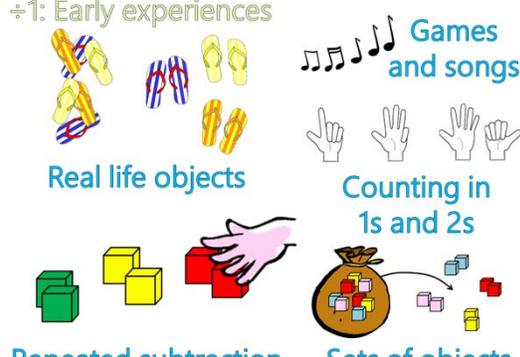
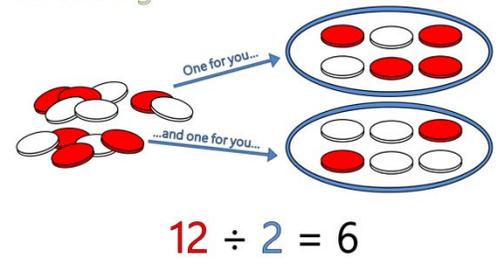
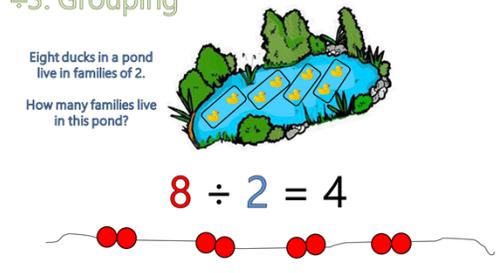
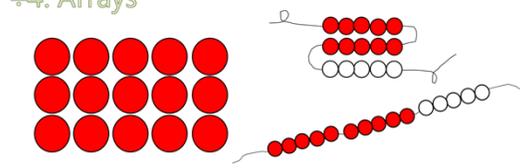




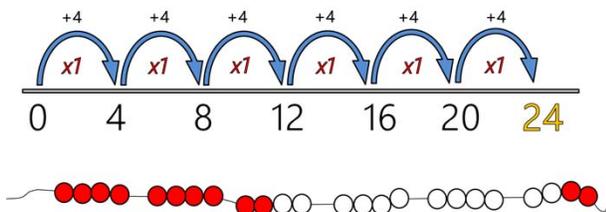
This policy accounts for only one path of progression through division. Children will move through these calculation methods and experiences at different rates. Consequently, the stages do not relate to an age range or year group – rather, they should be seen as a continuum that all children will progress 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>Real life objects Games and songs Counting in 1s and 2s Repeated subtraction Sets of objects</p>	<ul style="list-style-type: none"> ✓ Recognising 1-to-1 relationship. ✓ Counting groups of objects reliably. ✓ Arranging objects into sets containing the same amount. ✓ Comparing the size of equal and unequal sets of objects. <p><i>Use key language in context:</i> Groups of, sets of, lots of, pairs.</p>
÷2: Sharing	<p>+2: Sharing</p>  <p>$12 \div 2 = 6$</p> <p>Practical experience of sharing multiple items into smaller groups</p>	<ul style="list-style-type: none"> ✓ Separating objects into equal groups and recognise when some are left over. ✓ Using mental addition strategies for adding in 2s, 3s, 5s. ✓ Exploring and beginning to recognise numbers in the 2, 3, 5 and 10 times tables. <p><i>Use key language in context:</i> Share, equal, fair, unequal, unfair, sequence, more/less.</p>
÷3: Grouping	<p>+3: Grouping</p> <p>Eight ducks in a pond live in families of 2. How many families live in this pond?</p>  <p>$8 \div 2 = 4$</p> <p>Practical experience of dividing a collection of objects into small groups</p>	<ul style="list-style-type: none"> ✓ Grouping objects form a larger set into smaller, equal subsets. ✓ Counting the number of groups, not the number of objects. ✓ Identifying a pattern and continue the sequence in equal steps. ✓ Talking about patterns in the 2, 5 and 10 times tables and use this to extend beyond x10. <p><i>Use key language in context:</i> Equal groups/sets/piles, divide.</p>
÷4: Arrays	<p>+4: Arrays</p>  <p>$15 \div 3 = 5$ $15 \div 5 = 3$</p> <p>Physical resources are arranged into rows, providing visual models for exploring multiplication and division</p>	<ul style="list-style-type: none"> ✓ Recalling multiplication facts for the 2, 3, 4, 5 and 10 times tables and begin to recognise related division facts. ✓ Understanding that a multiplication can be broken down into easier chunks using an array e.g. $4 \times 8 = (4 \times 5) + (4 \times 3) = 20 + 12 = 32$. ✓ Recording legibly with increasing accuracy. <p><i>Use key language in context:</i> All of the above! + Array, partition, multiply, multiples, times, divide, sets, groups.</p>

÷5: Number line chunking

÷5: Chunking using a number line

$$24 \div 5 = 4 \text{ r}4$$



Use repeated chunks to reach the target. All chunks are added to give the answer.

- ✓ Repeating addition accurately towards a target number.
- ✓ Reciting multiplication sequence for x2, 3, 4, 5, & 10 times tables in order.
- ✓ Relating physical resources to what is written on the numberline and visa versa.
- ✓ Recording legibly to organise the numberline.

Use key language in context:

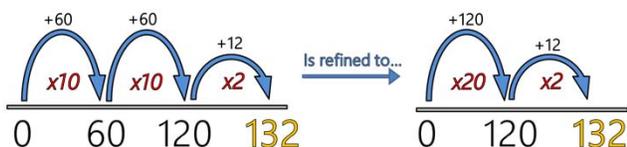
Repeated addition, times, lots of, chunks of, groups of.

÷6: Chunking large numbers

÷6: Jumping in larger chunks

$$132 \div 6 = 22$$

MENU:
 $6 \times 1 = 6$
 $6 \times 2 = 12$
 $6 \times 5 = 30$
 $6 \times 10 = 60$



Children use known multiplication facts to jump towards their target numbers in larger jumps. A menu helps children to remember key facts.

- ✓ Recalling multiplication facts for many tables up to 10 x 10 and related division facts.
- ✓ Recognising how times tables knowledge can be applied to solve larger problems

$$6 \times 1 = 6 \quad x 2 = 12 \quad x 3 = 18 \quad x 4 = 24$$

$$6 \times 10 = 60 \quad x 20 = 120 \quad x 30 = 180 \quad x 40 = 240$$

- ✓ Adding up to 1000 mentally.
- ✓ Beginning to solve 2-digit divisions using menu.
- ✓ Applying addition strategies for adding in columns, if required.
- ✓ Using rounding, estimating and number sense to check for accuracy in work.

Use key language in context:

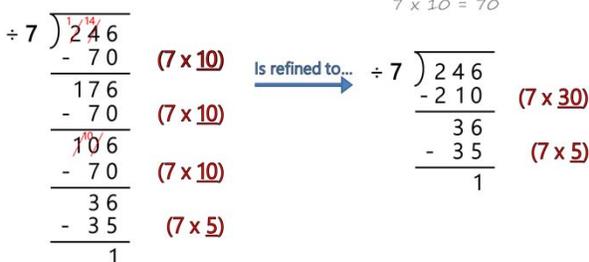
Place value, partition, 'true value', multiply & divide.

÷7: Column chunking

÷7: Chunking in columns

$$246 \div 7 = 35 \text{ r}1$$

MENU:
 $7 \times 1 = 7$
 $7 \times 2 = 14$
 $7 \times 5 = 35$
 $7 \times 10 = 70$



Chunks are subtracted from the target until nothing, or a remainder, is left over. Chunks are recorded and added to find answer.

- ✓ Recording the 'true value' of each chunk when solving a calculation.
- ✓ Demonstrating an understanding of column subtraction to calculate each chunk accurately.
- ✓ Showing secure understanding of multiplying and dividing times table facts by 10 and 100.
- ✓ Solving 2-digit divisions and begin to explore decimal divisions using menu.
- ✓ Recording legibly to arrange calculations in columns.
- ✓ Using rounding, estimating and number sense to check for accuracy in work.

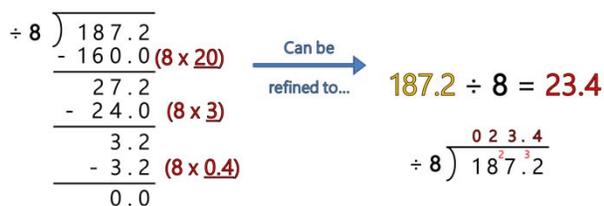
Use key language in context:

Remainder, left over, subtract, column, 'true value'

÷8: Column

÷8: Chunking with decimals and short method

$$187.2 \div 8 = 23.4$$



Children chunk in decimals by applying place value knowledge. Short method can be used make single-digit divisions more efficient.

- ✓ Recognising place value in numbers to 2 and 3 decimal places in the context of measure.
- ✓ Demonstrating greater accuracy and efficiency in using multiplication knowledge to derive other useful facts:
 $x20, x30, x40$ and $x200, x300, x400$ etc
and $x0.2, x0.3, x0.4$ and $x0.02, x0.03, x0.04$ etc.

- ✓ Solving 1- and 2- digit decimal divisions using appropriate strategies.
- ✓ Dividing by decimal numbers with 1 decimal place (using menu if required).
- ✓ Using rounding, estimating and number sense to check for accuracy in work

Use key language in context:

Place value, addition, decimal, tenth, hundredth