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| Fierte Multi-Academy Calculation Policy – addition | | |
| Key language: sum, total, parts and wholes, plus, add, altogether, more, ‘is equal to’, ‘is the same as’ | | |
| Concrete | Pictorial | Abstract |
| **Combining two parts to make a whole** (use other resources too e.g. eggs, shells, teddy bears, cars). | Children to represent the cubes using dots or crosses. They could put each part on a part whole model too. | 4 + 3 = 7  Four is a part, 3 is a part and the whole is seven.    Use the part, part whole diagram to move into the abstract. |
| **Counting on using number lines using cubes or Numicon.**      **Starting at the bigger number and counting on** | A bar model which encourages the children to count on, rather than count all. | The abstract number line:  What is 2 more than 4?  What is the sum of 2 and 4?  What is the total of 4 and 2?  4 + 2 |

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| **Regrouping to make 10**; using ten frames and counters/cubes or using Numicon.  6 + 5 = 11    Start with the bigger number and use the smaller number and use the smaller number to make 10.    **Adding Three Single Digits:** | | Children to draw the ten frame and counters/cubes.        Add together three groups of objects. Draw a picture to recombine the groups to make 10. | | Children to develop an understanding of equality e.g.    6 + □ = 11  6 + 5 = 5 + □  6 + 5 = □ + 4    Combine the two numbers that make 10 and then add on the remainder. |
| TO + O using base 10. Continue to develop understanding of partitioning and place value.  41 + 8    **Column method – no regrouping** | | Children to represent the base 10 e.g. lines for tens and dot/crosses for ones.    After practically using the base 10 blocks and place value counters, children can draw the counters to help them to solve additions. | | 41 + 8  1  + 8 = 9    40  + 9 =  49 |
| **Column method –regrouping**  TO + TO using base 10. Continue to develop understanding of partitioning and place value.  36 + 25 | | Chidlren to represent the base 10 in a place value chart. | | Looking for ways to make 10.    30  + 20 =  50    5  + 5 =  10    50  + 10 + 1 =  61          Formal method:        Start by partitioning the numbers before moving on to clearly show the exchange below the addition. |
| Use of place value counters to add HTO + TO, HTO + HTO etc. When there are 10 ones in the 1s column- we exchange for 1 ten, when there are 10 tens in the 10s column- we exchange for 1 hundred. | | Children to represent the counters in a place value chart, circling when they make an exchange.    Children can draw a pictorial representation of the columns and place value counters to further support their learning and understanding. | | As the children move on, introduce decimals with the same number of decimal places and different. Money can be used here. |
| Conceptual variation; different ways to ask children to solve 21 + 34 | | | | |
|  | Word problems: | |  |  |
| 21    34    ? | In year 3, there are 21 children and in year 4, there are 34 children.  How many children in total?      21 + 34 = 55. Prove it | | 21 + 34 =    = 21 + 34      Calculate the sum of twenty-one and thirty-four. | Missing digit problems: |

, subtract, minus, fewer, decrease.