| Addition Year 1 |  |  |  |
| :---: | :---: | :---: | :---: |
| Objective and Strategy | Concrete | Pictorial | Abstract |
| Combining 2 parts to make a whole: Part - Whole model | Use part - part whole model. <br> Use cubes to add 2 numbers together. | Use pictures to add 2 numbers together. <br> Represent the same addition with a bar model | Use the part-part-whole model below to help move into the abstract. $\begin{aligned} & 4+3=7 \\ & 10=6+4 \end{aligned}$ |
| Counting on using resources and number lines | Start with the larger number on the bead string and count along to find the answer. | $12+5=17$ <br> Start with the larger number on the number line and count along to find the answer. | $5+12=17$ <br> Put the larger number in your head and count on to find the answer. |

Primary School


| Subtraction Year 1 |  |  |  |
| :---: | :---: | :---: | :---: |
| Objective and Strategy | Concrete | Pictorial | Abstract |
| Taking away ones | Use physical objects, counters, cubes etc to show how objects can be taken away. | Draw and cross out objects to show what has been taken away / subtracted $15-3=12$ | $7-4=3$ $16-9=7$ |
| Counting Back | Move objects away from the group when counting back. | Count back in ones using a number line. <br> Counting backwards should be underneath the line. | Put 13 in your head, count back 4. What number are you at now? |
| Find the difference | Compare objects and amounts. <br> 7 is 3 more than 4 | Draw and count on using a number line to find the difference. $11-5=6$ | Hannah has 12 sweets and her sister has 5. How many more does Hannah have than her sister? |


| Introducing the bar model | Lay objects out to represent the bar model. |  |  |
| :---: | :---: | :---: | :---: |
| Represent and use number bonds and related subtraction facts within 20. <br> Part-Part-Whole model | Link to addition. Use the part-part-whole model to model the inverse. <br> If 10 is the whole and 6 is one of the parts, what is the other part? | Use pictorial representations to show the part. | Move to the part - part - whole model with numbers. |
| Bar model | $5-2=3$ |  | 8 2 <br> 10 $\begin{aligned} & 10=8+2 \\ & 10=2+8 \\ & 10-2=8 \\ & 10-8=2 \end{aligned}$ <br> Important to have the answer at the front of the calculation on occasion. |

\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|c|}{Multiplication Year 1} \\
\hline Objective and Strategy \& Concrete \& Pictorial \& Abstract \\

\hline Doubling \& Use concrete resources to and practical activities to demonstrate doubling. \& \begin{tabular}{l}
Draw pictures to show how to double numbers and explain what they are doing. \\
Double 4 is 8

\end{tabular} \& Partition a number and then double each part before recombining. \\

\hline Repeated Addition \& Use concrete resource to count groups of object \& | Use pictorial including number lines $\begin{array}{lll} X X & X X & X X \\ X X & X X & X X \end{array}$ |
| :--- |
| Use bar model to demonstrate the structure. | \& Write addition sentences to describe objects and pCictures . \\

\hline
\end{tabular}

| Counting in multiples | Children use resources in set amount to count along - may use fingers or objects. | Children make representations of groups of numbers to count in multiples. <br> Use of number lines to show repeated groups. | Count in multiples of a number aloud. <br> Write sequence with multiples of numbers. $\begin{aligned} & 2,4,6,8,10 \\ & 5,10,15,20,25,30 \end{aligned}$ <br> Abstract number line |
| :---: | :---: | :---: | :---: |
| Understanding arrays | Use objects laid out in arrays to find the answer to 2 lots of 5,3 lots of 2 etc. | Draw representations of arrays to show understanding. | $\begin{aligned} & 3 \times 2=6 \\ & 2 \times 5=10 \end{aligned}$ |

## Division Year 1

| $\frac{\text { Objective and }}{\text { Strategy }}$ | Concrete | Pictorial | Abstract |
| :---: | :---: | :---: | :---: |
| Sharing using a range of objects | Children practise sharing different amounts using concrete, everyday objects. | Children use pictures or shapes to share quantities using the correct language of sharing. <br> 8 shared between 2 is 4 <br> 12 shared between 3 is 4 <br> Introduce the language and sign for division $\begin{gathered} c \\ 8 \div 2=4 \end{gathered}$ <br> Children to also be introduced to bar modelling to support understanding. $12 \div 4=3$ | 12 shared between $3=4$ <br> progressing onto...... $12 \div 3=4$ <br> Children should also be encouraged to use their 2 times table facts. |

