Australian Curriculum Mathematics Alignment Document_V8.1   Year 4

Content Descriptors	Elaborations	Math-U-See Linkage
Number and Algebra		
Number and Place Value		
Investigate and use the properties of odd and even numbers (ACMNA071)	• Using the four operations with pairs of odd or even numbers or one odd and one even number, then using the relationships established to check the accuracy of calculations	
Recognise, represent and order numbers to at least tens of thousands (ACMNA072)	• Reproducing five-digit numbers in words using their numerical representations, and vice versa	Delta lesson 14, 15 Gamma lesson 27
Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems (ACMNA073)	• Recognising and demonstrating that the place-value pattern is built on the operations of multiplication or division of tens	Beta lesson 16, 18, 20, 28 Delta lesson 14, 15 Gamma lesson 17, 18, 21 Zeta lesson 2
Investigate number sequences involving multiples of 3, 4, 6, 7, 8, and 9 (ACMNA074)	• Recognising that number sequences can be extended indefinitely, and determining any patterns in the sequences	Gamma lesson 10 – 20
Recall multiplication facts up to 10 × 10 and related division facts (ACMNA075)	• Using known multiplication facts to calculate related division facts	Delta lesson 2, 3, 4, 8, 10, 12 Epsilon lesson 11, 12, 25 Gamma lesson 10 – 20
Develop efficient mental and written strategies and use appropriate digital technologies for multiplication and for division where there is no remainder (ACMNA076)	• Using known facts and strategies, such as commutativity, doubling and halving for multiplication, and connecting division to multiplication when there is no remainder	Delta lesson 2, 3, 4, 8, 10, 12, 17 Epsilon lesson 11, 12, 25 Gamma lesson 4 – 20
Fractions and decimals		
Investigate equivalent fractions used in contexts (ACMNA077)	• Exploring the relationship between families of fractions (halves, quarters and eighths or thirds and sixths) by folding a series of paper strips to construct a fraction wall	Epsilon lesson 4, 5, 7, 12, 17 – 22 Gamma lesson 9, 13 Zeta lesson 3
Count by quarters halves and thirds, including with mixed numerals. Locate and represent these fractions on a number line (ACMNA078)	• Converting mixed numbers to improper fractions and vice versa • Investigating the use of fractions and sharing as a way of managing Country: for example taking no more than half the eggs from a nest to protect future bird populations	Delta lesson 2 Epsilon lesson 13, 15

Recognise that the place value system can be extended to tenths and hundredths. Make connections between fractions and decimal notation (ACMNA079)	• Using division by 10 to extend the place-value system • Using knowledge of fractions to establish equivalences between fractions and decimal notation	Beta lesson 12, 14, 27 Epsilon lesson 29 Gamma lesson 5 Zeta lesson 3, 4, 5, 7, 9, 10, 11
Money and financial mathematics		
Solve problems involving purchases and the calculation of change to the nearest five cents with and without digital technologies (ACMNA080)	• Recognising that not all countries use dollars and cents, e.g. India uses rupees. • Carrying out calculations in another currency as well as in dollars and cents, and identifying both as decimal systems	Beta lesson 12 Zeta lesson 4, 5, 6
Patterns and algebra		
Explore and describe number patterns resulting from performing multiplication (ACMNA081)	• Identifying examples of number patterns in everyday life	The Gamma level lessons cover skip counting and relates this to the concept of multiplication. Investigation/ exploring patterns resulting from multiplication is the intent.
Solve word problems by using number sentences involving multiplication or division where there is no remainder (ACMNA082)	• Representing a word problem as a number sentence • Writing a word problem using a given number sentence	Delta lesson 2, 3, 4, 8, 10, 12, 15 Zeta lesson 1, 2, 6
Find unknown quantities in number sentences involving addition and subtraction and identify equivalent number sentences involving addition and subtraction (ACMNA083)	• Writing number sentences to represent and answer questions such as: 'when a number is added to 23 the answer is the same as 57 minus 19. What is the number?' • Using partitioning to find unknown quantities in number sentences	

Measurement and Geometry		
Using units of measurement		
Use scaled instruments to measure and compare lengths, masses, capacities and temperatures (ACMMG084)	• Reading and interpreting the graduated scales on a range of measuring instruments to the nearest graduation	Beta lesson 14, 15, 18, 29 Epsilon 14, 16 Zeta lesson 7
Compare objects using familiar metric units of area and volume (ACMMG290)	• Comparing areas using grid paper • Comparing volume using centicubes • Recognising that metric units are not the only units used throughout the world, for example measuring the area of floor	

		space using tatami mats (Japan), using squares for room and house area (Australia)	
Convert between units of time (ACMMG085)	•	Identifying and using the correct operation for converting units of time	Beta lesson 21
Use am and pm notation and solve simple time problems (ACMMG086)	• • •	Calculating the time spent at school during a normal school day Calculating the time required to travel between two locations Determining arrival time given departure time	
Shape			
Compare the areas of regular and irregular shapes by informal means (ACMMG087)	•	Comparing areas using metric units, such as counting the number of square centimetres required to cover two areas by overlaying the areas with a grid of centimetre squares	Gamma lesson 1, 4, 5, 6, 7
Compare and describe two dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies (ACMMG088)	• •	Identifying common two-dimensional shapes that are part of a composite shape by re-creating it from these shapes Creating a two-dimensional shapes from verbal or written instructions	
Location and transformation			
Use simple scales, legends and directions to interpret information contained in basic maps (ACMMG090)	• •	Identifying the scale used on maps of cities and rural areas in Australia and a city in Indonesia and describing the difference Using directions to find features on a map	
Create symmetrical patterns, pictures and shapes with and without digital technologies (ACMMG091)	•	Using stimulus materials such as the motifs in Central Asian textiles, Tibetan artefacts, Indian lotus designs and symmetry in Yolngu or Central and Western Desert art	
Geometric reasoning			
Compare angles and classify them as equal to, greater than or less than a right angle (ACMMG089)	•	Creating angles and comparing them to a right angle using digital technologies	Zeta lesson 30
Statistics and Probability			
Chance			
Describe possible everyday events and order their chances of occurring (ACMSP092)	•	Using lists of events familiar to students and ordering them from 'least likely' to 'most likely' to occur	
Identify everyday events where one cannot happen if the other happens (ACMSP093)	•	Using examples such as weather, which cannot be dry and wet at the same time	
Identify events where the chance of one will not be affected by the occurrence of the other (ACMSP094)	•	Explaining why the probability of a new baby being either a boy or a girl does not depend on the sex of the previous baby	
Data representation and interpretation			
Select and trial methods for data collection, including survey questions and recording sheets	•	Comparing the effectiveness of different methods of collecting data	

(ACMSP095)	• Choosing the most effective way to collect data for a given investigation	
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)	• Exploring ways of presenting data and showing the results of investigations • Investigating data displays using many-to-one correspondence	
Evaluate the effectiveness of different displays in illustrating data features including variability (ACMSP097)	• Interpreting data representations in the media and other forums in which symbols represent more than one data value • Suggesting questions that can be answered by a given data display and using the display to answer questions	

Curriculum gaps:
Properties of odd and even numbers
Exploring number patterns
Finding unknown quantities in number sentences
Area and volume
Time
Compare and describe 2D shapes
Location and transformation
Chance
Data representation and interpretation