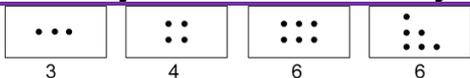
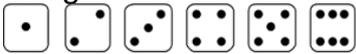
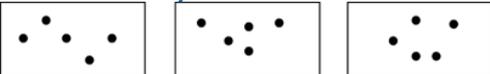


# EARLY STAGE 1 CONTENT

## WHOLE NUMBERS

<b>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)</b>	
<ul style="list-style-type: none"> <li>count forwards to 30 from a given number</li> <li>count backwards from a given number in the range 0 to 20</li> </ul>	<p>Place Value <a href="#">Unit 1</a> Counting songs and stories</p>
<ul style="list-style-type: none"> <li>identify the number before and after a given number</li> <li>describe the number before as 'one less than' and the number after as 'one more than' a given number (Communicating) 🗣️</li> </ul>	<p>Place Value <a href="#">Unit 8</a> One more, one less</p>
<ul style="list-style-type: none"> <li>read and use the ordinal names to at least 'tenth' 🗣️</li> </ul>	<p>Place Value <a href="#">Unit 10</a> Ordinal numbers</p>

<b>Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond (ACMNA002)</b>	
<ul style="list-style-type: none"> <li>read numbers to at least 20, including zero, and represent these using objects (such as fingers), pictures, words and <u>numerals</u> 🗣️</li> <li>recognise numbers in a variety of contexts, eg classroom charts, cash register, computer keyboard, telephone (Communicating) 🗣️</li> <li>communicate the use of numbers through everyday language, actions, materials and informal recordings (Communicating) 🗣️</li> </ul>	<p>Place Value <a href="#">Unit 2</a> Count to 3, then to 6</p> <p>Place Value <a href="#">Unit 3</a> Count to 10 and beyond</p>
<ul style="list-style-type: none"> <li>estimate the number of objects in a group of up to 20 objects, and count to check</li> </ul>	<p>Place Value <a href="#">Unit 14 – Lesson 1</a> Rounding and Estimation</p>
<ul style="list-style-type: none"> <li>use 5 as a reference in forming numbers from 6 to 10, eg 'Six is one more than five'</li> </ul>	<p>Place Value <a href="#">Unit 14 – Lesson 2</a> Rounding and Estimation</p>
<ul style="list-style-type: none"> <li>use 10 as a reference in forming numbers from 11 to 20, eg 'Thirteen is 1 group of ten and 3 ones'</li> </ul>	<p>Place Value <a href="#">Unit 13</a> Teen numbers</p>

<b>Subitise small collections of objects (ACMNA003) recognise the number of objects or dots in a pattern of objects or dots instantly</b>	
 <p>3                      4                      6                      6</p> <ul style="list-style-type: none"> <li>recognise dice and domino dot patterns, eg              dice dot patterns                      domino dot patterns         </li> <li>instantly recognise (subitise) different arrangements for the same number, eg different representations of five <b>formats</b>)            </li> <li>recognise that the way objects are arranged affects how easy it is to subitise (Reasoning) 🧠</li> </ul>	<p>Place Value <a href="#">Unit 5</a> Subitise (regular formats)</p> <p>Place Value <a href="#">Unit 6</a> Subitise (irregular formats)</p>

**Compare, order and make correspondences between collections, initially to 20, and explain reasoning (ACMNA289)**

- count with one-to-one correspondence
- recognise that the last number name represents the total number in the collection when counting (Communicating)

**Place Value Unit 2**  
**Count to 3, then to 6**

**Place Value Unit 3**  
**Count to 10 and beyond**

- make correspondences between collections, eg 'I have four counters, you have seven counters. So you have more counters than me'
- compare and order numbers and groups of objects
- apply counting strategies to solve simple everyday problems and justify answers (Problem Solving, Reasoning)✳
- use the term 'is the same as' to express equality of groups👉
- determine whether two groups have the same number of objects and describe the equality, eg 'The number of objects here is the same as the number there' (Communicating, Reasoning)👉

**Place Value Unit 7**  
**Compare and ordering numbers**

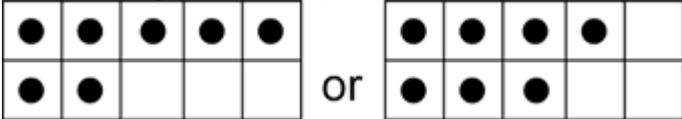
**Place Value Unit 8**  
**One more, one less**

**Use the language of money**

- use the language of money in everyday contexts, eg coins, notes, cents, dollars👉✳
- recognise that there are different coins and notes in our monetary system✳
- exchange money for goods in a play situation (Problem Solving)👉✳

**Money Unit 1**  
**Recognise and use coins**

# ADDITION AND SUBTRACTION

Represent practical situations to model addition and sharing (ACMNA004)	
<ul style="list-style-type: none"> <li>combine two or more groups of objects to model addition</li> </ul>	<p><b>Addition <a href="#">Unit 1</a></b>  <b>Practical addition for count all</b></p>
<ul style="list-style-type: none"> <li>model subtraction by separating and taking away part of a group of objects</li> </ul>	<p><b>Subtraction <a href="#">Unit 1</a></b>  <b>Physical take away actions</b></p>
<ul style="list-style-type: none"> <li>use concrete materials or fingers to model and solve simple addition and subtraction problems</li> <li>compare two groups of objects to determine 'how many more'</li> <li>use visual representations of numbers to assist with addition and subtraction, eg ten frames</li> <li>create and recognise combinations for numbers to at least 10, eg 'How many more make 10?'</li> </ul> <div style="text-align: center;">  </div>	<p><b>Subtraction <a href="#">Unit 4</a></b>  <b>Difference between</b></p>
<ul style="list-style-type: none"> <li>describe the action of combining, separating and comparing using everyday language, eg makes, joins, combines with, and, get, take away, how many more, all together 🧩</li> <li>explain or demonstrate how an answer was obtained (Communicating, Reasoning)</li> <li>apply strategies that have been demonstrated by other students (Problem Solving)</li> <li>investigate different methods of adding and subtracting used in various cultures, eg Aboriginal and Torres Strait Islander methods involving spatial patterns and reasoning, Asian counting tools such as the abacus (Communicating, Problem Solving) 🌐</li> <li>record addition and subtraction informally using drawings, words and <u>numerals</u> 📝</li> </ul>	<p><b>Addition <a href="#">Unit 1</a></b>  <b>Practical addition for count all</b></p> <p><b>Subtraction <a href="#">Unit 1</a></b>  <b>Physical take away actions</b></p>
<ul style="list-style-type: none"> <li>count forwards by ones to add and backwards by ones to subtract</li> </ul>	<p><b>Addition <a href="#">Unit 2</a></b>  <b>One more, two more</b>  <b>Addition <a href="#">Unit 3</a> Count on</b></p> <p><b>Subtraction <a href="#">Unit 2</a></b>  <b>One less, two less</b>  <b>Subtraction <a href="#">Unit 3</a> Count back</b></p>

# MULTIPLICATION AND DIVISION

## Investigate and model equal groups

- use the term 'group' to describe a collection of objects
- use the term 'sharing' to describe the distribution of a collection of objects
- model equal groups
- recognise groups that are not equal in size
- group and share concrete materials to solve problems
- explain or demonstrate how an answer was obtained (Communicating, Reasoning)

**Multiplication Unit 1**  
**Make equal groups**

**Division Unit 1**  
**Share between two**

## Record grouping and sharing using informal methods

- label the number of objects in a group
- record grouping and sharing informally using pictures, words and numerals

# FRACTIONS AND DECIMALS

## Establish the concept of one-half

- an object by dividing it into two equal parts, eg cutting a piece of ribbon into halves
- describe how to make equal parts (Communicating)
- recognise that halves are two equal parts
- explain the reason for dividing an object in a particular way (Communicating, Reasoning)
- recognise when two parts are not halves of one whole
- explain why two parts of one whole are or are not halves, eg 'The two parts are not halves because they are not the same' (Communicating, Reasoning)
- use the term 'half' accurately in everyday situations
- record halves of objects using drawings
- record grouping and sharing informally using pictures, words and numerals

**Fractions Unit 2**  
**Halves**

# PATTERNS AND ALGEBRA

**Sort and classify familiar objects and explain the basis for these classifications (ACMNA005)**

- sort and classify a group of familiar objects into smaller groups
- recognise that a group of objects can be sorted and classified in different ways
- explain the basis for their classification of objects (Communicating, Reasoning)

Copy, continue and create patterns with objects and drawings

- recognise, copy and continue repeating patterns using sounds and/or actions
- recognise, copy, continue and create repeating patterns using shapes, objects or pictures, eg  
♦, □, ♦, □, ♦, □, ♦, □, ...
- create or continue a repeating pattern using simple computer graphics (Problem Solving)
- recognise when an error occurs in a pattern and explain what is wrong
- describe a repeating pattern made from shapes by referring to its distinguishing features, eg 'I have made my pattern from squares. The colours repeat. They go red, blue, red, blue, ...'

**Patterns Unit 1  
Patterns with objects**

# STAGE 1 CONTENT

## WHOLE NUMBERS 1

<b>Develop confidence with number sequences to 100 by ones from any starting point (ACMNA012)</b>	
<ul style="list-style-type: none"><li>count forwards and backwards by ones from a given two-digit number</li></ul>	<b>Place Value <a href="#">Unit 11</a> Count to 120</b>
<ul style="list-style-type: none"><li>identify the number before and after a given two-digit number</li><li>describe the number before as 'one less than' and the number after as 'one more than' a given number (Communicating) 🗣️</li></ul>	<b>Place Value <a href="#">Unit 8</a> One more, One less</b>
<ul style="list-style-type: none"><li>read and use the ordinal names to at least 'thirty-first', eg when reading calendar dates 🗓️</li></ul>	<b>Place Value <a href="#">Unit 10</a> Ordinal numbers</b>

<b>Count collections to 100 by partitioning numbers using place value (ACMNA014)</b>	
<ul style="list-style-type: none"><li>count and represent large sets of objects by systematically grouping in tens</li><li>use and explain mental grouping to count and to assist with estimating the number of items in large groups 🗳️</li></ul>	<b>Place Value <a href="#">Unit 12</a> Two-digit numbers</b>  <b>Place Value <a href="#">Unit 14</a> Rounding and estimation</b>
<ul style="list-style-type: none"><li>use place value to partition two-digit numbers, eg 32 as 3 groups of ten and 2 ones</li><li>state the place value of digits in two-digit numbers, eg 'In the number 32, the "3" represents 30 or 3 tens' 🗣️</li></ul>	<b>Place Value <a href="#">Unit 12</a> Two-digit numbers</b>  <b>Place Value <a href="#">Unit 13</a> Teen numbers</b>
<ul style="list-style-type: none"><li>partition two-digit numbers in non-standard forms, eg 32 as 32 ones or 2 tens and 12 ones 🗳️</li></ul>	<b>Place Value <a href="#">Unit 16</a> Renaming</b>

<b>Recognise, model, read, write and order numbers to at least 100; locate these numbers on a number line (ACMNA013)</b>	
<ul style="list-style-type: none"> <li>represent two-digit numbers using objects, pictures, words and <u>numerals</u> 🗣️</li> </ul>	<b>Place Value <a href="#">Unit 12</a></b> <b>Two-digit numbers</b>
<ul style="list-style-type: none"> <li>locate and place two-digit numbers on a number line</li> </ul>	<b>Place Value <a href="#">Unit 14</a></b> <b>Rounding and estimation</b>
<ul style="list-style-type: none"> <li>apply an understanding of place value and the role of zero to read, write and order two-digit numbers 🗣️</li> <li>give reasons for placing a set of numbers in a particular order (Communicating, Reasoning) ✨</li> </ul>	<b>Place Value <a href="#">Unit 12</a></b> <b>Two-digit numbers</b>
<ul style="list-style-type: none"> <li><u>round</u> numbers to the nearest ten</li> <li>estimate, to the nearest ten, the number of objects in a collection and check by counting, eg estimate the number of children in a room to the nearest ten</li> </ul>	<b>Place Value <a href="#">Unit 14</a></b> <b>Rounding and estimation</b>
<ul style="list-style-type: none"> <li>solve simple everyday problems with two-digit numbers 🗣️ ✨</li> <li>choose an appropriate strategy to solve problems, including trial-and-error and drawing a diagram (Communicating, Problem Solving) ✨</li> <li>ask questions involving two-digit numbers, eg 'Why are the houses on either side of my house numbered 32 and 36?' (Communicating)</li> </ul>	<b>Place Value <a href="#">Unit 12</a></b> <b>Two-digit numbers</b>

<b>Recognise, describe and order Australian coins according to their value (ACMNA017)</b>	
<ul style="list-style-type: none"> <li>identify, sort, order and count money using the appropriate language in everyday contexts, eg coins, notes, cents, dollars ✨</li> </ul>	<b>Money <a href="#">Unit 1</a></b> <b>Recognise coins and notes</b>
<ul style="list-style-type: none"> <li>recognise that total amounts can be made using different denominations, eg 20 cents can be made using a single coin or two 10-cent coins</li> <li>recognise the symbols for dollars (\$) and cents (c)</li> </ul>	<b>Money <a href="#">Unit 2</a></b> <b>Calculate totals and rename money amounts</b>

# ADDITION AND SUBTRACTION 1

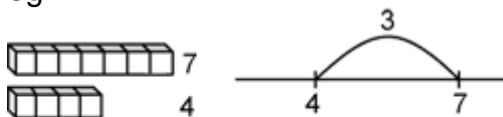
**Represent and solve simple addition and subtraction problems using a range of strategies, including counting on, partitioning and rearranging parts (ACMNA015)**

- use the terms 'add', 'plus', 'equals', 'is equal to', 'take away', 'minus' and the 'difference between'
- use concrete materials to model addition and subtraction problems involving one- and two-digit numbers

[Addition Unit 1](#)  
Practical addition

[Subtraction Unit 1](#)  
Physical take away

- use concrete materials and a number line to model and determine the difference between two numbers, eg



The difference between 7 and 4 is 3.

[Subtraction Unit 4](#)  
Difference between

- recognise and use the symbols for plus (+), minus (-) and equals (=)
- record number sentences in a variety of ways using drawings, words, numerals and mathematical symbols

[Addition Unit 1](#)  
Practical addition

[Subtraction Unit 1](#)  
Physical take away

- recognise, recall and record combinations of two numbers that add to 10

[Addition Unit 5](#)  
10 Facts

- create, record and recognise combinations of two numbers that add to numbers up to and including 9
- model and record patterns for individual numbers by making all possible whole-number combinations, eg  
 $5+0=5$ ,  $4+1=5$ ,  $3+2=5$ ,  $2+3=5$ ,  $1+4=5$ ,  $0+5=5$ ,  
 $5+0=5$  (Communicating, Problem Solving)
- describe combinations for numbers using words such as 'more', 'less' and 'double', eg describe 5 as 'one more than four', 'three combined with two', 'double two and one more' and 'one less than six' (Communicating, Problem Solving)

[Addition Unit 4](#)  
Partition 3 to 9

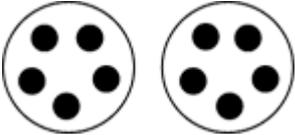
- create, record and recognise combinations of two numbers that add to numbers from 11 up to and including 20
- use combinations for numbers up to 10 to assist with combinations for numbers beyond 10 (Problem Solving)

[Addition Unit 5](#)  
10 Facts

[Addition Unit 6](#)  
Doubles

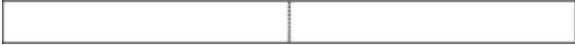
<ul style="list-style-type: none"> <li>investigate and generalise the effect of adding zero to a number, eg 'Adding zero to a number does not change the number'</li> <li>use concrete materials to model the <u>commutative</u> property for addition and apply it to aid the recall of addition facts, eg <math>4 + 5 = 5 + 4</math></li> </ul>	<p style="text-align: center;"><b>Addition <a href="#">Unit 4</a></b> <b>Partition 3 to 9</b></p>
<ul style="list-style-type: none"> <li>relate addition and subtraction facts for numbers to at least 20, eg <math>5 + 3 = 8</math>, so <math>8 - 3 = 5</math> and <math>8 - 5 = 3</math></li> </ul>	<p style="text-align: center;"><b>Subtraction <a href="#">Unit 4</a></b> <b>Difference between</b></p> <p style="text-align: center;"><b>Subtraction <a href="#">Unit 7</a></b> <b>Fact Families</b></p>
<ul style="list-style-type: none"> <li><b>use and record a range of mental strategies to solve addition and subtraction problems involving one- and two-digit numbers, including:</b>**</li> </ul>	
<ul style="list-style-type: none"> <li>counting on from the larger number to find the total of two numbers</li> </ul>	<p style="text-align: center;"><b>Addition <a href="#">Unit 3</a></b> <b>Count on from the larger number</b></p>
<ul style="list-style-type: none"> <li>counting back from a number to find the number remaining</li> </ul>	<p style="text-align: center;"><b>Subtraction <a href="#">Unit 3</a></b> <b>Count back strategy</b></p>
<ul style="list-style-type: none"> <li>counting on or back to find the difference between two numbers</li> </ul>	<p style="text-align: center;"><b>Subtraction <a href="#">Unit 4</a></b> <b>Difference between</b></p>
<ul style="list-style-type: none"> <li>using doubles and near doubles, eg <math>5 + 7</math>: double 5 and add 2</li> </ul>	<p style="text-align: center;"><b>Addition <a href="#">Unit 6</a> Doubles</b> <b>Addition <a href="#">Unit 7</a> Near doubles</b></p>
<ul style="list-style-type: none"> <li>combining numbers that add to 10, eg <math>4 + 7 + 8 + 6 + 3</math>: first combine 4 and 6, and 7 and 3, then add 8</li> </ul>	<p style="text-align: center;"><b>Addition <a href="#">Unit 5</a></b> <b>10 Facts</b></p>
<ul style="list-style-type: none"> <li>bridging to 10, eg <math>17 + 5</math>: 17 and 3 is 20, then add 2 more</li> <li>using <u>place value</u> to partition numbers, eg <math>25 + 8</math>: 25 is <math>20 + 5</math>, so <math>25 + 8</math> is <math>20 + 5 + 8</math>, which is <math>20 + 13</math></li> </ul>	<p style="text-align: center;"><b>Addition <a href="#">Unit 8</a></b> <b>Build to 10</b></p>
<ul style="list-style-type: none"> <li>choose and apply efficient strategies for addition and subtraction (Problem Solving)</li> </ul>	<p style="text-align: center;"><b>Addition <a href="#">Unit 7</a> Near doubles</b> <b>Addition <a href="#">Unit 8</a> Build to 10</b></p>
<ul style="list-style-type: none"> <li>use the equals sign to record equivalent number sentences involving addition, and to mean 'is the same as', rather than as an indication to perform an <u>operation</u>, eg <math>5 + 2 = 3 + 4</math></li> <li>check given number sentences to determine if they are true or false and explain why, eg 'Is <math>7 + 5 = 8 + 4</math> true? Why or why not?' (Communicating, Reasoning)**</li> </ul>	<p style="text-align: center;"><b>Patterns <a href="#">Unit 3</a></b> <b>Balancing equations</b></p>

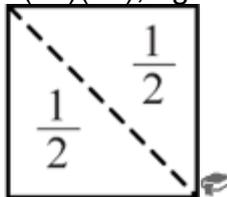
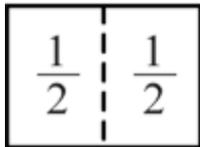
# MULTIPLICATION AND DIVISION 1

<b>Skip count by twos, fives and tens starting from zero (ACMNA012)</b>	
<ul style="list-style-type: none"> <li>count by twos, fives and tens using rhythmic counting and skip counting from zero</li> <li>use patterns on a number chart to assist in counting by twos, fives or tens (Communicating)</li> </ul>	<p><b>Multiplication</b> <b>Unit 2</b> <b>Skip-count by 2, 10 and 5</b></p>
<p>Model and use equal groups of objects as a strategy for <u>multiplication</u></p> <ul style="list-style-type: none"> <li>model and describe collections of objects as 'groups of', eg</li> </ul>  <p>'two groups of three' ➡</p> <ul style="list-style-type: none"> <li>recognise the importance of having groups of equal size (Reasoning)</li> <li>determine and distinguish between the 'number of groups' and the 'number in each group' when describing collections of objects (Communicating) ➡</li> <li>find the total number of objects using skip counting</li> </ul>	<p><b>Multiplication</b> <b>Unit 1</b> <b>Make equal groups</b></p>
<b>Recognise and represent division as grouping into equal sets (ACMNA032)</b>	
<ul style="list-style-type: none"> <li>recognise when there are equal numbers of items in groups, eg 'There are three pencils in each group'</li> <li>model division by sharing a collection of objects equally into a given number of groups to determine how many in each group, eg determine the number in each group when 10 objects are shared between two people</li> </ul>  <ul style="list-style-type: none"> <li>describe the part left over when a collection cannot be shared equally into a given number of groups (Communicating, Problem Solving, Reasoning) ✳</li> <li>model division by sharing a collection of objects into groups of a given size to determine the number of groups, eg determine the number of groups when 20 objects are shared into groups of four</li> <li>describe the part left over when a collection cannot be distributed equally using the given group size, eg when 22 objects are shared into groups of four, there are five groups of four and two objects left over (Communicating, Problem Solving, Reasoning)</li> </ul>	<p><b>Division</b> <b>Unit 2</b> <b>Create equal shares</b></p>

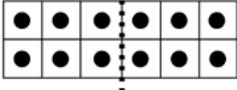
# FRACTIONS AND DECIMALS 1

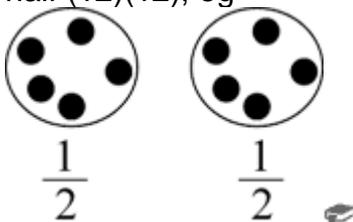
## Recognise and describe one-half as one of two equal parts of a whole (ACMNA016)

- use concrete materials to model half of a whole object, eg  

- describe two equal parts of a whole object, eg 'I folded my paper into two equal parts and now I have halves' (Communicating) 🗣️🌱
- recognise that halves refer to two equal parts of a whole
- describe parts of a whole object as 'about a half', 'more than a half' or 'less than a half' 🗣️
- record two equal parts of whole objects and shapes, and the relationship of the parts to the whole, using pictures and the fraction notation for half (1/2)(1/2), eg



- use concrete materials to model half of a collection, eg  

  
 counters or seedling trays 🌱
- describe two equal parts of a collection, eg 'I have halves because the two parts have the same number of seedlings' (Communicating) 🗣️🌱
- record two equal parts of a collection, and the relationship of the parts to the whole, using pictures and fraction notation for half (1/2)(1/2), eg



Fractions  
 Unit 1  
 Understand 'out of'

Fractions  
 Unit 2  
 Halves, quarters  
 and eighths

# PATTERNS AND ALGEBRA 1

## Investigate and describe number patterns formed by skip counting and patterns with objects (ACMNA018)

- identify and describe patterns when skip counting forwards or backwards by ones, twos, fives and tens from any starting point
- use objects to represent counting patterns (Communicating)
- investigate and solve problems based on number patterns (Problem Solving)\*\*
- represent number patterns on number lines and number charts
- recognise, copy and continue given number patterns that increase or decrease, eg  
1, 2, 3, 4, ...  
20, 18, 16, 14, ...
- describe how number patterns are made and how they can be continued (Communicating, Problem Solving)\*\*
- create, record and describe number patterns that increase or decrease
- recognise, copy and continue patterns with objects or symbols
- recognise when an error occurs in a pattern and explain what is wrong (Communicating, Problem Solving) \*\*
- create, record and describe patterns with objects or symbols
- describe a repeating pattern of objects or symbols in terms of a 'number' pattern, eg  
♦, O, ♦, O, ♦, O, ... is a 'two' pattern  
∇, Δ, O, ∇, Δ, O, ... is a 'three' pattern  
B, B, X, B, B, X, ... is a 'three' pattern 🖱
- make connections between repeating patterns and counting, eg a 'three' pattern and skip counting by threes (Communicating, Reasoning)
- model and describe 'odd' and 'even' numbers using counters paired in two rows
- describe the pattern created by modelling odd and even numbers (Communicating)

**Patterns**  
**Unit 2**  
**Skip-count by 10, 5**  
**and 2**

**Patterns**  
**Unit 1**  
**Patterns with**  
**objects**

# STAGE 1 CONTENT

## WHOLE NUMBERS 2

**Develop confidence with number sequences from 100 by ones from any starting point (ACMNA012)**

- count forwards or backwards by ones, from a given three-digit number
- identify the numbers before and after a given three-digit number
- describe the number before as 'one less than' and the number after as 'one more than' a given number (Communicating) 

Place Value [Unit 15](#)  
Three-digit numbers  
Place Value [Unit 8](#)  
Lesson 7

**Recognise, model, represent and order numbers to at least 1000 (ACMNA027)**

- represent three-digit numbers using objects, pictures, words and numerals 
- use the terms 'more than' and 'less than' to compare numbers 
- arrange numbers of up to three digits in ascending order
- use number lines and number charts beyond 100 to assist with counting and ordering (Communicating, Problem Solving)
- give reasons for placing a set of numbers in a particular order (Communicating, Reasoning) 

Place Value [Unit 15](#)  
Three-digit numbers  
  
Place Value [Unit 14](#)  
Rounding and estimation

**Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and tens from any starting point, then moving to other sequences (ACMNA026)**

- count forwards and backwards by twos, threes and fives from any starting point
- count forwards and backwards by tens, on and off the decade, with two- and three-digit numbers, eg 40, 30, 20, ... (on the decade); 427, 437, 447, ... (off the decade)
- identify number sequences on number charts

Patterns  
[Unit 2](#)  
Skip-count by 10, 5 and 2

**Group, partition and rearrange collections of up to 1000 in hundreds, tens and ones to facilitate more efficient counting (ACMNA028)**

- apply an understanding of place value and the role of zero to read, write and order three-digit numbers 🗣️
- form the largest and smallest number from three given digits (Communicating, Reasoning)
- count and represent large sets of objects by systematically grouping in tens and hundreds
- use models such as base 10 material, interlocking cubes and bundles of sticks to explain grouping (Communicating, Reasoning)
- use and explain mental grouping to count and to assist with estimating the number of items in large groups ⚡
- use place value to partition three-digit numbers, eg 326 as 3 groups of one hundred, 2 groups of ten and 6 ones
- state the place value of digits in numbers of up to three digits, eg 'In the number 583, the "5" represents 500 or 5 hundreds' 🗣️

**Place Value Unit 15  
Three-digit  
numbers**

- partition three-digit numbers in non-standard forms, eg 326 can be 32 groups of ten and 6 ones ⚡

**Place Value Unit 16  
Renaming**

- round numbers to the nearest hundred
- estimate, to the nearest hundred, the number of objects in a collection and check by counting, eg show 120 pop sticks and ask students to estimate to the nearest hundred

**Place Value  
Unit 14  
Rounding and  
estimation**

**Count and order small collections of Australian coins and notes according to their value (ACMNA034)**

- use the face value of coins and notes to sort, order and count money ⚡ 🗣️
- compare Australian coins and notes with those from other countries, eg from students' cultural backgrounds (Communicating) 🌐
- determine whether there is enough money to buy a particular item
- recognise that there are 100 cents in \$1, 200 cents in \$2, ...
- identify equivalent values in collections of coins and in collections of notes, eg four \$5 notes have the same value as one \$20 note

**Money Unit 2  
Calculate totals and  
represent them  
multiple ways**

**Place Value Unit 16  
Renaming  
(including money)**

# ADDITION AND SUBTRACTION 2

## Explore the connection between addition and subtraction (ACMNA029)

- use concrete materials to model how addition and subtraction are inverse operations
- use related addition and subtraction number facts to at least 20, eg  $15 + 3 = 18$ , so  $18 - 3 = 15$  and  $18 - 15 = 3$  ✨

[Subtraction Unit 7](#)  
[Fact Families](#)

## Solve simple addition and subtraction problems using a range of efficient mental and written strategies (ACMNA030)

- use and record a range of mental strategies to solve addition and subtraction problems involving two-digit numbers, including: ✨
  - the jump strategy on an empty number line
  - the split strategy, eg record how the answer to  $37 + 45$  was obtained using the split strategy  
 $30 + 40 = 70$ ,  $7 + 5 = 12$  so  $70 + 12 = 82$

[Addition Units 6-8](#)  
[Extending prompts](#)

- use an inverse strategy to change a subtraction into an addition, eg  $54 - 38$ : start at 38, adding 2 makes 40, then adding 10 makes 50, then adding 4 makes 54, and so the answer is  $2 + 10 + 4 = 16$

[Subtraction Unit 7](#)  
[Fact Families](#),  
[including extending prompts](#)

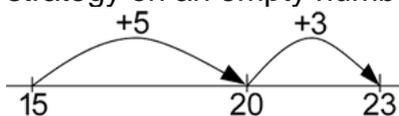
- select and use a variety of strategies to solve addition and subtraction problems involving one- and two-digit numbers ✨

[Addition Unit 6](#)  
[Doubles](#)  
[Addition Unit 7](#)  
[Near doubles](#)  
[Addition Unit 8](#)  
[Build to 10](#)

- perform simple calculations with money, eg buying items from a class shop and giving change (Problem Solving) ✨

[Money Unit 2](#)  
[Extending prompts for calculating change](#)

- check solutions using a different strategy (Problem Solving) ✨
- recognise which strategies are more efficient and explain why (Communicating, Reasoning)
- explain or demonstrate how an answer was obtained for addition and subtraction problems, eg show how the answer to  $15 + 8$  was obtained using a jump strategy on an empty number line



(Communicating, Reasoning)

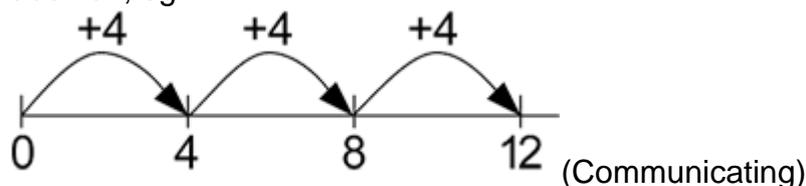
[Addition Unit 7](#)  
[Near doubles](#)

[Addition Unit 8](#)  
[Build to 10](#)

# MULTIPLICATION AND DIVISION 2

## Recognise and represent multiplication as repeated addition, groups and arrays (ACMNA031)

- model multiplication as repeated addition, eg 3 groups of 4 is the same as  $4 + 4 + 4$
- find the total number of objects by placing them into equal-sized groups and using repeated addition (Problem Solving)
- use empty number lines and number charts to record repeated addition, eg



- explore the use of repeated addition to count in practical situations, eg counting stock on a farm (Problem Solving)
- recognise when items have been arranged into groups, eg 'I can see two groups of three pencils'

**Multiplication**  
**Unit 3**  
**Repeated Addition**

- use concrete materials to model multiplication as equal 'groups' and by forming an array of equal 'rows' or equal 'columns', eg



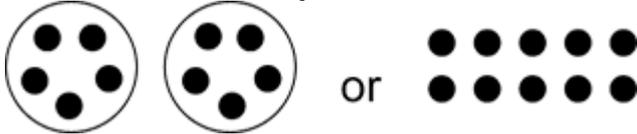
'two groups of three' or 'three columns of two'

**Multiplication**  
**Unit 4**  
**Multiply using**  
**array-based**  
**strategies**

- describe collections of objects as 'groups of', 'rows of' and 'columns of' (Communicating) 🗣️
- determine and distinguish between the 'number of rows/columns' and the 'number in each row/column' when describing collections of objects (Communicating) 🗣️
- recognise practical examples of arrays, such as seedling trays or vegetable gardens (Reasoning) 🌱
- model the commutative property of multiplication, eg '3 groups of 2 is the same as 2 groups of 3'

**Represent division as grouping into equal sets and solve simple problems using these representations (ACMNA032)**

- model division by sharing a collection of objects equally into a given number of groups, and by sharing equally into a given number of rows or columns in an array, eg determine the number each person receives when 10 objects are shared between two people



- describe the part left over when a collection cannot be shared equally into a given number of groups/rows/columns (Communicating, Problem Solving, Reasoning)
- model division by sharing a collection of objects into groups of a given size, and by arranging it into rows or columns of a given size in an array, eg determine the number of columns in an array when 20 objects are arranged into rows of four
- describe the part left over when a collection cannot be distributed equally using the given group/row/column size, eg when 14 objects are arranged into rows of five, there are two rows of five and four objects left over (Communicating, Problem Solving, Reasoning)
- model division as repeated subtraction
- use an empty number line to record repeated subtraction (Communicating)
- explore the use of repeated subtraction to share in practical situations, eg share 20 stickers between five people (Problem Solving)
- solve multiplication and division problems using objects, diagrams, imagery and actions\*\*
- support answers by demonstrating how an answer was obtained (Communicating)\*\*
- recognise which strategy worked and which did not work and explain why (Communicating, Reasoning)\*\*
- record answers to multiplication and division problems using drawings, words and numerals, eg 'two rows of five make ten', '2 rows of 5 is 10'

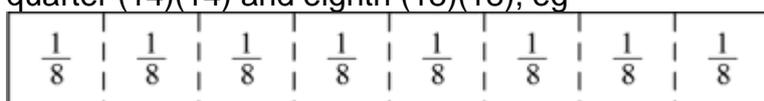
**Division  
Unit 2  
Create equal shares**

**Division  
Unit 3  
Quotition division  
situations and skip-  
counting to divide**

# FRACTIONS AND DECIMALS 2

## Recognise and interpret common uses of halves, quarters and eighths of shapes and collections (ACMNA033)

- use concrete materials to model a half, a quarter or an eighth of a whole object, eg divide a piece of ribbon into quarters
- create quarters by halving one-half, eg 'I halved my paper then halved it again and now I have quarters' (Communicating, Problem Solving)
- describe the equal parts of a whole object, eg 'I folded my paper into eight equal parts and now I have eighths' (Communicating)
- discuss why  $\frac{1}{8}$  is less than  $\frac{1}{4}$ , eg if a cake is shared among eight people, the slices are smaller than if the cake is shared among four people (Communicating, Reasoning)
- recognise that fractions refer to equal parts of a whole, eg all four quarters of an object are the same size
- visualise fractions that are equal parts of a whole, eg 'Imagine where you would cut the rectangle before cutting it' (Problem Solving)
- recognise when objects and shapes have been shared into halves, quarters or eighths
- record equal parts of whole objects and shapes, and the relationship of the parts to the whole, using pictures and the fraction notation for half (12)(12), quarter (14)(14) and eighth (18)(18), eg



- use concrete materials to model a half, a quarter or an eighth of a collection, eg



quarters

- describe equal parts of a collection of objects, eg 'I have quarters because the four parts have the same number of counters' (Communicating)
- recognise when a collection has been shared into halves, quarters or eighths
- record equal parts of a collection, and the relationship of the parts to the whole, using pictures and the fraction notation for half ( $\frac{1}{2}$ ), quarter ( $\frac{1}{4}$ ) and eighth ( $\frac{1}{8}$ )
- use fraction language in a variety of everyday contexts, eg the half-hour, one-quarter of the class

Fractions  
[Unit 2](#)  
Halves,  
quarters  
and eighths

Fractions  
[Unit 3](#)  
Proper  
Fractions

# PATTERNS AND ALGEBRA 2

## Describe patterns with numbers and identify missing elements (ACMNA035)

- describe a number pattern in words, eg 'It goes up by threes'
- determine a missing number in a number pattern, eg 3, 7, 11, \_\_, 19, 23, 27
- describe how the missing number in a number pattern was determined (Communicating, Reasoning)
- check solutions when determining missing numbers in number patterns by repeating the process (Reasoning)

Patterns [Unit 2](#)  
Skip-counting  
patterns

Patterns [Unit 3](#)  
Missing elements

## Solve problems by using number sentences for addition or subtraction (ACMNA036)

- complete number sentences involving one operation of addition or subtraction by calculating the missing number, eg find  $\square$  so that  $5 + \square = 13$  or  $5 + \square = 13$  or  $15 - \square = 9$  or  $15 - \square = 9$
- make connections between addition and related subtraction facts to at least 20 (Reasoning)
- describe how a missing number in a number sentence was calculated (Communicating, Reasoning)
- solve problems involving addition or subtraction by using number sentences
- represent a word problem as a number sentence (Communicating, Problem Solving)
- pose a word problem to represent a number sentence (Communicating, Problem Solving)

Patterns [Unit 3](#)  
Balance equations  
and missing  
elements

Subtraction [Unit 7](#)  
Fact Families