder in division calculations sensibly for the context	Delta lesson 16 Zeta lesson 21
Use efficient mental and written strategies and apply appropriate digital technologies to solve problems (ACMNA291)	• Using calculators to check the reasonableness of answers	Delta lesson 17 – 24 Gamma lesson 21, 23, 24, 25, 28
Fractions and decimals		
Compare and order common unit fractions and locate and represent them on a number line (ACMNA102)	• Recognising the connection between the order of unit fractions and their denominators	Delta lesson 27 Epsilon lesson 1, 14, 16 Algebra 1 lesson 5
Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator (ACMNA103)	• Modelling and solving addition and subtraction problems involving fractions by using jumps on a number line, or making diagrams of fractions as parts of shapes	Epsilon lesson 3, 17 – 22
Recognise that the place value system can be extended beyond hundredths (ACMNA104)	• Using knowledge of place value and division by 10 to extend the number system to thousandths and beyond	Epsilon lesson 29

	• Recognising the equivalence of one thousandths and 0.001	Zeta lesson 2, 10
Compare, order and represent decimals (ACMNA105)	• Locating decimals on a number line	
Money and financial mathematics		
Create simple financial plans (ACMNA106)	• Creating a simple budget for a class fundraising event • Identifying the GST component of invoices and receipts	
Patterns and algebra		
Describe, continue and create patterns with fractions, decimals and whole numbers resulting from addition and subtraction (ACMNA107)	• Using the number line or diagrams to create patterns involving fractions or decimals	
Find unknown quantities in number sentences involving multiplication and division and identify equivalent number sentences involving multiplication and division (ACMNA121)	• Using relevant problems to develop number sentences	Delta lesson 1 Gamma lesson 8 Algebra 1 lesson 3

Measurement and Geometry		
Using units of measurement		
Choose appropriate units of measurement for length, area, volume, capacity and mass (ACMMG108)	• Recognising that some units of measurement are better suited for some tasks than others, for example kilometres rather than metres to measure the distance between two towns • Investigating alternative measures of scale to demonstrate that these vary between countries and change over time, for example temperature measurement in Australia, Indonesia, Japan and USA	Beta lesson 15 Zeta lesson 6
Calculate the perimeter and area of rectangles using familiar metric units (ACMMG109)	• Exploring efficient ways of calculating the perimeters of rectangles such as adding the length and width together and doubling the result • Exploring efficient ways of finding the areas of rectangles	Beta lesson 15 Delta lesson 1 Gamma lesson 1, 4, 5, 6, 7 Zeta lesson 1 Geometry lesson 8, 9
Compare 12- and 24-hour time systems and convert between them (ACMMG110)	• Investigating the ways time was and is measured in different Aboriginal Country, such as using tidal change • Using units hours, minutes and seconds	Pre-algebra lesson 26, 28
Shape		
Connect three-dimensional objects with their nets and other two-dimensional representations (ACMMG111)	• Identifying the shape and relative position of each face of a solid to determine the net of the solid, including that of prisms and pyramids • Representing two-dimensional shapes such as photographs, sketches and images created by digital technologies	
Location and transformation		
Use a grid reference system to describe locations. Describe routes using landmarks and directional language (ACMMG113)	• Comparing aerial views of Country, desert paintings and maps with grid references • Creating a grid reference system for the classroom and using it to locate objects and describe routes from one object to another	
Describe translations, reflections and rotations of two-dimensional shapes. Identify line and rotational symmetries (ACMMG114)	• Identifying and describing the line and rotational symmetry of a range of two-dimensional shapes, by manually cutting, folding and turning shapes and by using digital technologies • Identifying the effects of transformations by manually flipping, sliding and turning two-dimensional shapes and by using digital technologies	Geometry lesson 28
Apply the enlargement transformation to familiar two dimensional shapes and explore the properties of the resulting image compared with the original (ACMMG115)	• Using digital technologies to enlarge shapes • Using a grid system to enlarge a favourite image or cartoon	Geometry lesson 28

Geometric reasoning	**Geometry lessons 1 and 2 are good for review and setting the scene for develop geometric reasoning. Honours geometry lesson 1, 11, 22 support the development of logical thinking and reasoning**	
Estimate, measure and compare angles using degrees. Construct angles using a protractor (ACMMG112)	• Measuring and constructing angles using both 180° and 360° protractors • Recognising that angles have arms and a vertex, and that size is the amount of turn required for one arm to coincide with the other	Zeta lesson 29 Geometry lesson 1, 3, 4

Statistics and Probability		
Chance		
List outcomes of chance experiments involving equally likely outcomes and represent probabilities of those outcomes using fractions (ACMSP116)	• Commenting on the likelihood of winning simple games of chance by considering the number of possible outcomes and the consequent chance of winning in simple games of chance such as jan-ken-pon (rock-paper-scissors)	Zeta lesson 26 Geometry lesson 2 (language for set notation)
Recognise that probabilities range from 0 to 1 (ACMSP117)	• Investigating the probabilities of all outcomes for a simple chance experiment and verifying that their sum equals 1	Zeta lesson 26
Data representation and interpretation		
Pose questions and collect categorical or numerical data by observation or survey (ACMSP118)	• Posing questions about insect diversity in the playground, collecting data by taping a one-metre-square piece of paper to the playground and observing the type and number of insects on it over time	Geometry lesson 2 *Honours geometry lesson 2 (Venn diagrams)*
Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies (ACMSP119)	• Identifying the best methods of presenting data to illustrate the results of investigations and justifying the choice of representations	Beta lesson 30 Geometry lesson 2, 3
Describe and interpret different data sets in context (ACMSP120)	• Using and comparing data representations for different data sets to help decision making	Geometry lesson 2, 3 *Honours algebra 1 lesson 4*