**Transition: Advanced Counting to Early Additive Domain: Addition and Subtraction**

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| **Achievement Objectives** | **Number and Algebra: Level Two** |
| Number Strategies:* Use simple additive strategies with whole numbers and fractions

Number Knowledge:* Know forward and backward counting sequences with whole numbers to at least 1000.
* Know the basic addition and subtraction facts.
* Know how many ones, tens, and hundreds are in whole numbers to at least 1000.

Equations and Expressions:* Communicate and interpret simple additive strategies, using words, diagrams [pictures], and symbols.
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| **Key Teaching Ideas** | **Problem progression** | **References** | **Knowledge being developed** | **Resources** |
| Our number system is based on ten.(Key Idea #1)Basic fact knowledge can be used to add and subtract tens.(Key Idea #2) | 30 + 40 = 🞏, so 34 + 42 = 🞏. 50 + 40 = 🞏, so 53 + 43 = 🞏 and 45 + 55 = 🞏.60 – 30 = 🞏, so 64 – 32 = 🞏.80 – 50 = 🞏, so 84 – 51 = 🞏 and 88 – 54 = 🞏.30 + 20 + 40 = 🞏, so 32 + 25 + 41 = 🞏 | **T*eaching Addition and Subtraction (Book 5)*** [More Ones and Tens](https://nzmaths.co.nz/node/901) (38)[Adding Ones and Tens](https://nzmaths.co.nz/node/904) (38)[Subtracting Ones and Tens](https://nzmaths.co.nz/node/902) (39)***BSM***12-1-9, 12-1-55, 12-1-5612-1-86***Figure It Out***N2.1 [Shaker Makers](https://nzmaths.co.nz/node/3054) (4)N2.1 [How Old?](https://nzmaths.co.nz/node/3055) (5)N2.1 [Mighty Marty!](https://nzmaths.co.nz/node/3056) (6)N2.2 [Hunting the Taniwha](https://nzmaths.co.nz/node/3083) (7)N2.2 [Leapfrog](https://nzmaths.co.nz/node/3087) (12)N2-3 [Putting Numbers to Work](https://nzmaths.co.nz/node/3103) (2)N2-3 [Going Up](https://nzmaths.co.nz/node/3118) (8)N3-4.1 [Disappearing Dollars](https://nzmaths.co.nz/node/3271) (24)N7/8 l.1 [Down with Darts](https://nzmaths.co.nz/node/3362) (18)N7/8 L.1 [Absolutely Abseiling](https://nzmaths.co.nz/node/3363) (19) | Identify all of the numbers in the range 0-1000 | ***Teaching Number Knowledge (Book 4)***[Number Fans](https://nzmaths.co.nz/node/1039) (4)[Place Value Houses](https://nzmaths.co.nz/node/1042) (5)[Number Hangman](https://nzmaths.co.nz/node/1043) (5)***Figure It Out***N 2-3 [What’s My Number?](https://nzmaths.co.nz/node/23621) (3)N 2-3 [Digit Time](https://nzmaths.co.nz/node/3114) (5)N 2-3 [Going Up](https://nzmaths.co.nz/node/3118) (8)NS 7/8 L.1 [Aiming High](https://nzmaths.co.nz/node/4185) (4) |

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| **Key Teaching Ideas** | **Problem progression** | **References** | **Knowledge being developed** | **Resources** |
| Numbers can be rearranged and combined to make ten.(Key Idea #3)Addition is associative, so addends can be re-grouped to solve a problem more efficiently. (Key Idea #6) | 4 + 6 = 🞏, so 4 + 6 + 4 + 6 = 🞏.7 + 3 = 🞏, so 7 + 5 + 5 + 3 = 🞏.8 + 4 + 6 + 3 + 2 + 7 = 🞏, 2 + 4 + 9 + 6 = 🞏, 3 + 8 + 6 + 7 + 2 + 4 = 🞏,50 + 40 + 60 + 50 + 30 = 🞏.4 + 17 + 26 + 3 + 8 = 🞏  | ***Teaching Addition and Subtraction (Book 5)***[Make Ten](https://nzmaths.co.nz/node/908) (working with ten) (40)[Compatible Numbers](https://nzmaths.co.nz/node/909) (44) | Say the forwards and backwards number word sequences by ones, tens, and hundreds in the range 0-1000.Say the number 1, 10, or 100 more or less than a given number in the range 0-1000. | ***Teaching Number Knowledge (Book 4)***[Number Fans](https://nzmaths.co.nz/node/1039) (4)[Counting](https://nzmaths.co.nz/node/1054) (11)[Skip Counting on a Number Line](https://nzmaths.co.nz/node/1055) (11)[Lucky Dip](https://nzmaths.co.nz/node/873) (13)[Using Calculators](https://nzmaths.co.nz/node/1059) (14)***BSM***12-3-3, 12-3-4, 12-3-81, 12-3-82***Figure It Out***N 2.2 (2) [Fan-tastic Numbers](https://nzmaths.co.nz/node/3078) |
| Addition and subtraction problems can be solved by partitioning one of the numbers to go up or back through ten. (Key Idea #4)Subtraction problems can be solved by going back through ten, partitioning numbers rather than counting back (Key Idea #5) | 9 + 6 as 10 + 5 = 🞏.6 + 8 as 4 + 10 = 🞏.18 + 7 as 20 + 5 = 🞏.59 + 8 as 60 + 7 = 🞏.6 + 87 as 3 + 90 = 🞏.97 + 6 as 100 + 3 = 🞏.38 + 298 as 36 + 300 = 🞏. | ***Teaching Addition and Subtraction (Book 5)***[Adding in Parts](https://nzmaths.co.nz/node/913) (working through ten) (41) [Subtraction in Parts](https://nzmaths.co.nz/node/915) (subtracting back through ten) (42)***Figure It Out***N2.2 [Counting Counts](https://nzmaths.co.nz/node/3085) (10)N2.2 [On and Off the Train](https://nzmaths.co.nz/node/3089) (14)NS&AT2-3.2 [Make 28](https://nzmaths.co.nz/node/4058) (14)BF3 [Animal Antics](https://nzmaths.co.nz/node/2880) (1)BF3 [Carrot Country](https://nzmaths.co.nz/node/2884) (6)BF3-4 [Diamond Dazzle](https://nzmaths.co.nz/node/2906) (4)BF3-4 [Bunches](https://nzmaths.co.nz/node/2903) (1)BF3-4 [Magical Tens](https://nzmaths.co.nz/node/2912) (11)BF3-4 [Face Totals](https://nzmaths.co.nz/node/2925) (18)N7/8 L.1 [King of the Castle](https://nzmaths.co.nz/node/3360) (15) | Recall the number of tens and hundreds in centuries and thousands. | ***Teaching Number Knowledge (Book 4)***Close to 100 (24)[Tens in Hundreds and More](https://nzmaths.co.nz/node/1082) (27) |

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| **Key Teaching Ideas** | **Problem progression** | **References** | **Knowledge being developed** | **Resources** |
| Change unknown problems can be solved by using place-value knowledge of tens and ones or by partitioning through tens. (Key Idea #7) | 7 + ☐ = 1316 + ☐ = 2567- ☐ = 2168 + ☐ = 7531 + ☐ = 73200 - ☐ = 156 | ***Teaching Addition and Subtraction (Book 5)***[Up Over Ten](https://nzmaths.co.nz/node/910) (change unknown working through ten) (45)[The missing ones and tens](https://nzmaths.co.nz/node/916) (46)[Problems like 37 + 🞏 = 79](https://nzmaths.co.nz/node/929) (change unknown with tens) (46)[Problems like 67 - 🞏 = 34](https://nzmaths.co.nz/node/939) | Record the results of addition calculations, using equations and diagrams. | ***Teaching Number Knowledge (Book 4)***Close to 100 (24)N 3-4 [Disappearing Dollars](https://nzmaths.co.nz/node/3271) (24) |
| Subtraction can be used to solve difference problems in which two amounts are being compared. (Key Idea #8) | 12 – 442 – 45 + ☐ = 11 so 11 – 5 = ☐68 + ☐ = 77so 77 – 68 = ☐ | ***Teaching Addition and Subtraction (Book 5)***[Comparisons: Finding Difference in Data](https://nzmaths.co.nz/node/25708) (48)[More comparisons: Comparing Heights](https://nzmaths.co.nz/node/911) (49) | Order numbers in the range 0-1000. | ***Teaching Number Knowledge (Book 4)***[Card Ordering](https://nzmaths.co.nz/node/1057) (12)[Arrow Cards](https://nzmaths.co.nz/node/1058) (13)[Rocket - Where Will I Fit](https://nzmaths.co.nz/node/1060) (15)[Number Line Flips](https://nzmaths.co.nz/node/1061) (15)[Squeeze – Guess my Number](https://nzmaths.co.nz/node/1064) (15)[Hundreds Boards and Thousands Book](https://nzmaths.co.nz/node/1065) (16)[Bead Strings](https://nzmaths.co.nz/node/1066) (17)[Who is the Richest](https://nzmaths.co.nz/node/1067) (18)***BSM***10-3-86, 11-3-3, 11-3-42***Figure It Out***N 2-3 [On the Cards](https://nzmaths.co.nz/node/3117) (7)NS 7/8 L.1 [Up the Ladder](https://nzmaths.co.nz/node/4195) (15) |

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| **Key Teaching Ideas** | **Problem progression** | **References** | **Knowledge being developed** | **Resources** |
| Knowledge of doubles can be used to work out problems close to a double.(Key Idea #9) | 3 + 3 = 🞏 so 4 + 3 = 🞏.7 + 7 = 🞏 so 7 + 8 = 🞏, 6 + 7 = 🞏, 14 – 7 = 🞏.8 + 8 = 🞏 so 16 – 7 = 🞏,16 – 9 = 🞏, 15 – 8 = 🞏.25 + 25 = 🞏 so 26 + 27 = 🞏, 23 + 27 = 🞏, 50 – 24 = 🞏.500 + 500 = 🞏 so 503 + 501 = 🞏, 498 + 497 = 🞏, 501 – 498 = 🞏. | ***Teaching Addition and Subtraction (Book 5)***[Near Doubles](https://nzmaths.co.nz/node/937) (49)***Figure It Out***N2.1 [Helping Hands](https://nzmaths.co.nz/node/3053) (3)N2.2 [It’s Not Fair](https://nzmaths.co.nz/node/3090) (15)BF2.3 [Fizzing It Up](https://nzmaths.co.nz/node/2858) (5) | Recall groupings within 100, e.g. 49 and 51 (particularly multiples of 5 e.g. 25 & 75)Recall the number of groupings of tens that can be made from a three-digit number | ***Teaching Number Knowledge (Book 4)***[Traffic Lights](https://nzmaths.co.nz/node/1079) (25)[Zap](https://nzmaths.co.nz/node/1081) (26)[Nudge](https://nzmaths.co.nz/node/1078) (24)[Slavonic Abacus](https://nzmaths.co.nz/node/1076) (23)[Tens and Ones](https://nzmaths.co.nz/node/883) (23)***BSM***11-3-4, 11-3-5, 11-3-43, 11-3-44, 11-3-45, 11-3-81, 11-3-82, 12-1-1, 12-1-2, 12-1-41, 12-1-82, 12-1-83***Figure It Out***N 2.1 [Different Strokes!](https://nzmaths.co.nz/node/3052) (2)N 2.1 [Mighty Marty!](https://nzmaths.co.nz/node/3056) (6)N 2.2 [All that Glitters](https://nzmaths.co.nz/node/3079) (3)N 2.2 [Leapfrog](https://nzmaths.co.nz/node/3087) (12)N 2.2 [Hitting 100](https://nzmaths.co.nz/node/3080) (4)N 2-3 [Putting Numbers to Work](https://nzmaths.co.nz/node/3103) (2) |

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| **Key Teaching Ideas** | **Problem progression** | **References** | **Knowledge being developed** | **Resources** |
| The equals sign represents balance. (Key Idea #10) | 6 +1 = 5 + ☐2 + 4 = ☐ + 3☐ + 12 = 15 + 1342 + 38 = ☐ + 32☐ + 65 = 67 + 33585 – 35 = ☐ - 34 | ***Teaching Addition and Subtraction (Book 5)***[A Balancing Act](https://nzmaths.co.nz/node/1104) (50) | Recall addition and subtraction facts to 20 | ***Teaching Number Knowledge (Book 4****)*[Number Boggle](https://nzmaths.co.nz/node/1089) (33)[Tens Frames Again](https://nzmaths.co.nz/node/1090) (34)[Number Mats and Number Fans](https://nzmaths.co.nz/node/1092) (34)[Bridges](https://nzmaths.co.nz/node/1093) (35)[Bowl a Fact](https://nzmaths.co.nz/node/1094) (35)[Loopy](https://nzmaths.co.nz/node/1097) (37)[Addition Flash Cards](https://nzmaths.co.nz/node/1098) (37)***BSM***9-3-6, 9-3-7, 9-3-48, 9-3-83, 9-3-84, 10-3-6, 10-3-8, 10-3-10, 10-3-46, 10-3-47, 10-3-52, 10-3-53, 10-3-54, 11-1-8, 11-1-9, 11-1-52, 11-1-53, 11-1-83, 11-1-84, 11-3-52, 11-3-53, 11-3-84, 12-1-7, 12-1-52, 12-1-85, 12-3-2, 12-3-45, 12-3-46, 12-3-47, 12-3-8, 12-3-52, 12-3-53, 12-3-85***Figure It Out***N 2.1 [Frogs Frolic](https://nzmaths.co.nz/node/3075) (22)BF 2-3 [Quick Add](https://nzmaths.co.nz/node/2820) (3)BF 2-3 [Add it On](https://nzmaths.co.nz/node/2859) (6)BF 2-3 [Twenty-Seven](https://nzmaths.co.nz/node/2868) (15)BF 2-3 [Stay on Line](https://nzmaths.co.nz/node/2873) (19)BF 2-3 [Testing Triangles](https://nzmaths.co.nz/node/2817) (21)BF 3 [Beat Yourself Down](https://nzmaths.co.nz/node/2881) (2)BF 3 [Give or Take](https://nzmaths.co.nz/node/2883) (5)BF 3 [Four in a Row](https://nzmaths.co.nz/node/2885) (7)BF 3 [Array Puzzles](https://nzmaths.co.nz/node/2886) (8)N 2-3 [Going Down](https://nzmaths.co.nz/node/3119) (9)N 3.3 [Skimming Stones](https://nzmaths.co.nz/node/3225) (4) |

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| **Knowledge being developed** | **Resources** |
| Round three-digit whole numbers to the nearest 10, or hundred | ***BSM***12-1-6, 12-1-46 |
| Recall the multiples of 100 that add to 1000, e.g. 400 and 600. | ***BSM***12-1-3, 12-1-4, 12-1-42, 12-1-43 |