Teaching the emergent child...

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| Chapter 5 - Number Word Sequences from 1-20 | Numerals to 10 | Counting Visible Items | Spatial Patterns | Finger Patterns | Temporal Patterns and Temporal Sequences |
| Purpose - To develop knowledge of FNWS in the range 1-20 and BNWS in the range 1-10 | Purpose - To develop knowledge of numerals and numeral sequences in the range 1-10 | Purpose - To develop perceptual counting strategies | Purpose – To develop the initial facility to ascribe number to spatial patterns and random arrays | Purpose - To develop initial facility with making finger patterns | Purpose - To develop facility with copying and counting temporal patterns and temporal sequences. |
| ***5.1.1 Copying and Saying short FNWS’s:*** | **5.2.1 Numeral Sequences forwards:** *Numerals 0 - 10* | **5.3.1 Counting items in one collection:** *Double Sided Counters* | **5.4.1 Ascribing numerosity to patterns and random arrays***Domino Patterns 1 to 6,* | **5.5.1 Sequential patterns for 1 to 5, fingers seen:**  | **5.6.1 Copying and counting temporal sequences of movements:**  |
| **5.1.2 Copying and Saying short BNWS’s** | **5.2.2 Numeral Sequences Forwards & Backwards***Numerals 0 – 10* | **5.3.2 Establishing a collection of given numerosity:** *Double Sided Counters* | Repeat above sequence using random array cards*Random arrays 1 to 4* | **5.5.2 Sequential patterns for 1 to 5, fingers unseen (bunny ears):**  | **5.6.2 Copying and counting rhythmic patterns:** |
| **5.1.3 Saying alternate numbers forwards and backwards:**  | **5.2.3 Sequencing Numerals:***Numerals 0 - 10* | **5.3.3 Counting items in a row, forwards and backwards:** *Rows of Dots* | Repeat above sequence using pairs patterns cards*Pairs Patterns 1 - 6* | **5.5.3 Simultaneous patterns for 1 to 5, finger seen:**  | **5.6.3 Copying and counting monotonic sequences and sounds:** |
| **5.1.4 Saying the next number word forwards:**  | **5.2.4 Numeral Recognition:** *Numerals 0 - 10* | **5.3.4 Counting items of two collections:** *Rows of Dots; Red - 6, 10, 15 and 20**Green - 1, 2, 3, 4, 5* | **5.4.2 Making Spatio-Motor Patterns:** *Domino, Pairs and Random Array Cards* | **5.5.4 Simultaneous patterns for 1 to 5, fingers unseen (bunny ears):**  | **5.6.4 Copying and counting arhythmical sequences and sounds:** |
| **5.1.5 Saying the next number word backwards:**  | **5.2.5 Numeral Identification:***Numerals 0 - 10* | **5.3.5 Counting items of two rows:** | **5.4.3 Making auditory patterns to match spatial patterns***Domino, Pairs and Random Array Cards* | 5.5.5 Double patterns 1 to 5 |
| **5.1.6 Saying the number word after:**  | **5.2.6 Numeral Tracks:***Numerals 1 – 10* and *Numeral Tracks* |  | **5.5.6 Use finger patterns to keep track of temporal sequences of movement:**  |
| **5.1.7 Saying the number word before:**  |  |  | **5.5.7 Use finger patterns to keep track of temporal sequences of sounds:**  |

... To become perceptual

Teaching the perceptual child...

... to become figurative

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| Chapter 6 - Number Word Sequences from 1-30 | Numerals to 20 | Figurative Counting | Spatial Patterns | Finger Patterns | Equal Groups and Sharing |
| Purpose - To develop knowledge of number word sequences in the range 1 to 30 | Purpose - To develop knowledge of numerals and numeral sequences in the range 1-20 | Purpose - To develop figurative counting strategies | Purpose – To further develop the facility to ascribe number to spatial patterns  | Purpose - To further develop facility with finger patterns for numbers in the range to 10 | Purpose - To develop initial ideas of equal groups and sharing |
| **6.1.1 Saying short FNWS’s:**  | **6.2.1 Numeral Sequences Forwards and Backwards:** Numerals 0 - 20 | **6.3.1 Counting Items in two collections, with first collection screened:** *Double Sided Counters* | **6.4.1 Partitioning visual patterns to 6***Domino and Pairs Patterns 3 - 6* | **6.5.1 Five plus patterns for 6 to 10** | **6.6.1 Describing equal groups***2.3.4.5 Dots Cards* |
| **6.1.2 Saying short BNWS’s:**  | **6.2.2 Sequencing numerals:**Numerals 0 - 20 | **6.3.2 Counting Items in two collections, with second collection screened:** *As above plus screens* | **6.4.2 Partitioning flashed patterns to 6:** *Domino and Pairs Patterns 3 - 6* | **6.5.2 Partitioning numbers 3 to 10** | **6.6.2 Organising equal groups:**Assorted Coloured Counters |
| **6.1.3 Saying alternate number words forwards and backwards:**  | **6.2.3 Numeral Recognition:** Numerals 0 - 20 | **6.3.3 Counting Items in two screened collections:** *As above with small screens* | **6.4.3 Partitioning visual patterns to 10:** *Pairs Patterns 7 - 10* | **6.5.3 Doubles plus one:**  | **6.6.3 Making equal groups:**  |
| **6.1.4 Saying the next one, two, three number words forwards** | **6.2.4 Numeral Identification:**Numerals 0 - 20 | **6.3.4 Counting items in a row with some items screened***20 Dots in a row**Small screen to cover 1 – 4 dots* | **6.4.4 Partitioning flashed patterns to 10:** *Pairs Patterns 7 - 10* | **6.5.4 Partitioning 10 fingers:** | **6.6.4 Describing equal shares:**  |
| **6.1.5 Saying the next one, two, three number words backwards** | **6.2.5 Numeral Tracks:** Numeral Track and Numerals 1 - 20 | **6.4.5 Combining patterns using 4-grids, 6-grids, 8 grids, 10 grids:** *4-grids, 6-grids, 8-grids and 10-grids* | **6.6.5 Organising Equal shares:**  |
| **6.1.6 Saying the number word after** |  | **6.6.6 Partitioning into equal shares:** |
| **6.1.7 Saying the number word before:**  | **6.2.6 Numeral Rolls** |
| *Numeral Roll 1 – 50* |

Teaching the figurative child...

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| Number Word Sequences from 1-100 | Numerals 1-100 | Counting on Counting Back | Combining and Partitioning Involving 5and 10 | Partitioning and combining within the range 1-10 | Early Multiplication and Division |
| Purpose – To develop knowledge of number word sequences in the range 1 to 100 | Purpose - To develop knowledge of numerals and numeral sequences in the range 1-100 | Purpose - To develop strategies involving counting-on and counting-back | Purpose – To develop facility with using five and ten to combine and partition numbers in he range 1 to 10  | Purpose – To develop facility with combing and partitioning numbers in the range 1 to 10 | Purpose – To Develop early Multiplicative and Divisional Strategies |
| **7.1.1 Saying short FNWS’s:**  | **7.2.1 Sequencing numerals:** **Numerals 0 - 100** | **7.3.1 Counting Items in two screened collections:** **Double Sided Counters** | ***7.4.1 Combining numbers to 5:*****Five Frames and Empty Five Frames** | **7.5.1 Describing and Recording Partitions of a Number:** **Pair and Five Wise Ten Frames** | **7.6.1 Combining and Counting Equal Groups:** **Dot Cards** |
| **7.1.2 Saying short BNWS’s:**  | **7.2.2 Sequencing Decade Numerals:** **Decade Cards** | **7.3.2 Counting items in a row with some items screened:** **Row of 30 Dots and Small screens** | **7.4.2 Partitioning 5****Five Frames and Empty Five Frames** | **7.5.2 Partitioning using Flashed Ten Frames:** **Pair and Five Wise Ten Frames** | **7.6.2 Determining the Number of Equal Groups:**  |
| **7.1.3 Saying one, two three numbers after a given number:** | **7.2.3 Sequencing Off-Decade Numerals***Numerals 0 - 100* | **7.3.3 Missing Addend Tasks:** **Double Sided Counters and Screens** | **7.4.3 Combining 5 and a number in the range 1 to 5:** **Double Sided Counter, Empty Ten Frames, Five-Wise Ten Frames**  | **7.5.3 Partitioning and recording Using Flashed Tens Frames:** **Pair and Five Wise Ten Frames** | **7.6.3 Determining the number in an equal share:** **Counters** |
| **7.1.4 Saying one, two three numbers before a given number:** | **7.2.4 Ordering 2-digit numerals:*****Numerals 0 - 100*** | **7.3.4 Removed Item Task:** **Double Sided Counters and Screens** | ***7.4.4 Using 5 to partition Numbers in the Range 6 to 10*****Double Sided Counter, Empty Ten Frames, Five-Wise Ten Frames** | **7.5.4 Combining Two Numbers Using Visible, Pair-Wise Frames:** **Pair and Five Wise Ten Frames** | **7.6.4 Describing Visible Arrays:** **Arrays**  |
| **7.1.5 Counting the Number of Jumps Forwards from a to b:**  | **7.2.5 Numeral Recognition:** ***Numerals 0 - 100*** | **7.3.5 Missing Subtrahend Tasks****Double Sided Counters and Screens** | **7.4.5 Combining numbers to 10:****Empty Ten Frames, Counters, Printed Ten Frames** | **7.5.5 Combining Two Numbers Using Visible, Five-Wise Frames:** **Pair and Five Wise Ten Frames** | **7.6.5 Building Visible Arrays:** **Individual Dot Cards** |
| **7.1.6 Counting the Number of Jumps backwards from b to a** | **7.2.6 Numeral Identification:****Numerals 0 - 100** | **7.3.6 Subtractive Tasks Using a Row:** **Rows of 20 dots and small screens** | **7.4.6 Partitioning 10:** **Empty Ten Frames, Counters, Printed Ten Frames** | **7.5.6 Combining Two numbers Using Flashed Frames:** **Pair and Five Wise Ten Frames** | **7.6.6 Determining the Number of Dots on Visible Arrays:****Selection of Arrays** |
| **7.1.7 Forwards and Backwards Using the Sequence of Decade Numbers from 10 to 100:**  | **7.2.7 Numeral Tracks:** **Numeral Tracks 20 - 100** | **Rows of 20 dots and small screens/marker** | **7.5.7 Combining Two numbers Using Flashed Frames and recording:** **Pair and Five Wise Ten Frames** |
|  |  | **7.3.7 Comparison Task:**  |
| **7.2.8 Numeral Rolls:**  |
| **7.2.9 Hundred Square:****100 Square** |
| **7.2.10 Blank Hundred Square:** **100 Square** |

... To become counting-on

Teaching the counting-on child...

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| Number Word Sequences from 2s, 10, 5s, 3s, and 4, | Numerals 1-1000 | Incrementing by 10s and 1s | Adding and Subtracting to and from decade numbers. | Addition and Subtraction to 20,using 5 and 10 | Developing Multiplication and Division |
| Purpose – To develop facility with forward and backward number word sequences in the range 1-100 | Purpose - To develop knowledge of numerals and numeral sequences in the range 1-1000 | Purpose-To develop the facility to increment and decrement numbers by 10s and 1s in the range 1-100. | Purpose – To develop the facility to add numbers in the range 1-9 to and from decade numbers, and to subtract numbers in the range 1-9 to and from decade numbers. | Purpose – to develop facility with addition and subtraction in the range 1-20, using grouping by 5 and 10**THE PROCEDURES INVOLVE USING THE ARITHMETIC RACK** | Purpose – to further develop early multiplicative and divisional strategies |
| **8.1.1 FNWSs by 2s from 2:**  | **8.2.1 Sequencing and naming 100s cards:** **100s cards to 1000** | **8.3.1 Incrementing and Decrementing on the decade, by 10s:** **Lollipop Sticks** | **8.4.1 Adding from a decade*:*****Lollipop Sticks and screens** | 8.5.1 Building numbers 6-10.  | **8.6.1 Determining the number in partially screened equal groups:** **Coloured Counters** |
| **8.1.2 FNWS and BNWS’s by 2s:** **2 Dot Cards**  | **8.2.2 Naming 3 digit numerals using arrow cards:** Arrow Cards | **8.3.2 Incrementing and decrementing off the decade by 10s:** **Lollipop Sticks** | **8.4.2 Subtracting to a decade*:*****Lollipop Sticks and screens** | **8.5.2 Doubles 3+3, 4+4, 5+5:**  | **8.6.2 Determining the number in screened equal groups:****2,3,4,5 Dot Cards**  |
| **8.1.3 FNWSs by 10s from 10:** **Lollipop Sticks** | **8.2.3 Naming 3 digit numerals using digit cards:** **Numerals 0 - 9** | **8.3.3 Incrementing by 10s and 1s:** **Lollipop Sticks and screens** | **8.4.3 Adding to a decade: 1-5:**.**10 frames** | **8.5.3 Building numbers 11-20:** | **8.6.3 Determining the number of groups:** Place three 4-dot cards under a screen. *I am* **2,3,4,5 Dot Cards**  |
| **8.1.4 FNWSs and BNWSs by 10s****Lollipop Sticks** | **8.2.4 Sequencing and Naming Decade Numerals beyond 100:**  **Numerals 100 – 1000 – on the decade** | **8.3.4 Decrementing by 10s and 1s:** **Lollipop Sticks and screens** | **8.4.4 Subtracting from a decade: 1-5****10 frames** | **8.5.4 Doubles 6+6 to 10+10** | **8.6.4 Determining the number in each group****2,3,4,5 Dot Cards**  |
| **8.1.5 FNWSs by 5s from 5****Five Dot Cards**  | **8.2.5 Sequence 3 digit numerals:** **Numerals 0 - 1000** |  | **8.4.5 Adding to a decade: 6-9:** **10 frames and screens** | **8.5.5 Doubles plus or minus 1:** | **8.6.5 Determining the number in a Screened Array:** **Variety of Arrays**  |
| **8.1.6 FNWS and BNWS’s by 5s:** **Five Dot Cards**  | **8.2.6 Ordering 3 digit numerals:** **Numerals 0 - 1000** | **8.4.6 Subtracting from a decade: 6-910 frames and screens** | **8.5.6 Addition by going through 10:**  | **8.6.6 Determining the number of Rows:** **Variety of Arrays** |
| **8.1.7 Counting by 3s, from 3, and by 4s from 4:****Three and Four Dot Cards**  | **8.2.7 Sequences of multiples with numerals**: **Numeral Tracks with numerals in multiples of 2,3,4,5 and 10** | 8.5.7 Commutativity of Addition:*Move over 2 on the upper row and 5 on the lower*  | **8.6.7 Determining the number in each row:** **Variety of Arrays**  |
| **8,1,8 FNWSs by 3s and 4s**:**Three and Four Dot Cards**  | **8.5.8 Addition by compensation:** |
| **8.5.8 Subtraction by going through 10** *Move*  |

... To become facile

Teaching the facile child...

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| Counting by 10s and 100s | 2-digit addition and subtraction through counting | Non-canonical forms of 2-digit and 3-digit Number | 2 digit addition and subtraction through collections | Higher Decade Addition and Subtraction | Advanced multiplication and division. |
| To develop facility with counting forwards and backwards by 10s off the decade, and counting by 100s on and off the 100, and on and off the decade | To develop counting-based strategies for 2-digit addition and subtraction | To develop facility to associate non-canonical forms of 2-digit and 3-digit numbers with their canonical forms ( e.g. 4 tens and 27 ones is a non canonical form of 67. and 6 tens and 7 ones is a canonical form of 67) | To develop collections-based strategies for 2-digit addition and subtraction. | To develop strategies for adding numbers in the range 2 to 9, to 2-digit numbers, and subtracting numbers in the range 2-9, from 2-digit numbers. | To develop advanced multiplicative and divisional strategies. |
| **9.1.1 Counting by 10s off the decade:****100 x 10 strips****1-9 strips** | **9.2.1 Adding tens to a 2-digit number:**  | **9.3.1 - 2-Digit numbers in Canonical form****Lollipop Sticks** | 9.4.1 Adding two 2-digit numbers using visible collections.**Coloured Straws – Red and Green** | **9.5.1 Using addition facts within the decade:** **Coloured Straws – Red and Green** | **9.6.1 Word Problems - Multiplication:**  |
| **9.1.2 Counting by 100s to 1000:****10 x 100 Squares** | **9.2.2 Adding Two 2-digit Numbers without Regrouping:** | **9.3.2 - 2-Digit Numbers in Non-Canonical Forms**: **Lollipop Sticks** | **9.4.2 Adding two 2-digit numbers using screened collections:****Coloured Straws – Red and Green** | **9.5.2 Using Subtraction Facts within the decade:** **Coloured Straws – Red and Green** | **9.6.2 Word Problems- Quotition Division:**  |
| **9.1.3 Counting by 10s beyond 100:****10 x 100 Squares** | **9.2.3 Adding Two 2-digit Numbers with Regrouping:** | **9.4.3 Missing Addend tasks using visible collections**: **Coloured Straws – Red and Green** | **9.5.3 Using Addition Facts Across the decades:** **Red and Green Ten Frames and 1 to 9 -10 Frames** | **9.6.3 Word Problems- Partition Division:**  |
| **9.1.4 Counting by 100s off the 100:****100 squares and 10 strips** | **9.2.4 Subtracting tens from a 2-digit number:**  | **9.3.3 - 3 Digit Numbers in Canonical Form**: **Lollipop Sticks** | **9.4.4 Missing addend tasks using screened collections.****Lollipop Sticks** | **9.5.4 Using subtraction facts across the decade.** . **Ten Frames** | **9.6.4 Commutativity with arrays:** **Arrays**  |
| **9.2.5 Subtraction involving two 2-digit numbers without regrouping:**  | **9.4.5 Subtraction using visible collections:** **Lollipop Sticks**. |  | **9.6.5 Combining two sets of equal groups:** **2,3,4, 5 Dot Cards**  |
| **9.1.5 Counting by 100s off the hundred and off the decade****100 Squares, 10 strips and 1 – 9 strips** | **9.2.6 Subtraction involving two 2-digit numbers with regrouping** | **9.3.4 - 3- Digit Numbers in non-canonical forms: hundreds and tens**: **Lollipop Sticks** | **9.4.6 Subtraction using screened collections:** **Lollipop Sticks** |  | **9.6.6 Partitioning Arrays****Partitioned Arrays** |
| **9.2.7 Missing addend tasks involving two 2-digit numbers**:  |  |  |  |
| **9.1.6 Counting by 10s beyond 100 off the decade:** **100 Squares, 10 strips and 1 – 9 strips** |  | **9.3.5 - 3-Digit Numbers in non-canonical Forms: Hundreds, Tens and Ones:** **Lollipop Sticks** |  |  |  |

... to have secure early number knowledge