**Transition: Moving from Counting All to Advanced Counting Domain: Addition and Subtraction**

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| **Achievement Objectives** | **Number and Algebra: Level One** |
| Number Strategies:* Use a range of counting, grouping, and equal-sharing strategies with whole numbers and fractions

Number Knowledge:* Know the forward and backward counting sequences of whole numbers to 100.
* Know the groupings with five, within ten, and with ten.

Equations and Expressions:* Communicate and explain counting, grouping, and equal-sharing strategies, using words, numbers and pictures.

Patterns and Relationships:* Generalise that the next counting number gives the result of adding one object to a set and that counting the number of objects in a set tells how many.
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| **Key Teaching Ideas** | **Problem progression** | **References** | **Knowledge being developed** | **Resources** |
| Numbers can be added by counting on from the largest number in increments of one.(Key Idea #1) | 9 + 2 = 🞏, 8 + 4 = 🞏, 14 + 3 = 🞏, 25 + 4 = 🞏,99 + 5 = 🞏, 77 + 4 = 🞏, 8 + 🞏 = 11, 15 + 🞏 = 19,67 + 🞏 = 72, 89 + 🞏 = 9614 is how many more than 8?33 is how many more than 27?74 is how many more than 69? | ***Teaching Addition, Subtraction, and Place Value (Book 5)***[Number Tiles](https://nzmaths.co.nz/node/895) (29)[The Number Strip](https://nzmaths.co.nz/node/893) (30)[The Bears’ Picnic](https://nzmaths.co.nz/node/896) (31)[Change Unknown](https://nzmaths.co.nz/node/897) (31)***BSM***Can You Count On? 6-3-2 (7)Taking a Group and Counting On 9-3-57 (124)7-1-53, 9-1-11, 9-1-49, 10-1-7, 10-1-49, 10-1-50, 10-1-51 | Identify all of the numbers in the range 0–100 at least. | ***Teaching Number Knowledge (Book 4)***[Number Mat and Lily Pads](https://nzmaths.co.nz/node/1036) (2)[“Teen” and “Ty” Numbers](https://nzmaths.co.nz/node/1040) (3)[Number Hangman](https://nzmaths.co.nz/node/1043) (5)***BSM***8-1-45, 8-1-81, 9-1-4, 9-1-5, 9-1-6, 9-1-42, 9-1-82, 12-1-1 |

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| **Key Teaching Ideas** | **Problem progression** | **References** | **Knowledge being developed** | **Resources** |
| Numbers can be subtracted by counting back from the largest number in increments of one.(Key Idea #2) | 12 - 3 = 🞏, 14 - 5 = 🞏, 23 - 4 = 🞏, 41 - 2 = 🞏,67 - 5 = 🞏, 72 - 6 = 🞏, 12 - 🞏 = 9, 24 - 🞏 = 19,67 - 🞏 = 58, 94 - 🞏 = 8916 is how many less than 21?39 is how many less than 43?74 is how many less than 80? | ***Teaching Addition, Subtraction, and Place Value (Book 5)***[Counting Back](https://nzmaths.co.nz/node/898) (32)***BSM***9-3-13, 9-3-14, 9-3-55, 9-3-56, 9-3-57,9-3-58, 9-3-59, 9-3-85, 10-1-8, 10-1-52, 10-1-53 | Say the forwards and backwards number word sequences in the range 0–100, at least, connecting that the result of adding or taking one more/less object to a set is given by the next/previous counting number. | ***Teaching Number Knowledge*** ***(Book 4)***[Number Fans](https://nzmaths.co.nz/node/1039) (4)[Counting](https://nzmaths.co.nz/node/1054) (11)[Lucky Dip](https://nzmaths.co.nz/node/873) (13)[Using Calculators](https://nzmaths.co.nz/node/1059) (14)[Hundreds Boards and Thousands Book](https://nzmaths.co.nz/node/1065) (16)***BSM***9-1-4, 9-1-42, 9-3-9 |
| Objects can be counted by creating bundles of ten.(Key Idea #3) | 40 + 20 = 🞏, 70 - 50 = 🞏, 60 + 30 = 🞏, 90 - 20 = 🞏,42 + 30 = 🞏, 75 - 20 = 🞏, 54 - 🞏 = 24, 27 + 🞏 = 57,36 + 🞏 = 76, 94 - 🞏 = 54 | ***Teaching Addition, Subtraction, and Place Value (Book 5)***[Ones and Tens](https://nzmaths.co.nz/node/1103) (33) | Order numbers in the range 0–100, at least. | ***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)[Bead Strings](https://nzmaths.co.nz/node/1066) (17)[Who is the Richest?](https://nzmaths.co.nz/node/1067) (18)***Figure It Out***N 2.1 (1) [The Mail Gets Through](https://nzmaths.co.nz/node/3051)N 2-3 (1) [Happy Hundreds](https://nzmaths.co.nz/node/3102)***BSM***9-3-51, 9-3-52, 10-1-4, 11-1-4, 11-1-5, 11-1-43, 11-1-44, 11-1-45, 11-1-46, 11-3-6, 11-3-7, 11-3-46, 11-3-47, 11-3-48, 11-3-83 |

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| **Key Teaching Ideas** | **Problem progression** | **References** | **Knowledge being developed** | **Resources** |
| Groups of ten can be added and subtracted by using simple addition facts(Key Idea #4) | 3 tens + 1 ten5 tens – 2 tens50 + 3040 – 2048 - 2084 + 1076 - 30 | ***Teaching Addition, Subtraction, and Place Value (Book 5)***[Ten Stickers Per Packet](https://nzmaths.co.nz/node/25703) (34)[Adding Tens](https://nzmaths.co.nz/node/899) (35)[Subtracting Tens](https://nzmaths.co.nz/node/903) (35) | Recall the facts to ten, and the teen facts, e.g. 3 + 7 = 10, 10 - 6 = 4, 10 + 8 = 18. | ***Teaching Number Knowledge (Book 4)***[Up to Ten](https://nzmaths.co.nz/node/1087) (32)[Tens Frames Again](https://nzmaths.co.nz/node/1090) (34)[Using Tens Frames to Describe Patterns to Ten](https://nzmaths.co.nz/node/493) (34)[Addition Flash Cards](https://nzmaths.co.nz/node/1098) (37)***BSM***9-1-9, 9-1-10, 9-1-47, 9-1-48, 9-3-11, 9-3-12, 9-3-54, 10-1-3, 10-3-46, 11-3-8, 11-3-9, 11-3-49, 11-3-50, 11-3-51 |
| Addition is commutative, so the order of the numbers can be rearranged to make counting on easier(Key Idea #5) | 3 + 11 = 11 + 34 + 23 = 23 + 43 + 21 + 2 = 3 + 2 + 212 + 94 = 94 + 2 | ***Teaching Addition, Subtraction, and Place Value (Book 5)***[The Bigger Number First](https://nzmaths.co.nz/node/892) (36) | Recall the doubles to 20, e.g. 7 + 7 = 14. | ***Teaching Number Knowledge (Book 4)***[Double Trouble](https://nzmaths.co.nz/node/1088) (32)***Figure It Out*** N 2.2 [Helping Hands](https://nzmaths.co.nz/node/3053) (3)***BSM***10-1-6, 10-1-47, 10-1-48, 10-1-83 |

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| **Knowledge being developed** | **Resources** |
| Recall the number of tens within decades | ***Teaching Number Knowledge (Book 4)***[Zap](https://nzmaths.co.nz/node/1081) (26)[Number Boggle](https://nzmaths.co.nz/node/1089) (33)***Figure It Out*** N 2.2 [Flexible Fingers](https://nzmaths.co.nz/node/3084) (8)BF 2-3 [One Liner](https://nzmaths.co.nz/node/2818) (1)BF 2-3 [Fizzing It Up](https://nzmaths.co.nz/node/2858) (5)***BSM***9-1-9, 9-1-10, 9-1-47, 9-1-48, 10-1-5, 10-1-45, 10-1-46, 11-1-12 |
| Recall the decades that add to 100, e.g. 60 + 40 = 100. | ***BSM***9-3-8, 9-3-49, 9-3-50 |