## Year 3 Progression in maths

| Addit | tion Pupils should be taught to:  | Strategies:  | Number line 57 + 285 = 342   | No regrouping:   |
|-------|---|--|--|--|
|       | add numbers mentally,<br>including:<br>a three-digit number   | <ul> <li>Number line</li> <li>Unstructured number line</li> </ul>  | + 50 + 7   | Add together the ones first then add the<br>tens. Use the Base 10 blocks first before<br>moving onto place value counters. |
|       | a three-digit number<br>and 1s<br>a three-digit number<br>and 10s<br>a three-digit number<br>and 10os<br>add and subtract numbers with<br>up to 3 digits, using formal<br>written methods of columnar<br>addition<br>estimate the answer to a<br>calculation and use inverse<br>operations to check answers | <ul> <li>Partitioning         <ul> <li>Expanded</li> </ul> </li> <li>All of the methods should be alongside concrete resources and pictorial representations.</li> <li>DO NOT USE PLACE VALUE COUNTERS UNTIL CHN ARE SECURE WITH DIENNES.</li> <li>Summer term: introduce compact method.</li> </ul> | No number line<br>57 + 285 = 342<br>285 + 50 = 335<br>335 + 7 = 342<br>Expanded $\frac{374}{12}$<br>$\frac{110}{500}$<br>$\frac{622}{622}$ | With regrouping:<br>128 + 134 =  |
|       | missing number problems, using<br>number facts, place value, and<br>more complex addition   |  | SUMMER TERM:<br>Compact vertical<br>374<br>+ 248<br>622<br>11  | 1005<br>105<br>105<br>105<br>10<br>105<br>105<br>105   |

|             |                                | Year 3 Progres                   | ssion in maths                                   |   |
|-------------|--------------------------------|----------------------------------|--|---|
| Subtraction | Pupils should be taught to:    | Strategies:                      |  | No decomposition:   |
|             |                                |                                  | Counting on 436 - 389 = 47                       | 138 – 24=   |
|             | Subtract numbers mentally,     | Number line                      | + 36   | Education W/  |
|             | including.                     | Unstructured number              | + 11   |   |
|             | a three-digit number           | line                             | 389 400 436                                      |   |
|             | and 1s                         | Partitioning                     | 369 100 130                                      |   |
|             |                                | Expanded                         | <b> </b> L                                       |   |
|             | a three-digit number           |                                  |  |   |
|             | and 10s                        | All of the methods should be     | Taking away (no number line)                     | 100s 10s 1s 0   |
|             |                                | alongside concrete resources and | 326 - 178 = 148                                  |   |
|             | a three-digit number           | pictorial representations.       | 326 - 100 = 226<br>228 - 70 = 156                |   |
|             |                                |                                  | 156 - 6 = 150                                    | III I   |
|             | Subtract numbers with up to 3  |                                  | 150 - 2 = 148                                    |   |
|             | digits, using formal written   | WITH DIENNES                     |  | etter .   |
|             | methods of columnar            |                                  |  |   |
|             | subtraction                    | Summer term: introduce           | (no decomposition 700 450 - 005                  | Decomposition:  |
|             | actimate the answer to a       | compact method.                  | 8 7 4 700 20 3                                   | 134-16=   |
|             | calculation and use inverse    |                                  | - 5 2 3 400 60 8                                 |   |
|             | operations to check answers    |                                  | 3 5 1 600 110 13<br>400 50 8                     | 100s 10s 1s   |
|             |                                |                                  | 200 60 5   |   |
|             | solve problems, including      |                                  |  |   |
|             | missing number problems, using |                                  |  | and the second se |
|             | more complex subtraction       |                                  |  |   |
|             |                                |                                  | Summer Term:                                     |   |
|             |                                |                                  |  |   |
|             |                                |                                  | Decomposition                                    | A A A A A A A A A A A A A A A A A A A   |
|             |                                |                                  | 932 - 457 = 475                                  |   |
|             |                                |                                  | <sup>8</sup> <sup>12</sup> <sup>1</sup><br>9 3 2 | I Share the second second   |
|             |                                |                                  | - 4 5 7  | Country IV  |
|             |                                |                                  | 4 7 5  | 1005 105 = 15   |
|             |                                |                                  |  |   |
|             |                                |                                  |  |   |
|             |                                |                                  |  |   |
|             |                                |                                  |  |   |

|                |   | Year   | 3 Progression in maths  |                              |
|----------------|---|--|---|------------------------------|
| Multiplication | Pupils should be taught<br>to:<br>recall and use<br>multiplication and facts<br>for the 3, 4 and 8<br>multiplication tables<br>write and calculate<br>mathematical<br>statements for<br>multiplication using the<br>multiplication tables that<br>they know, including for<br>two-digit numbers times<br>one-digit numbers, using<br>mental and progressing<br>to formal written<br>methods<br>solve problems,<br>including missing<br>number problems,<br>involving multiplication<br>including positive integer<br>scaling problems and<br>correspondence | STRATEGIES:<br>• Number line<br>• Grid method<br>• Expanded method<br>All of the methods should be<br>alongside concrete resources and<br>pictorial representations.<br>DO NOT USE PLACE VALUE<br>COUNTERS UNTIL CHN ARE<br>SECURE WITH DIENNES.<br>Summer Term:<br>Introduce compact method for<br>higher attainers only.<br>36 x 4 = 144 | 36 x 4 = 144<br>36 x 4 = 144 Support grid method with diennes<br>to show visually what each number<br>looks like.<br>36 x 4 = 144 $36 x 4 = 144$ $36 x 4 = 144$ $36 x 4 = 144$ $(6 x 4) 24$ $(6 x 4) 24$ $(30 x 4) 120$ $144$ | when confident with diennes: |
|                | including missing<br>number problems,<br>involving multiplication<br>including positive integer<br>scaling problems and<br>correspondence<br>problems in which n<br>objects are connected to<br>m objects   | higher attainers only.<br>$36 \times 4 = 144$<br>$36 \times \frac{4}{144}$   |   |                              |

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|----------|--|--|--|--|--|
| Division | Pupils should be taught<br>to:<br>write and calculate<br>mathematical<br>statements for division<br>using the multiplication<br>tables that they know,<br>including for two-digit<br>numbers times one-digit<br>numbers, using mental<br>and progressing to<br>formal written methods<br>solve problems,<br>including missing<br>number problems,<br>involving division,<br>including positive integer<br>scaling problems and<br>correspondence<br>problems in which n<br>objects are connected to<br>m objects | <ul> <li>STRATEGIES:</li> <li>Number line</li> <li>Using timetable<br/>knowledge &amp; inverse</li> <li>Linking arrays to<br/>divisions</li> </ul> All of the methods should be<br>alongside concrete resources and<br>pictorial representations. DO NOT USE PLACE VALUE<br>COUNTERS UNTIL CHN ARE<br>SECURE WITH DIENNES. | 96+4=24<br>0<br>Multiples of t<br>85+5=17<br>10 x 5 = 50<br>7 x 5 = 35<br>18+3=6<br>18+3=6 | $\frac{20 \times 4}{80} \frac{4 \times 4}{96}$ | Summer term only for higher attainers: use two digits by 1 digit only. |