

# Planning Guide

## Advanced Counting to Early Additive

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### Addition and Subtraction

Strategy	Numeracy Book reference	Unit in this book	pages
Solve addition and subtraction problems by working from doubles.	<i>No specific Numeracy Book reference</i>	<b>1 – Adding and subtracting near doubles</b>  <i>We are learning to solve addition and subtraction problems where the numbers are easily related to near doubles.</i>	24 to 27
Solve addition and subtraction problems by using groupings with five.	<i>No specific Numeracy Book reference</i>	<b>2 – Adding and subtracting using fives facts</b>  <i>We are learning to solve addition and subtraction problems by using groupings with five.</i>	28 to 31
Solve addition problems by looking for compatible numbers that add to ten, other decades or one hundred.	<i>Teaching Addition and Subtraction (Book 5)</i> Make Ten   Compatible Numbers	<b>3 – Adding to make ten</b>  <i>We are learning to add three or more numbers by first making up pairs that add up to 10.</i>  <b>4 – Adding and subtracting using compatible numbers</b>  <i>We are learning to use compatible numbers to solve problems like <math>5 + 3 + 6 - 8</math> by first adding five and three to get eight then subtracting the eight.</i>	32 to 37  38 to 41
Solve addition and subtraction problems.	<i>Teaching Addition and Subtraction (Book 5)</i>  Make Ten Compatible Numbers	<b>5 – Adding and subtracting practice 1</b>  <i>We are learning to solve addition and subtraction problems using different strategies and our number knowledge.</i>  <i>Note: This unit revises all of the addition and subtraction strategies covered in units 1 to 4 of this book.</i>	42 to 47

Strategy	Numeracy Book reference	Unit in this book	pages
Solve subtraction problems by going back through tens.	<i>Teaching Addition and Subtraction (Book 5)</i> Subtraction in Parts	<b>6 – Subtracting in parts</b>  <i>We are learning to subtract by splitting numbers into parts instead of counting down.</i>	48 to 53
Solve addition problems by going up through tens.	<i>Teaching Addition and Subtraction (Book 5)</i> Adding in Parts  Up over the Tens	<b>7 – Adding in parts</b>  <i>We are learning to add by splitting numbers into parts.</i>  <b>8 – Adding by going up through ten</b>  <i>We are learning to add by splitting numbers into parts to make tens (adding through tens to solve problems like <math>37 + \boxed{?} = 45</math>).</i>	54 to 59  60 to 65
Solve addition and subtraction problems by combining and separating tens and ones.	<i>Teaching Addition and Subtraction (Book 5)</i> Adding Tens Subtracting Tens Adding Ones and Tens Subtracting Ones and Tens Missing Ones and Tens The Thousands Book  <i>Note: All of the above are units from Stage 4 AC.</i>	<b>9 – Adding using partitioning</b>  <i>We are learning to add using partitioning (adding the ones and tens separately).</i>  <b>10 – Subtracting using partitioning</b>  <i>We are learning to subtract using partitioning (subtracting the ones and tens separately).</i>	66 to 69  70 to 73
Solve addition and subtraction problems.	<i>Teaching Addition and Subtraction (Book 5)</i>  Make Ten Compatible Numbers Subtraction in Parts Up over the Tens Adding in Parts	<b>11 – Adding and subtracting practice 2</b>  <i>We are learning to solve addition and subtraction problems using different strategies and our number knowledge.</i>  <i>Note: This unit revises all of the addition and subtraction strategies covered in units 1 to 10 of this book.</i>	74 to 77

Strategy	Numeracy Book reference	Unit in this book	pages
Solve addition problems by making a tidy number.	<i>No specific Numeracy Book reference</i>	<b>12 – Adding using tidy numbers</b>  <i>We are learning to add using tidy numbers.</i>	<b>78 to 81</b>
Solve addition and subtraction problems using comparison.	<i>Teaching Addition and Subtraction (Book 5)</i>  Comparisons  More Comparisons	<b>13 – Adding and subtracting using comparisons</b>  <i>We are learning to add and subtract using comparisons of sets without counting down or counting up.</i>  <i>We are learning to add and subtract using comparisons of sets without counting down or counting up.</i>	<b>82 to 84</b>  <b>85 to 87</b>
Estimate the answers when adding and subtracting money.	<i>No specific Numeracy Book reference</i>	<b>14 – Estimating answers when adding and subtracting money</b>  <i>We are learning to estimate the answers when adding and subtracting money.</i>	<b>88 and 89</b>
Understand that subtracting then adding the same number leaves the original number unchanged.	<i>Teaching Number Sense and Algebraic Thinking (Book 8)</i> You Don't Need the Number	<b>15 – Adding and subtracting the same number</b>  <i>We are learning that subtracting then adding the same number leaves the original number unchanged.</i>	<b>90 and 91</b>
Solve addition and subtraction problems using a suitable strategy.	<i>Teaching Addition and Subtraction (Book 5)</i> Make Ten Compatible Numbers Subtraction in Parts Up over the Tens Adding in Parts Comparisons More Comparisons	<b>16 – Adding and subtracting practice 3</b>  <i>We are learning to solve addition and subtraction problems using different strategies and our basic facts.</i>  <i>Note: This unit revises all of the addition and subtraction strategies covered in units 1 to 15 of this book.</i>	<b>92 to 97</b>

## Multiplication and Division

Strategy	Numeracy Book reference	Unit in this book	pages
<p>Solve multiplication problems using ways other than repeated addition.</p> <p>Use the commutative property.</p>	<p><i>Teaching Multiplication and Division (Book 6)</i> Animal Arrays</p>	<p><b>17 – Multiplying using ways other than repeated addition</b></p> <p><i>We are learning to find other ways to solve problems like <math>5 + 5 + 5 + 5</math>.</i></p>	<p>98 to 103</p>
<p>Solve two times tables by doubling (and learn them).</p> <p>Use the commutative property.</p>	<p><i>Teaching Multiplication and Division (Book 6)</i> Twos, Fives, and Tens</p>	<p><b>18 – Multiplying by twos</b></p> <p><i>We are learning to work out times two facts from doubling.</i></p>	<p>104 to 107</p>
<p>Solve five and ten times tables by doubling and halving (and learn them).</p> <p>Use the commutative property.</p>	<p><i>Teaching Multiplication and Division (Book 6)</i> Twos, Fives, and Tens</p>	<p><b>19 – Multiplying by fives and tens</b></p> <p><i>We are learning to work out multiplication facts from what we know about fives and tens.</i></p>	<p>108 to 113</p>
<p>Solve three times tables from skip counting in threes (and learn them).</p>	<p><i>Teaching Multiplication and Division (Book 6)</i> Three’s Company</p>	<p><b>20 – Multiplying by threes</b></p> <p><i>We are learning to solve times three problems.</i></p>	<p>114 to 117</p>
<p>Solve problems using two, three, five and ten times tables (and learn them).</p>	<p><i>Teaching Multiplication and Division (Book 6)</i> Animal Arrays Twos, Fives and Tens Three’s Company</p>	<p><b>21 – Multiplying by twos, threes, fives and tens practice</b></p> <p><i>We are learning our two, three, five and ten times facts.</i></p> <p><i>Note: This unit revises all of the multiplication strategies covered in units 17 to 20 in this book.</i></p>	<p>118 to 123</p>

Strategy	Numeracy Book reference	Unit in this book	pages
Dividing by sharing using addition to predict.	<i>Teaching Multiplication and Division (Book 6)</i> Pirate Crews	<b>22 – Dividing by sharing</b>  <i>We are learning to solve problems by making equal shares.</i>	124 to 127
Dividing by making equal sets.	<i>Teaching Multiplication and Division (Book 6)</i> Biscuit Boxes	<b>23 – Dividing by making equal sets</b>  <i>We are learning to solve problems by counting the number of groups we have made.</i>	128 to 133
Dividing by sharing or making equal sets.	<i>Teaching Multiplication and Division (Book 6)</i> Pirate Crews Biscuit Boxes	<b>24 – Dividing practice</b>  <i>We are learning to solve dividing problems by making equal shares or making equal sets.</i>  <i>Note: This unit revises all of the division strategies covered in units 22 and 23 in this book.</i>	134 to 139
Solve problems using a combination of addition, subtraction, multiplication and division.	<i>No specific Numeracy Book reference</i>	<b>25 – Solving problems using adding, subtracting, multiplying and dividing</b>  <i>We are learning to solve problems by choosing which operation to use and then finding an efficient way to solve the problem.</i>	140 to 149

## Ratios and Proportions

Strategy	Numeracy Book reference	Unit in this book	pages
Understand what a fraction represents.	<i>No specific Numeracy Book reference</i>	<b>26 – Understanding fractions</b> <i>We are learning to understand fractions.</i>	<b>150 to 153</b>
Find a unit fraction of a set using addition facts, particularly doubles.	<i>Teaching Fractions, Decimals and Percentages (Book 7)</i> Animals	<b>27 – Finding fractions of sets</b> <i>We are learning to find fractions of a set.</i>	<b>154 to 159</b>
Find unit fractions of a continuous region, like a length or area, using halving.	<i>Teaching Fractions, Decimals and Percentages (Book 7)</i> Wafers	<b>28 – Finding fractions of regions</b> <i>We are learning to find fractions of lengths, including seeing when a fraction is greater than one.</i>	<b>160 to 165</b>
Find fractions of a set or region using basic facts.	<i>Teaching Fractions, Decimals and Percentages (Book 7)</i> Hungry Birds	<b>29 – More finding fractions of sets and regions</b> <i>We are learning to use basic facts to work out fractions of a set.</i>	<b>166 to 169</b>
Order unit fractions and fractions with the same denominator and explain why they are larger or smaller.  Order fractions visually using materials, including improper fractions like $\frac{5}{3}$ and $\frac{7}{4}$ and explain what the numerator and denominator mean.	<i>Teaching Fractions, Decimals and Percentages (Book 7)</i> Fraction Circles	<b>30 – Ordering fractions</b>  <i>We are learning to put unit fractions in order from smallest to largest.</i>  <i>We are learning to put fractions, including improper fractions, in order from smallest to largest.</i>	<b>170 to 172</b>  <b>173 to 175</b>

Strategy	Numeracy Book reference	Unit in this book	pages
Order fractions visually using materials, including improper fractions like $\frac{5}{3}$ and $\frac{7}{4}$ , and explain what the numerator and denominator mean.	<i>Teaching Fractions, Decimals and Percentages (Book 7)</i> Fraction Circles Dotty Pairs Game	<b>31 – Ordering fractions using number lines</b>  <i>We are learning to put fractions in order using a number line.</i>	<b>176 to 179</b>
Recognise fractions that add to a whole.	<i>Teaching Number Sense and Algebraic Thinking (Book 8)</i> Fractions in a Whole	<b>32 – Fractions that add to a whole</b>  <i>We are learning about fractions that add up to a whole.</i>	<b>180 to 183</b>
Find fractions of sets and regions and order fractions.	<i>Teaching Fractions, Decimals and Percentages (Book 7)</i> Animals Wafers Hungry Birds Fraction Circles Dotty Pairs Game  <i>Teaching Number Sense and Algebraic Thinking (Book 8)</i> Fractions in a Whole	<b>33 – Fraction practice</b>  <i>We are practising with fractions.</i>  <i>Note: This unit revises all the fraction strategies covered in units 26 to 32 in this book.</i>	<b>184 to 189</b>

## Algebraic Thinking

Strategy	Numeracy Book reference	Unit in this book	pages
Continue on a picture pattern.	<i>Teaching Number through Measurement, Geometry, Algebra and Statistics (Book 9)</i> Thinking Ahead Sticky Moments	<b>34 – Continuing picture patterns</b>  <i>We are learning how to extend a repeating picture pattern.</i>	<b>190 to 193</b>
Continue on a picture pattern and work out the rule for finding the next picture in the sequence.	<i>Teaching Number through Measurement, Geometry, Algebra and Statistics (Book 9)</i> Thinking Ahead Sticky Moments	<b>35 – Rules for picture patterns</b>  <i>We are learning how to extend a repeating picture pattern and use number strategies to think ahead.</i>	<b>194 to 199</b>
Continue on a number pattern and work out the rule for finding the next number in the sequence.	<i>No specific Numeracy Book reference</i>	<b>36 – Number patterns</b>  <i>We are learning how to continue a number pattern and find the rule for finding the next number.</i>	<b>200 to 205</b>
Show relationships using graphs.	<i>No specific Numeracy Book reference</i>	<b>37 – Graphing</b>  <i>We are learning to read graphs and show relationships using a graph.</i>	<b>206 to 211</b>
Understand the symbols for less than or greater than and apply them.	<i>No specific Numeracy Book reference</i>	<b>38 – Less than and greater than</b>  <i>We are learning to use symbols for less than and greater than.</i>	<b>212 to 215</b>
Understand what the equals symbol means and solve simple equations.	<i>Teaching Number through Measurement, Geometry, Algebra and Statistics (Book 9)</i> Numbers at Work	<b>39 – Equations</b>  <i>We are learning how to solve simple equations.</i>	<b>216 to 223</b>



## Number Knowledge

Knowledge being developed	Numeracy Book reference	Number Knowledge unit in this book	pages
Identify all of the numbers in the range 0 to 1000. (Number Identification and Grouping/Place Value)	<i>Teaching Number Knowledge (Book 4)</i> Number Fans Place Value Houses Number Hangman Arrow Cards Zap	<i>Number Knowledge unit A</i>  <i>Place value up to 1000</i>	224
Identify all of the numbers in the range 0 to 1000. (Number Identification)	<i>Teaching Number Knowledge (Book 4)</i> Number Fans Place Value Houses Number Hangman	<i>Number Knowledge unit B</i>  <i>Reading and writing whole numbers up to 1000</i>	228
Know the number of tens in decades and the groupings of ten and a hundred that can be made from a three-digit number. (Grouping/Place Value)	<i>Teaching Number Knowledge (Book 4)</i> Number Fans Place Value Houses Number Hangman Tens in Hundreds and More	<i>Number Knowledge unit C</i>  <i>How many tens?</i>	229
Know the groupings of hundreds in centuries and thousands. (Grouping/Place Value)	<i>Teaching Number Knowledge (Book 4)</i> Number Fans Place Value Houses Number Hangman Tens in Hundreds and More	<i>Number Knowledge unit D</i>  <i>Hundreds in hundreds and thousands</i>	233
Recall multiplication basic facts with tens. (Basic Facts and Grouping/Place Value)	<i>Teaching Number Knowledge (Book 4)</i> Digits on the Move	<i>Number Knowledge unit E</i>  <i>Multiplying by 10</i>	234

Knowledge being developed	Numeracy Book reference	Number Knowledge unit in this book	pages
Order whole numbers in the range 0 to 1000. (Number Sequence and Order)	<i>Teaching Number Knowledge (Book 4)</i> Number Fans Card Ordering Arrow Cards Number Line Flips Bead Strings Who is the Richest?	<i>Number Knowledge unit F</i>  <i>Ordering numbers up to 1000</i>	236
Round three-digit whole numbers to the nearest 10 or 100. (Grouping/Place Value)	<i>Teaching Number Knowledge (Book 4)</i> Sensible Rounding	<i>Number Knowledge unit G</i>  <i>Rounding to the nearest ten or hundred</i>	239
Say the number word sequences forwards and backwards by ones, tens and hundreds in the range 0 to 1000. (Number Sequence and Order)	<i>Teaching Number Knowledge (Book 4)</i> Counting Skip-counting on the Number Line Beep Close to 100	<i>Number Knowledge unit H</i>  <i>Skip counting in ones, tens and hundreds</i>	242
Say the skip counting sequences, forwards and backwards, in the range 0 to 100 in twos, threes, fours, fives and tens. (Number Sequence and Order)	<i>Teaching Number Knowledge (Book 4)</i> Counting Skip-counting on the Number Line Beep	<i>Number Knowledge unit I</i>  <i>Skip counting in twos, threes, fours and fives</i>	244
Say the number 1, 10, 100 before and after a given number in the range 0 to 1000. (Number Sequence and Order)	<i>Teaching Number Knowledge (Book 4)</i> Counting Skip-counting on the Number Line Beep Lucky Dip	<i>Number Knowledge unit J</i>  <i>What comes 1, 10 or 100 before and after me?</i>	246

Knowledge being developed	Numeracy Book reference	Number Knowledge unit in this book	pages
Recall the addition facts to decades. (Grouping/Place Value and Basic Facts)	<i>Teaching Number Knowledge (Book 4)</i> Up to Ten Tens Frames Again Patterns to Ten Number Mats and Number Fans Bridges	<i>Number Knowledge unit K</i>  <i>Addition facts to decades</i>	248
Recall the addition facts to decades. (Basic Facts)	<i>Teaching Number Knowledge (Book 4)</i> Up to Ten Tens Frames Again Patterns to 10 Number Mats and Number Fans Bridges	<i>Number Knowledge unit L</i>  <i>Adding to the next ten</i>	253
Recall the doubles to 20 and corresponding halves, e.g. 6 + 6, $\frac{1}{2}$ of 14. (Basic Facts)	<i>Teaching Number Knowledge (Book 4)</i> Double Trouble Patterns to 10 Bridges	<i>Number Knowledge unit M</i>  <i>Doubles and halves</i>	255
Recall the multiples of 10 that add to 100, e.g. 30 + 70, 40 + 60. (Basic Facts)	<i>Teaching Number Knowledge (Book 4)</i> Tens Frames Again Patterns to 10 Number Mats and Number Fans Tens in Hundreds and More	<i>Number Knowledge unit N</i>  <i>Adding to hundreds with tens</i>	259
Know the groupings within 100, e.g. 49 and 51 (particularly multiples of 5, e.g. 25 and 75). (Grouping/Place Value)	<i>Teaching Number Knowledge (Book 4)</i> Tens Frames Again Patterns to 10 Number Mats and Number Fans	<i>Number Knowledge unit O</i>  <i>Pairs that add to 100</i>	261
Recall the multiples of 100 that add to 1000, e.g. 400 and 600, 300 and 700. (Basic Facts)	<i>Teaching Number Knowledge (Book 4)</i> Tens Frames Again Patterns to 10 Number Mats and Number Fans	<i>Number Knowledge unit P</i>  <i>Adding to a thousand with hundreds</i>	263

Knowledge being developed	Numeracy Book reference	Number Knowledge unit in this book	pages
Know that numbers can be partitioned in many different ways. (Basic Facts)	<i>Teaching Number Knowledge (Book 4)</i> Double Trouble Number Boggle Tens Frames Again Number Mats and Number Fans Addition Flash Cards	<i>Number Knowledge unit Q</i>  <i>Partitioning</i>	264
Know the groupings of two (or three) that are in numbers to 20. (Grouping/Place Value)	<i>Teaching Number Knowledge (Book 4)</i> Counting Skip-counting on the Number Line Beep	<i>Number Knowledge unit R</i>  <i>How many groups of two or three?</i>	265
Know the groupings of five (or four) that are in numbers to 50. (Grouping/Place Value)	<i>Teaching Number Knowledge (Book 4)</i> Counting Skip-counting on the Number Line Beep	<i>Number Knowledge unit S</i>  <i>How many groups of four or five?</i>	267
Recall the multiplication facts for the 2, 3, 4, 5 and 10 times tables and the corresponding division facts. (Basic Facts)	<i>Teaching Number Knowledge (Book 4)</i> Counting Skip-counting on the Number Line Beep Number Mats and Number Fans Multiplication Madness Multiplication Flash Cards	<i>Number Knowledge unit T</i>  <i>Two, three, four, five and ten times tables</i>	268
Record the results of mental calculations using equations and diagrams. (Written Recording)	<i>Teaching Number Knowledge (Book 4)</i> Number Mats and Number Fans Bridges Multiplication Madness Dividing? Think About Multiplying First	<i>Number Knowledge unit U</i>  <i>Recording calculations</i>	273

Knowledge being developed	Numeracy Book reference	Number Knowledge unit in this book	pages
Identify the symbols for the most common fractions including at least halves, quarters, thirds, fifths and tenths. (Number Identification)	<i>Teaching Number Knowledge (Book 4)</i> Fraction Pieces Creating Fractions Non-unit Fractions	<i>Number Knowledge unit V</i> <i>Naming fractions</i>	274
Identify the symbols for improper fractions, e.g. $\frac{5}{4}$ . (Number Identification)	<i>Teaching Number Knowledge (Book 4)</i> Creating Fractions Non-unit Fractions	<i>Number Knowledge unit W</i> <i>Improper fractions</i>	278

