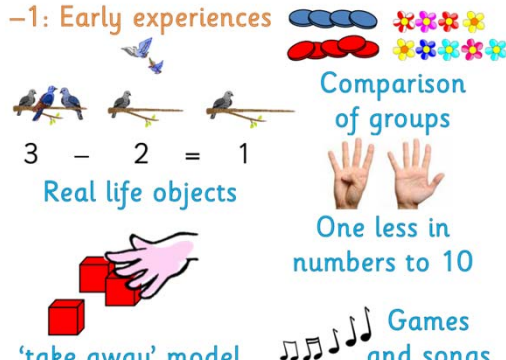
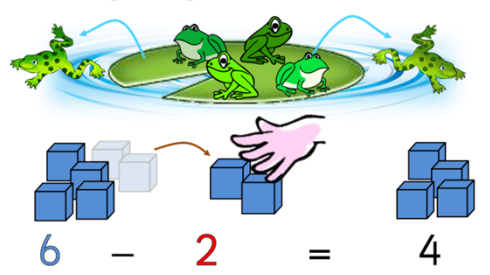
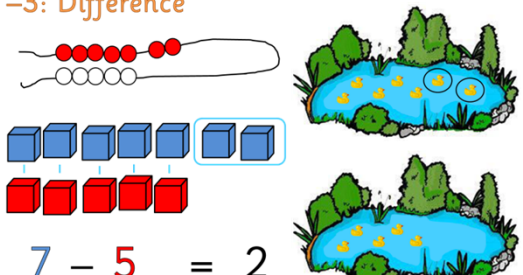
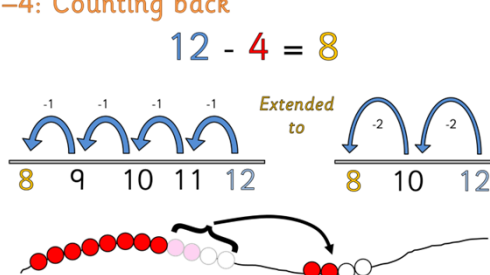


# Calculation Policy

## Subtraction

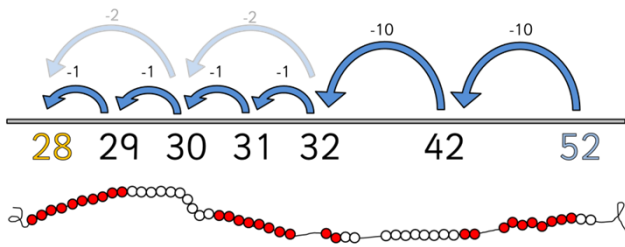
This policy accounts for only one path of progression through subtraction. Children will move through these calculation methods and experiences at different rates. Consequently, the stages do not relate to an age range or year group – rather, they should be seen as a continuum that all children will progress along. They may incorporate other approaches in their work and this should be encouraged so long as they are developing sound understanding. The concepts outlined here will enable the school to deliver a set of skills that allow for continuity and progression.

Stage	Examples	At each stage children develop and refine different skills. Children secure their understanding by...
-1: Early Experiences	<p>-1: Early experiences</p>  <p>Comparison of groups</p> <p>3 - 2 = 1</p> <p>Real life objects</p> <p>'take away' model</p> <p>One less in numbers to 10</p> <p>Games and songs</p>	<ul style="list-style-type: none"> <li>✓ Counting while pointing to one object at a time.</li> <li>✓ Linking a number of objects to the correct number symbol.</li> <li>✓ Using language of comparison: <i>more/less than, one more/less, the same, equal.</i></li> </ul> <p><b>Key language to be aware of:</b> Number names, more/less, take away, equal.</p>
-2: Objects	<p>-2: Taking away</p>  <p>6 - 2 = 4</p> <p>Practical experience of the 'take away' model using a range of apparatus</p>	<ul style="list-style-type: none"> <li>✓ Using a variety of resources for counting, including counters, bead strings, cubes, Cuisenaire, abacus, etc.</li> <li>✓ Counting larger collections of objects accurately (up to 10 objects, then to 20).</li> <li>✓ Rearranging objects for counting.</li> <li>✓ Counting on from a number in jumps of 1.</li> </ul> <p><b>Key language to be aware of:</b> Awareness of number symbols and their correlation to objects. Take away, subtract, minus, less than, deduct, equal.</p>
-3: Difference	<p>-3: Difference</p>  <p>7 - 5 = 2</p> <p>Compare the difference between two sets of objects</p>	<ul style="list-style-type: none"> <li>✓ Using a variety of resources for counting, including counters, bead strings, cubes, Cuisenaire, abacus, etc.</li> <li>✓ Comparing the relative size of 2 numbers, mentally or with the use of resources.</li> <li>✓ Applying language of 'difference' in the context of number: <i>more/less than, one more/less, the same, equal.</i></li> </ul> <p><b>Key language to be aware of:</b> Comparing, difference, __ more than, __ less than, the same, equal, greater/fewer.</p>
-4: Counting back	<p>-4: Counting back</p> <p>12 - 4 = 8</p>  <p>Count back in ones or bridge through 10s</p>	<ul style="list-style-type: none"> <li>✓ Recognising ordinal numbers and count on/back from any number to 20.</li> <li>✓ Applying knowledge of partitioning when jumping through 10s.</li> <li>✓ Recording legibly to arrange calculations in columns</li> </ul> <p><b>Extension &amp; refinement:</b></p> <ul style="list-style-type: none"> <li>✓ Jumping through the nearest 10 by partitioning.</li> </ul> <p><b>Key language to be aware of:</b> Counting back, less than, take away, subtract, minus, fewer than, deduct, equals.</p>

-5: Jumping back

-5: Jumping back

$$52 - 24 = 28$$



Apply partitioning to jump back in 10s and 1s, using a numberline or beadstring

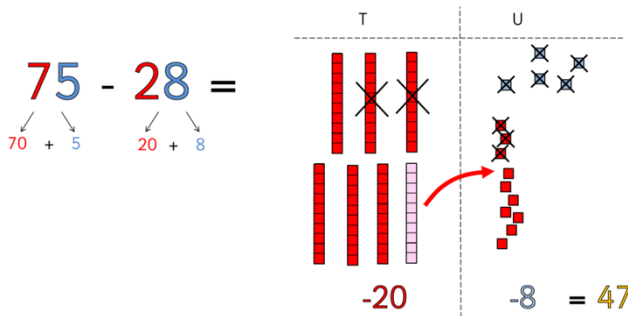
- ✓ Partitioning 2-digit numbers into 10s and 1s
- ✓ Counting on and back in 10s from any number
- ✓ Using a variety of resources for counting, including counters, bead strings, cubes, Cuisenaire, abacus, etc.
- ✓ Continuing to jump through 10s by partitioning smaller numbers.
- ✓ Record legibly to arrange calculations on a numberline

**Key language to be aware of:**

Partition, tens, ones, less than, counting back, bridging through 10

-6: Decomposition

-6: Decomposition



Represent the value in each column by partitioning. Subtract from each column, 'breaking down' higher values if needed.

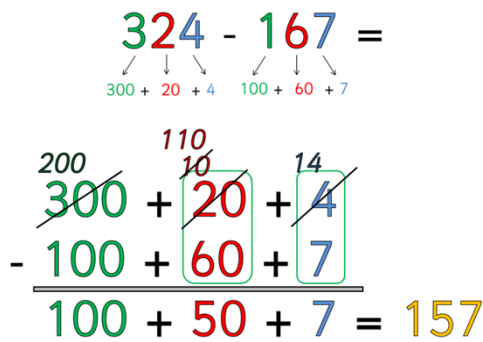
- ✓ Recognising place value in all numbers (TH, H, T, U).
- ✓ Representing place value in numbers using a variety of equipment, including Diennes, Cuisenaire and blocks/counters.
- ✓ Understanding zero as a 'place holder' in 3- and 4-digit numbers.
- ✓ Exchanging numbers between place value columns – knowing that 10 1s = 10, 10 10s = 100, 10 100s = 1000, etc.
- ✓ Using rounding, estimating and number sense to check for accuracy in work

**Key language to be aware of:**

Place value, partition, recombine, exchange, 'true value'

-7: Expanded Column

-7: Expanded Column Subtraction



Identify problems in each column. Resolve all problems before subtracting.

- ✓ Modelling written calculations using apparatus and visa-versa.
- ✓ Recording the 'true value' of numbers when solving a calculation.
- ✓ Demonstrating a secure understanding of place value in TTH, TH, H, T, U numbers and to 1 and 2 decimal places
- ✓ Recording legibly to arrange calculations in columns
- ✓ Using rounding, estimating and number sense to check for accuracy in work.

**Key language to be aware of:**

Place value, partition, recombine, exchange, 'true value' and the language of place value in large numbers and decimals.

-8: Column

-8: Column Subtraction

$$1603 - 845 = \quad 7.34 - 4.5 =$$



Begin subtracting with the smallest value, solving problems as you go. Take care to line up columns in decimals.

- ✓ Recognising place value in numbers to millions.
- ✓ Recognising place value in numbers to 2 and 3 decimal places in the context of measure.
- ✓ Multiplying and dividing numbers by 10, 100 and 1000 when converting measures between units of measure.
- ✓ Speaking about the 'true value' of any number within a calculation.
- ✓ Recording legibly to arrange calculations in columns.
- ✓ Using rounding, estimating and number sense to check for accuracy in work.

**Key language to be aware of:**

Place value, partition, exchange, 'true value' and the language of place value in large numbers and decimals.