## Vocabulary

| Number |  <br> Subtraction | Multiplication <br> \& Division | Fractions | Measurement | Geometry | Time |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| numeral | altogether | multiply | fraction | kilogram | symmetry | earlier/ <br> later |
| zero | sum | dividing | equal part | wide/narrow | corner | first/next/ <br> last |
| ones/ tens/ <br> hundreds | more | grouping | equal <br> sharing | estimate | side | midnight |
| pattern | total | sharing | part of a <br> whole | longer/ <br> shorter | face | seasons |
| forwards | take away | doubling | half <br> heavier/ <br> lighter | edge | day/month/ |  |
| year |  |  |  |  |  |  |

## Order for learning the times tables

Year 1 focuses on repeated addition, however, if they are ready:

Step 1
Fire just $1 \times 6,2 \times 6,5 \times 6,10 \times 6$ at them first.
This will build up on their most secure existing table facts

Step 2
Add in $3 \times 6,4 \times 6$ when step 1 is frequently recalled correctly and instantly

## Step 3

Build up with $6 \times 6,7 \times 6,8 \times 6$

Step 4 When looking at $9 \times 6,11 \times 6$ and $12 \times 6$, children should look at finding $10 \times 6$ and adjust

## CPA approach to: Subtraction

| Objective \& Strategy | Concrete | Pictorial | Abstract |
| :---: | :---: | :---: | :---: |
| Taking away ones. | Use physical objects, counters, cubes etc to show how objects can be taken away. | $15-3=$ $12$ <br> Cross out drawn objects to show what has been taken away. | $7-4=3$ $16-9=7$ |
| Counting back | Move objects away from the group, counting backwards. | Count back in ones using a number line. | Put 13 in your head, count back 4. What number are you at? |
| Find the Difference | Compare objects and amounts | Count on using a number line to find the difference. | Hannah has12 sweets and her sister has 5. How many more does Hannah have than her sister.? |


| Represent and use number bonds and related subtraction facts within 20 <br> Part Part Whole model | Link to addition. Use PPW model to model the inverse. <br> If 10 is the whole and 6 is one of the arts, what s the other part? $10-6=4$ |  | Move to using numbers within the part whole model. |
| :---: | :---: | :---: | :---: |
| Make 10 | Make 14 on the ten frame. Take 4 away to make ten, then take one more away so that you have taken 5 . | $\qquad$ <br> Jump back 3 first, then another 4 . Use ten as the stopping point. | $16-8$ <br> How many do we take off first to get to 10? How many left to take off? |
| Bar model | $5-2=3$ |  | $\mathbf{8}$ $\mathbf{2}$ <br>   <br> $10=8+2$  <br> $10=2+8$  <br> $10-2=8$  <br> $10-8=2$  |

## CPA approach to: Addition

| Objective \& Strategy | Concrete | Pictorial | Abstract |
| :---: | :---: | :---: | :---: |
| Combining two parts to make a whole: part- whole model | Use part part whole model. <br> Use cubes to add two numbers together as a group or in a bar. |  | $4+3=7$ $10=6+4$ <br> Use the part-part whole diagram as shown above to move into the abstract. |
| Starting at the bigger number and counting on | Start with the larger number on the bead string and then count on to the smaller number 1 by 1 to find the answer. | $12+5=17$ <br> Start at the larger number on the number line and count on in ones or in one jump to find the answer. | $5+12=17$ <br> Place the larger number in your head and count on the smaller number to find your answer. |
| Regrouping to make 10. <br> This is an essential skill for column addition later. |  | Use pictures or a number line. Regroup or partition the smaller number using the part part whole model to make 10 . $9+5=14$ <br> (1) 4 | $7+4=11$ <br> If I am at seven, how many more do I need to make 10 . How many more do ladd on now? |
| Represent \& use number bonds and related subtraction facts within 20 | 2 more than 5. |  | Emphasis should be on the language <br> ' 1 more than 5 is equal to 6.' <br> ' 2 more than 5 is 7.' <br> ' 8 is 3 mare than 5.' |

## CPA approach to: Division



## CPA approach to: Multiplication

| Objective \& Strategy | Concrete | Pictorial | Abstract |
| :---: | :---: | :---: | :---: |
| Doubling | Use practical activities using manipultives including cubes and Numicon to demonstrate doubling | Draw pictures to show how to double numbers <br> Double 4 is 8 | Partition a number and then double each part before recombining it back together. |
| Counting in multiples | Count the groups as children are skip counting, children may use their fingers as they are skip counting. | Children make representations to show counting in multiples. | Count in multiples of a number aloud. <br> Write sequences with multiples of numbers. $2,4,6,8,10$ $5,10,15,20,25,30$ |
| Making equal groups and counting the total | Use manipulatives to create equal groups. | Draw to show $2 \times 3=6$ <br> Draw and make representations | $2 \times 4=8$ |
| Repeated addition | Use different objects to add equal groups | Use pictorial including number lines to solve prob There are 3 sweets in one bag. How many sweets are in 5 bags altogether? | Write addition sentences to describe objects and pictures. |
| Understanding arrays | Use objects laid out in arrays to find the answers to 2 lots 5,3 lots of 2 etc. | Draw representations of arrays to show understandipo | $\begin{gathered} 3 \times 2=6 \\ 2 \times 5=10 \end{gathered}$ |

