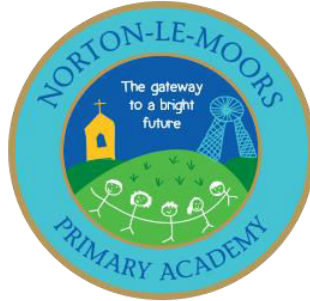


Maths Policy



Approved by:	Eileen Harvey	Date: 01.09.2025
Last reviewed on:	01.09.2025	
Next review due by:	01.09.2026	

The Inspirational Learning Academies Trust

Mathematical Policy

Maths Rationale

The teaching and learning of Maths at the Inspirational Learning Academies Trust allows the children to develop the fluency and reasoning skills that will enable them to access, explore and express their learning across a wide range of Mathematical themes.

Our aim is to provide an engaging, enriching, challenging and inspiring curriculum so that children can gain the life-long skills that they need to succeed whilst in education and beyond.

From the Early Years through to Key Stage Two, children will establish a variety of methods and develop them securely to meet the expectations of the National Curriculum.

Aims

- To adopt the White Rose Maths approach to teaching to ensure all children have the same opportunities to learn and have the support they need to fully grasp concepts.
- To produce a progressive and challenging curriculum which allows children to build on previous knowledge and deepen their thinking as they move through their learning journey.
- For children to enjoy Mathematics learning and have confidence in their own ability.
- To be able to choose and select suitable mathematical manipulatives and models to support them in their learning and to be able to articulate the reasons for their choice.
- To enable children to possess the arithmetic and reasoning skills to confidently support and develop learning and problem solving across a range of Mathematical concepts.
- To expose children to a wide range of reasoning opportunities in which they will be able to apply their mathematical skills to explain thinking and deepen understanding.

The objectives of teaching Mathematics are to enable children to:

- Develop their skills in selecting a method that best suits their style of learning to achieve the outcomes of a lesson.
- Know how to correctly use a range of mathematical manipulatives and models.
- Have an understanding of how their learning impacts on real life situations.
- Develop their verbal conversations to explain their understanding when solving reasoning problems.
- Know how previously taught skills can support when moving their learning forward.

The Inspirational Learning Academies Trust

Mathematical Policy

Intent, Implementation and Impact

Within the Inspirational Learning Academies, we believe an ambitious and rich mathematics curriculum is an important part of children's development throughout school. We intend to deliver a curriculum which:

Allows children to become fluent in the fundamentals of mathematics through creative and engaging lessons that give them a range of opportunities to explore mathematics.

Develops conceptual and procedural understanding as well as the ability to recall and apply knowledge fluently and flexibly.

Provides opportunities to reason and problem solve by applying knowledge and understanding to a variety of increasingly complex challenges.

Ensures children believe in themselves as mathematicians, developing their resilience and perseverance to reason and problem solve with increased confidence.

Builds upon the knowledge and understanding from EYFS to Year 6 as is in line with the National Curriculum.

Curriculum Implementation

Our mastery approach to the curriculum is designed to develop children's knowledge and understanding of mathematical concepts from the Early Years through to the end of Year 6.

Within the teaching of mathematics, we follow the national curriculum and use the White Rose Schemes of Work as a guide to support teachers with their planning and delivery of lessons.

The calculation policy is used within school to ensure a consistent approach to teaching the four operations over time.

Daily maths lessons include varied fluency, problems solving and reasoning.

Concrete manipulatives and pictorial representations are used to support conceptual understanding and to ensure links are made across the different curriculum areas.

Key vocabulary is taught daily and revisited regularly to develop language acquisition.

Children who demonstrate understanding at a deep level are given challenges with deeper knowledge questions to develop their skills at a mastery level

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Children with additional needs are included in whole class lessons and teachers provide scaffolding and relevant support as necessary.

Formative assessment occurs within every lesson in order to identify the children who need more support to achieve the intended outcome and who are ready for greater challenges.

Summative assessments are completed at the end of each term, to inform gaps in learning which can be addressed in following lessons. These also help to create a clear picture of the progress of children within the school.

Impact

A mathematical concept or skill has been 'mastered' when a child can show it in multiple ways, using the mathematical language to explain their ideas and can independently apply the concept to new problems in unfamiliar situations. We aim for mastery in maths for all children and through adopting this approach, children will have the ability to:

Quick recall of facts and procedures

The flexibility and fluidity to move between different contexts and representations of mathematics

The ability to reason and problem solve in different areas of mathematics

The ability to recognise relationships and make connections in mathematics

Assessment

Assessment for learning is continuous throughout the planning, teaching and learning cycle. Key mathematical skills are taught to enable and promote the development of children's mathematical understanding. Teachers track the children's acquisition and application of key skills through varied fluency, reasoning and problem solving approaches. Trustees are regularly updated upon the attainment and progress in maths across the MAT. Trustees challenge any anomalies or unexpected data trends based upon the data analysis from pupil progress meetings. This ensures that maths teaching and data is consistent and of the highest standard.

Assessment is also supported by using the following strategies:

Observing children at work, individually, in pairs, in a group and in class during whole class teaching

The Inspirational Learning Academies Trust

Mathematical Policy

Using differentiated, open ended questions that require children to unpick their understanding

Providing effective feedback to engage children with their learning and to provide opportunities for self-assessment, consolidation, depth and target setting.

Book moderation and monitoring outcomes of work, to evaluate the range and balance of work and to ensure that tasks meet the needs of different learners.

At the end of each term White Rose Hub assessment materials are used to identify areas of strength and weaknesses within each topic which can then be picked up in small guided sessions.

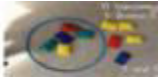
Equal Opportunities

We are committed to providing a teaching environment which ensures all children are provided with the same learning opportunities regardless of social class, gender, culture, race, special educational need or disability. Teachers use a range of strategies to ensure inclusion. Support for specific individuals is well considered and planned for, with consideration given to how greater depth and further challenge can be implemented.

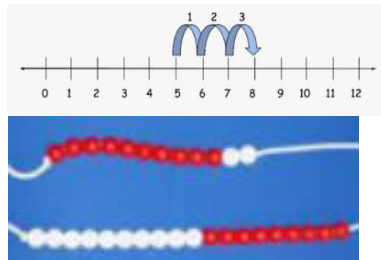
Inclusion

All pupils across the trust are entitled to access the mathematics curriculum at a level appropriate to their needs. It forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our mathematics teaching, we provide learning opportunities that enable all pupils to make good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those who are gifted and talented and those learning English as an additional language and we take all reasonable steps to achieve this. To ensure inclusion, teachers use a range of strategies, tasks as well as teaching are well adapted to ensure full accessibility, as well as to provide appropriate challenge to different groups of learners.

EYFS Calculation Policy

<i>Addition</i>	<i>Subtraction</i>	<i>Multiplication (Doubling)</i>	<i>Division (Halving)</i>
<i>Children are encouraged to make sense of counting using concrete objects.</i>  <i>They combine the objects in practical ways and count.</i>  <i>They understand addition as counting on. They will count on in</i>	<i>Children are encouraged to make sense of counting using concrete objects.</i>  <i>They understand subtraction as counting out.</i>  <i>They understand subtraction as counting back. They will count back in ones and twos</i>	<i>The children use concrete objects to count and make equal groups.</i>  <i>They will count on in twos using a bead string or a number line.</i>  <i>They understand doubling as repeated addition.</i>	<i>Children will use concrete objects to share equally into two groups.</i> <i>They count the objects and halve them.</i>   <i>They understand sharing as dividing by two.</i>

ones and twos
using objects such
as cubes, beads,
and number lines.

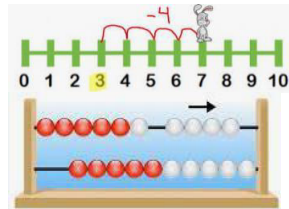


They use concrete
and pictorial
representations to
record their
calculations.

They begin to use +
and =

They are
encouraged to use
a mental picture of
the number system
in their heads to
use for

using objects such
as cubes, beads,
and number lines.



They use concrete
and pictorial
representations to
record their
calculations.

They begin to use -
and =

They are
encouraged to use
a mental picture of
the number system
in their heads to
use for
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children will be
able to write a
number sentence to

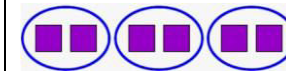
$$2 + 2 = 4$$



They use concrete
and pictorial
representations
for their
calculations.
Some children
will be able to
write it in a
number sentence.

They will begin
to use objects to
make groups of
two from a given
amount.

They will use
concrete and
pictorial
representations
to record the
calculation.

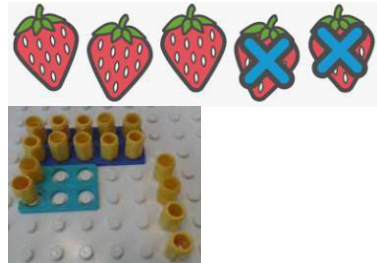


Some children
will be able to
record
calculations in
a written number
sentence.

calculations. Some children will be able to write a number sentence to represent their calculation.



represent their calculation.



Addition and subtraction calculation policies (Taken from White Rose Maths):

Year 1 - 6

Calculation Policy

Addition and Subtraction

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Skill: Add 1-digit numbers within 10	Year: 1
$4 + 3 = 7$	When adding numbers to 10, children can explore both aggregation and augmentation. The part-whole model, discrete and continuous bar model, number shapes and ten frame support aggregation. The combination bar model, ten frame, bead string and number track all support augmentation.

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Mathematics Policy *Reviewed November 2022*

Skill: Add 1 and 2-digit numbers to 20	Year: 1/2
$8 + 7 = 15$ $8 + 7 = 15$ $2 \quad 5$ $+2 \quad +5$ $8 + 7 = 15$ $2 \quad 5$	When adding one-digit numbers that cross 10, it is important to highlight the importance of ten ones equalling one ten. Different manipulatives can be used to represent this exchange. Use concrete resources alongside number lines to support children in understanding how to partition their jumps.

Skill: Add three 1-digit numbers	Year: 2
$7 + 6 + 3 = 16$ $7 + 6 + 3 = 16$ 10 16	When adding three 1-digit numbers, children should be encouraged to look for number bonds to 10 or doubles to add the numbers more efficiently. This supports children in their understanding of commutativity. Manipulatives that highlight number bonds to 10 are effective when adding three 1-digit numbers.

Skill: Add 1-digit and 2-digit numbers to 100	Year: 2/3																																																																																																				
38 + 5 = 43 <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr> <tr><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td></tr> <tr><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td></tr> <tr><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td><td>37</td><td>38</td><td>39</td><td>40</td></tr> <tr><td>41</td><td>42</td><td>43</td><td>44</td><td>45</td><td>46</td><td>47</td><td>48</td><td>49</td><td>50</td></tr> <tr><td>51</td><td>52</td><td>53</td><td>54</td><td>55</td><td>56</td><td>57</td><td>58</td><td>59</td><td>60</td></tr> <tr><td>61</td><td>62</td><td>63</td><td>64</td><td>65</td><td>66</td><td>67</td><td>68</td><td>69</td><td>70</td></tr> <tr><td>71</td><td>72</td><td>73</td><td>74</td><td>75</td><td>76</td><td>77</td><td>78</td><td>79</td><td>80</td></tr> <tr><td>81</td><td>82</td><td>83</td><td>84</td><td>85</td><td>86</td><td>87</td><td>88</td><td>89</td><td>90</td></tr> <tr><td>91</td><td>92</td><td>93</td><td>94</td><td>95</td><td>96</td><td>97</td><td>98</td><td>99</td><td>100</td></tr> </table>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	When adding single digits to a two-digit number, children should be encouraged to count on from the larger number. They should also apply their knowledge of number bonds to add more efficiently e.g. $8 + 5 = 13$ so $38 + 5 = 43$. Hundred squares and straws can support children to find the number bond to 10.
1	2	3	4	5	6	7	8	9	10																																																																																												
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Skill: Add two 2-digit numbers to 100	Year: 2/3						
38 + 23 = 61 <table border="1"> <thead> <tr> <th>Tens</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td>38</td> <td>23</td> </tr> <tr> <td>61</td> <td>1</td> </tr> </tbody> </table>	Tens	Ones	38	23	61	1	At this stage, encourage children to use the formal column method when calculating alongside straws, base 10 or place value counters. As numbers become larger, straws become less efficient. Children can also use a blank number line to count on to find the total. Encourage them to jump to multiples of 10 to become more efficient.
Tens	Ones						
38	23						
61	1						

Skill: Add numbers with up to 3 digits	Year: 3
$265 + 164 = 429$	Base 10 and place value counters are the most effective manipulatives when adding numbers with up to 3 digits. Ensure children write out their calculation alongside any concrete resources so they can see the links to the written column method. Plain counters on a place value grid can also be used to support learning.

Skill: Add numbers with up to 4 digits	Year: 4
$1,378 + 2,148 = 3,526$	Base 10 and place value counters are the most effective manipulatives when adding numbers with up to 4 digits. Ensure children write out their calculation alongside any concrete resources so they can see the links to the written column method. Plain counters on a place value grid can also be used to support learning.

Mathematics Policy *Reviewed November 2022*

Place value counters or plain counters on a place value grid are the most effective concrete resources when adding numbers with more than 4 digits.

At this stage, children should be encouraged to work in the abstract, using the column method to add larger numbers efficiently.

Place value counters and plain counters on a place value grid are the most effective manipulatives when adding decimals with 1, 2 and then 3 decimal places.

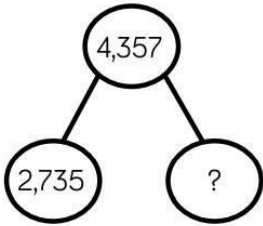
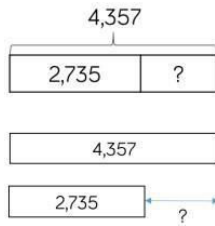
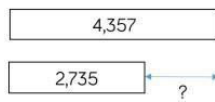
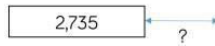
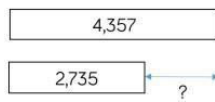
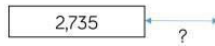
Ensure children have experience of adding decimals with a variety of decimal places. This includes putting this into context when adding money and other measures.

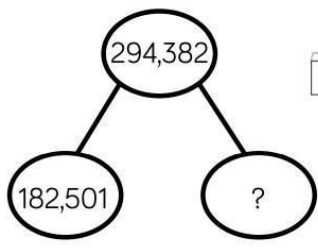
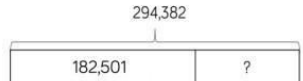
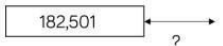
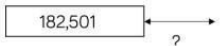
Mathematics Policy *Reviewed November 2022*[illegible][illegible]

Skill: Subtract 1 and 2-digit numbers to 100	Year: 2
The diagram illustrates the subtraction of 28 from 65. On the left, a number bond shows 65 as the sum of 28 and an unknown. Below it, a place value chart shows 65 in the tens column and 28 in the ones column, with a question mark in the tens column. To the right, a number line shows the steps: 28 to 30 (+2), 30 to 60 (+30), and 60 to 65 (+5). Below the number line, place value counters show 6 tens rods and 5 ones units, which are then transformed into 5 tens rods and 15 ones units to subtract 2 tens rods and 8 ones units, leaving 3 tens rods and 7 ones units. The equation $65 - 28 = 37$ is shown in a box.	At this stage, encourage children to use the formal column method when calculating alongside straws, base 10 or place value counters. As numbers become larger, straws become less efficient. Children can also use a blank number line to count on to find the difference. Encourage them to jump to multiples of 10 to become more efficient.

Skill: Subtract numbers with up to 3 digits	Year: 3
The diagram illustrates the subtraction of 273 from 435. On the left, a number bond shows 435 as the sum of 273 and an unknown. Below it, a place value chart shows 435 in the hundreds, tens, and ones columns, with 273 in the hundreds and tens columns, and a question mark in the ones column. To the right, a number line shows the steps: 273 to 300 (+27), 300 to 400 (+10), and 400 to 435 (+35). Below the number line, place value counters show 4 hundreds flats, 3 tens rods, and 5 ones units, which are then transformed into 3 hundreds flats, 13 tens rods, and 5 ones units to subtract 2 hundreds flats, 7 tens rods, and 3 ones units, leaving 1 hundred flat, 6 tens rods, and 2 ones units. The equation $435 - 273 = 262$ is shown in a box.	Base 10 and place value counters are the most effective manipulative when subtracting numbers with up to 3 digits. Ensure children write out their calculation alongside any concrete resources so they can see the links to the written column method. Plain counters on a place value grid can also be used to support learning.

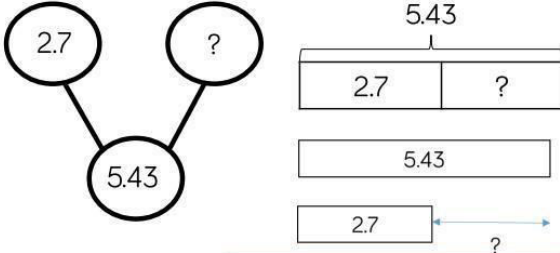
The Inspirational Learning Academies Trust.
Mathematics Policy *Reviewed November 2022*

Skill: Subtract numbers with up to 4 digits	Year: 4
      $4,357 - 2,735 = 1,622$	Base 10 and place value counters are the most effective manipulatives when subtracting numbers with up to 4 digits. Ensure children write out their calculation alongside any concrete resources so they can see the links to the written column method. Plain counters on a place value grid can also be used to support learning.

Skill: Subtract numbers with more than 4 digits	Year: 5/6
      $294,382 - 182,501 = 111,881$	Place value counters or plain counters on a place value grid are the most effective concrete resource when subtracting numbers with more than 4 digits. At this stage, children should be encouraged to work in the abstract, using column method to subtract larger numbers efficiently.

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Mathematics Policy *Reviewed November 2022*

Skill: Subtract with up to 3 decimal places	Year: 5																		
 $5.43 - 2.7 = 2.73$ <table border="1" style="font-size: 8px;"> <tr><th>Ones</th><th>Tenths</th><th>Hundredths</th></tr> <tr><td>1 1 1 1</td><td>0.1 0.1 0.1 0.1</td><td>0.01 0.01 0.01</td></tr> <tr><td>1</td><td>0.1 0.1 0.1 0.1</td><td>0.1 0.1 0.1 0.1</td></tr> </table> <table border="1" style="font-size: 8px;"> <tr><th>Ones</th><th>Tenths</th><th>Hundredths</th></tr> <tr><td>5 4 3</td><td>0.1 0.1 0.1 0.1</td><td>0.01 0.01 0.01</td></tr> <tr><td>2 7 3</td><td>0.1 0.1 0.1 0.1</td><td>0.01 0.01 0.01</td></tr> </table>	Ones	Tenths	Hundredths	1 1 1 1	0.1 0.1 0.1 0.1	0.01 0.01 0.01	1	0.1 0.1 0.1 0.1	0.1 0.1 0.1 0.1	Ones	Tenths	Hundredths	5 4 3	0.1 0.1 0.1 0.1	0.01 0.01 0.01	2 7 3	0.1 0.1 0.1 0.1	0.01 0.01 0.01	Place value counters and plain counters on a place value grid are the most effective manipulative when subtracting decimals with 1, 2 and then 3 decimal places. Ensure children have experience of subtracting decimals with a variety of decimal places. This includes putting this into context when subtracting money and other measures.
Ones	Tenths	Hundredths																	
1 1 1 1	0.1 0.1 0.1 0.1	0.01 0.01 0.01																	
1	0.1 0.1 0.1 0.1	0.1 0.1 0.1 0.1																	
Ones	Tenths	Hundredths																	
5 4 3	0.1 0.1 0.1 0.1	0.01 0.01 0.01																	
2 7 3	0.1 0.1 0.1 0.1	0.01 0.01 0.01																	

Glossary

Addend - A number to be added to another.

Aggregation - combining two or more quantities or measures to find a total.

Augmentation - increasing a quantity or measure by another quantity.

Commutative - numbers can be added in any order.

Complement - in addition, a number and its complement make a total e.g. 300 is the complement to 700 to make 1,000

Difference - the numerical difference between two numbers is found by comparing the quantity in each group.

Exchange - Change a number or expression for another of an equal value.

Minuend - A quantity or number from which another is subtracted.

Partitioning - Splitting a number into its component parts.

Reduction - Subtraction as take away.

Subitise - Instantly recognise the number of objects in a small group without needing to count.

Subtrahend - A number to be subtracted from another.

Sum - The result of an addition.

Total - The aggregate or the sum found by addition.

Multiplication and division calculation policies (Taken from White Rose Maths)

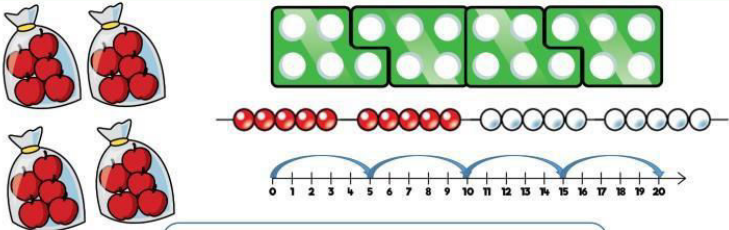
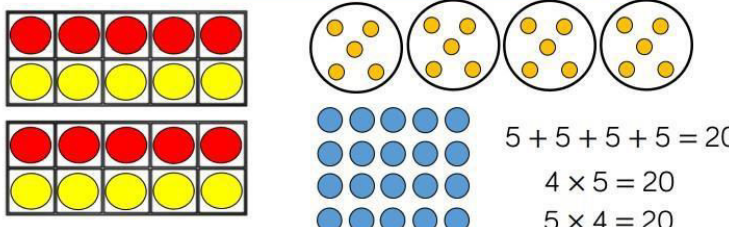
Year 1 - 6

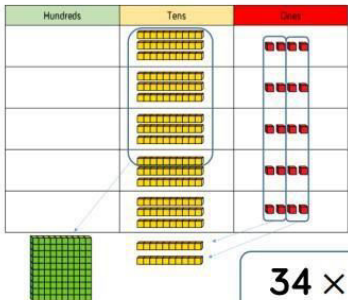
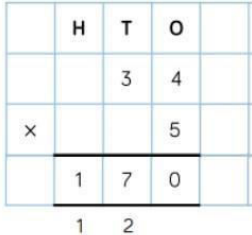
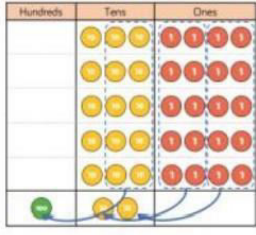
Calculation Policy

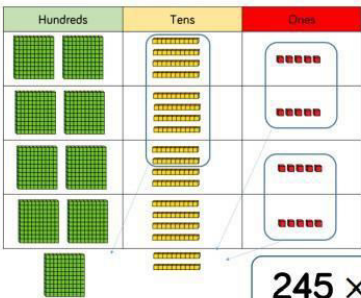
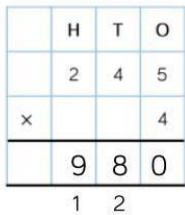
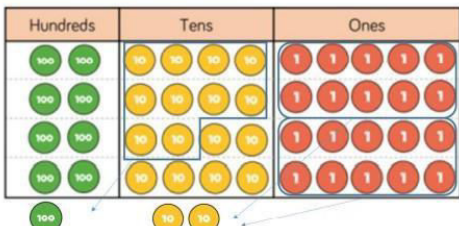
Multiplication and Division

#MathsEveryoneCan



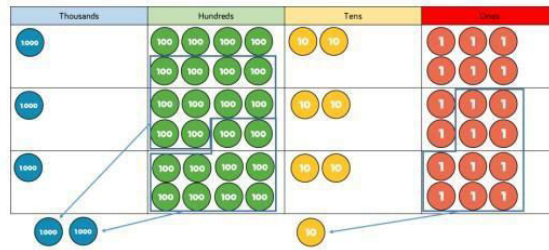
Skill: Solve 1-step problems using multiplication	Year: 1/2
 One bag holds 5 apples. How many apples do 4 bags hold? 	Children represent multiplication as repeated addition in many different ways. In Year 1, children use concrete and pictorial representations to solve problems. They are not expected to record multiplication formally. In Year 2, children are introduced to the multiplication symbol.

Skill: Multiply 2-digit numbers by 1-digit numbers	Year: 3/4
 $34 \times 5 = 170$  	Teachers may decide to first look at the expanded column method before moving on to the short multiplication method. The place value counters should be used to support the understanding of the method rather than supporting the multiplication, as children should use times table knowledge.

Skill: Multiply 3-digit numbers by 1-digit numbers	Year: 3/4
 $245 \times 4 = 980$  	When moving to 3-digit by 1-digit multiplication, encourage children to move towards the short, formal written method. Base 10 and place value counters continue to support the understanding of the written method. Limit the number of exchanges needed in the questions and move children away from resources when multiplying larger numbers.

Skill: Multiply 4-digit numbers by 1-digit numbers

Year: 5



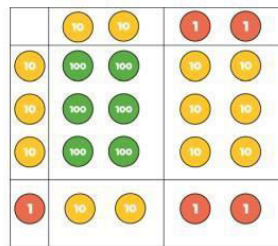
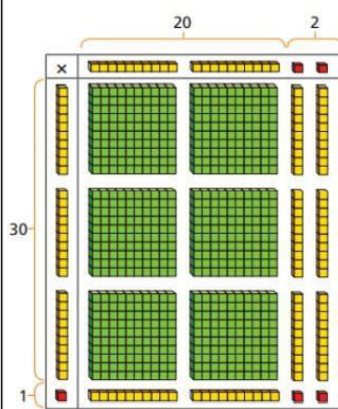
$$1,826 \times 3 = 5,478$$

	Th	H	T	O
	1	8	2	6
x				3
	5	4	7	8
	2		1	

When multiplying 4-digit numbers, place value counters are the best manipulative to use to support children in their understanding of the formal written method. If children are multiplying larger numbers and struggling with their times tables, encourage the use of multiplication grids so children can focus on the use of the written method.

Skill: Multiply 2-digit numbers by 2-digit numbers

Year: 5



x	20	2
30	600	60
1	20	2

	H	T	O
		2	2
x		3	1
		2	2
	6	6	0
	6	8	2

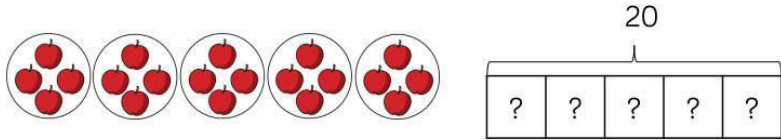
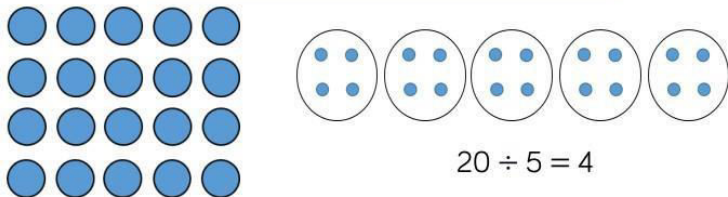
$$22 \times 31 = 682$$

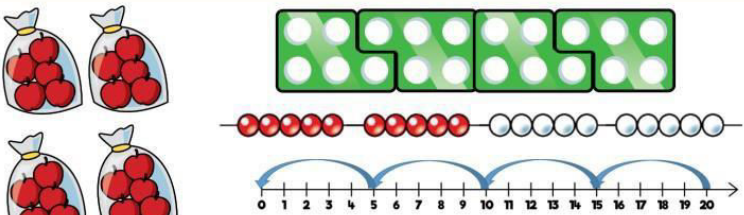
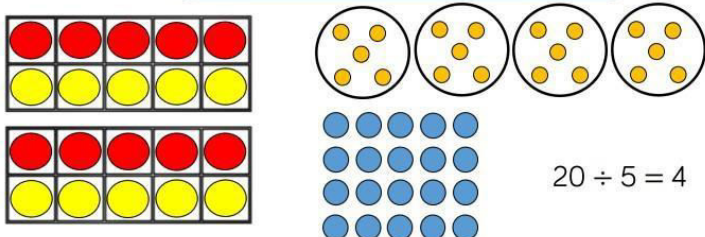
When multiplying a multi-digit number by 2-digits, use the area model to help children understand the size of the numbers they are using. This links to finding the area of a rectangle by finding the space covered by the Base 10. The grid method matches the area model as an initial written method before moving on to the formal written multiplication method.

Skill: Multiply 3-digit numbers by 2-digit numbers				Year: 5																							
				Children can continue to use the area model when multiplying 3-digits by 2-digits. Place value counters become more efficient to use but Base 10 can be used to highlight the size of numbers. Encourage children to move towards the formal written method, seeing the links with the grid method.																							
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	2	3	4																								
x		3	2																								
	4	6	8																								
1 7	1 0	2	0																								
7	4	8	8																								
<table border="1"> <tr> <td>x</td> <td>200</td> <td>30</td> <td>4</td> </tr> <tr> <td>30</td> <td>6,000</td> <td>900</td> <td>120</td> </tr> <tr> <td>2</td> <td>400</td> <td>60</td> <td>8</td> </tr> </table>				x	200	30	4	30	6,000	900	120	2	400	60	8												
x	200	30	4																								
30	6,000	900	120																								
2	400	60	8																								
234 × 32 = 7,488																											

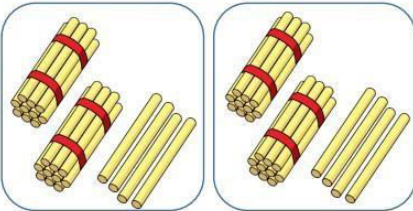
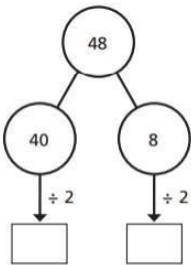
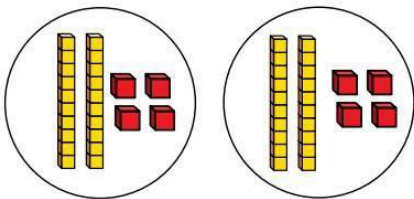
Skill: Multiply 4-digit numbers by 2-digit numbers				Year: 5/6																																								
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TTh	Th	H	T	O																																								
	2	7	3	9																																								
x			2	8																																								
2	1	9	1	2																																								
2	5	3	7																																									
5	4	7	8	0																																								
1		1																																										
7	6	6	9	2																																								
2,739 × 28 = 76,692																																												

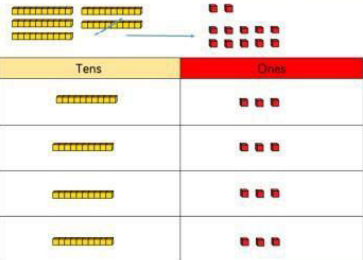
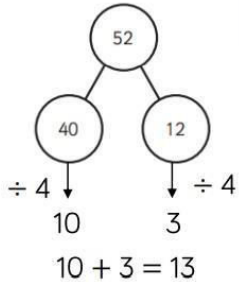
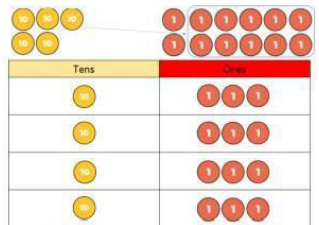
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Skill: Solve 1-step problems using multiplication (sharing)	Year: 1/2
 There are 20 apples altogether. They are shared equally between 5 bags. How many apples are in each bag?  $20 \div 5 = 4$	Children solve problems by sharing amounts into equal groups. In Year 1, children use concrete and pictorial representations to solve problems. They are not expected to record division formally. In Year 2, children are introduced to the division symbol.

Skill: Solve 1-step problems using division (grouping)	Year: 1/2
 There are 20 apples altogether. They are put in bags of 5. How many bags are there?  $20 \div 5 = 4$	Children solve problems by grouping and counting the number of groups. Grouping encourages children to count in multiples and links to repeated subtraction on a number line. They can use concrete representations in fixed groups such as number shapes which helps to show the link between multiplication and division.

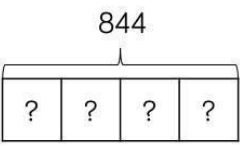
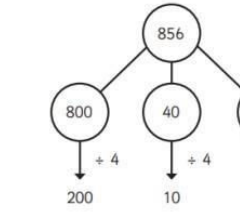
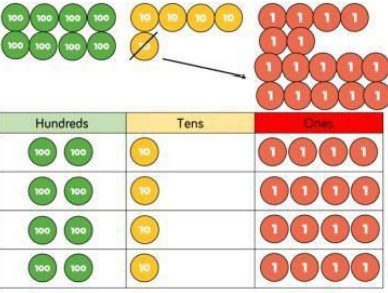
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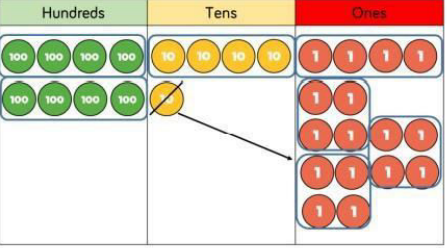
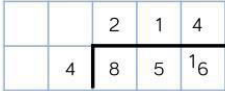
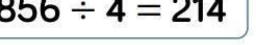
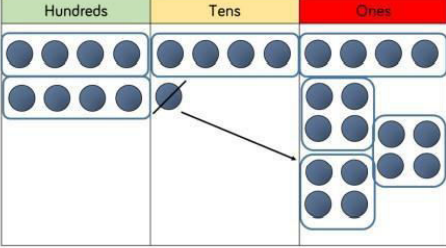
Skill: Divide 2-digits by 1-digit (sharing with no exchange)	Year: 1/2
   $48 \div 2 = 24$ 	When dividing larger numbers, children can use manipulatives that allow them to partition into tens and ones. Straws, Base 10 and place value counters can all be used to share numbers into equal groups. Part-whole models can provide children with a clear written method that matches the concrete representation.

Skill: Divide 2-digits by 1-digit (sharing with exchange)	Year: 3/4
  $52 \div 4 = 13$ 	When dividing numbers involving an exchange, children can use Base 10 and place value counters to exchange one ten for ten ones. Children should start with the equipment outside the place value grid before sharing the tens and ones equally between the rows. Flexible partitioning in a part-whole model supports this method.

Skill: Divide 2-digits by 1-digit (sharing with remainders)	Year: 3/4
53 $53 \div 4 = 13 \text{ r}1$	When dividing numbers with remainders, children can use Base 10 and place value counters to exchange one ten for ten ones. Starting with the equipment outside the place value grid will highlight remainders, as they will be left outside the grid once the equal groups have been made. Flexible partitioning in a part-whole model supports this method.

Skill: Divide 2-digits by 1-digit (grouping)	Year: 4/5
52 $52 \div 4 = 13$	When using the short division method, children use grouping. Starting with the largest place value, they group by the divisor. Language is important here. Children should consider 'How many groups of 4 tens can we make?' and 'How many groups of 4 ones can we make?' Remainders can also be seen as they are left ungrouped.

Skill: Divide 3-digits by 1-digit (sharing)		Year: 4
$844 \div 4 = 122$ 		Children can continue to use place value counters to share 3-digit numbers into equal groups. Children should start with the equipment outside the place value grid before sharing the hundreds, tens and ones equally between the rows. This method can also help to highlight remainders. Flexible partitioning in a part-whole model supports this method.
$844 \div 4 = 122$ 		

Skill: Divide 3-digits by 1-digit (grouping)		Year: 5
		Children can continue to use grouping to support their understanding of short division when dividing a 3-digit number by a 1-digit number. Place value counters or plain counters can be used on a place value grid to support this understanding. Children can also draw their own counters and group them through a more pictorial method.
$856 \div 4 = 214$ 		

Skill: Divide 4-digits by 1-digit (grouping)	Year: 5																														
<table border="1" style="border-collapse: collapse; text-align: center; margin-right: 20px;"> <thead> <tr style="background-color: #d9e1f2;"> <th style="width: 15%;">Th</th> <th style="width: 15%;">H</th> <th style="width: 15%;">T</th> <th style="width: 15%;">O</th> </tr> </thead> <tbody> <tr> <td>1,000 1,000</td> <td>100 100</td> <td>10 10</td> <td>1 1</td> </tr> <tr> <td>1,000 1,000</td> <td>100 100</td> <td>10 10</td> <td>1 1</td> </tr> <tr> <td>1,000 1,000</td> <td>100 100</td> <td>10 10</td> <td>1 1</td> </tr> <tr> <td>1,000 1,000</td> <td>100 100</td> <td>10 10</td> <td>1 1</td> </tr> </tbody> </table> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr> <td></td> <td>4</td> <td>2</td> <td>6</td> <td>6</td> </tr> <tr> <td>2</td> <td>8</td> <td>5</td> <td>13</td> <td>12</td> </tr> </table> $8,532 \div 2 = 4,266$	Th	H	T	O	1,000 1,000	100 100	10 10	1 1	1,000 1,000	100 100	10 10	1 1	1,000 1,000	100 100	10 10	1 1	1,000 1,000	100 100	10 10	1 1		4	2	6	6	2	8	5	13	12	Place value counters or plain counters can be used on a place value grid to support children to divide 4-digits by 1-digit. Children can also draw their own counters and group them through a more pictorial method. Children should be encouraged to move away from the concrete and pictorial when dividing numbers with multiple exchanges.
Th	H	T	O																												
1,000 1,000	100 100	10 10	1 1																												
1,000 1,000	100 100	10 10	1 1																												
1,000 1,000	100 100	10 10	1 1																												
1,000 1,000	100 100	10 10	1 1																												
	4	2	6	6																											
2	8	5	13	12																											

Skill: Divide multi digits by 2-digits (short division)	Year: 6																														
<table border="1" style="border-collapse: collapse; text-align: center; margin-right: 20px;"> <tr> <td></td> <td></td> <td>0</td> <td>3</td> <td>6</td> </tr> <tr> <td></td> <td>12</td> <td>4</td> <td>43</td> <td>72</td> </tr> </table> $432 \div 12 = 36$ $7,335 \div 15 = 489$ <table border="1" style="border-collapse: collapse; text-align: center;"> <tr> <td></td> <td>0</td> <td>4</td> <td>8</td> <td>9</td> </tr> <tr> <td>15</td> <td>7</td> <td>73</td> <td>133</td> <td>135</td> </tr> </table> <table border="1" style="border-collapse: collapse; text-align: center; width: 100%;"> <tr> <td>15</td> <td>30</td> <td>45</td> <td>60</td> <td>75</td> <td>90</td> <td>105</td> <td>120</td> <td>135</td> <td>150</td> </tr> </table>			0	3	6		12	4	43	72		0	4	8	9	15	7	73	133	135	15	30	45	60	75	90	105	120	135	150	When children begin to divide up to 4-digits by 2-digits, written methods become the most accurate as concrete and pictorial representations become less effective. Children can write out multiples to support their calculations with larger remainders. Children will also solve problems with remainders where the quotient can be rounded as appropriate.
		0	3	6																											
	12	4	43	72																											
	0	4	8	9																											
15	7	73	133	135																											
15	30	45	60	75	90	105	120	135	150																						

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Skill: Divide multi-digits by 2-digits (long division)

Year: 6

		0	3	6
1	2	4	3	2
	-	3	6	0
			7	2
	-		7	2
				0

(x30)
 $12 \times 1 = 12$
 $12 \times 2 = 24$
 $12 \times 3 = 36$
 $12 \times 4 = 48$
 $12 \times 5 = 60$
 $12 \times 6 = 72$
 $12 \times 7 = 84$
 $12 \times 8 = 96$
 $12 \times 9 = 108$
 $12 \times 10 = 120$

$$432 \div 12 = 36$$

$$7,335 \div 15 = 489$$

	0	4	8	9
15	7	3	3	5
-	6	0	0	0
	1	3	3	5
-	1	2	0	0
		1	3	5
-		1	3	5
				0

(x400)
 $1 \times 15 = 15$
 $2 \times 15 = 30$
 $3 \times 15 = 45$
 $4 \times 15 = 60$
 $5 \times 15 = 75$
 $10 \times 15 = 150$

Children can also divide by 2-digit numbers using long division.

Children can write out multiples to support their calculations with larger remainders.

Children will also solve problems with remainders where the quotient can be rounded as appropriate.

Skill: Divide multi digits by 2-digits (long division)

Year: 6

$$372 \div 15 = 24 \text{ r}12$$

		2	4	r	1	2
1	5	3	7	2		
	-	3	0	0		
			7	2		
	-		6	0		
			1	2		

$1 \times 15 = 15$
 $2 \times 15 = 30$
 $3 \times 15 = 45$
 $4 \times 15 = 60$
 $5 \times 15 = 75$
 $10 \times 15 = 150$

		2	4	$\frac{4}{5}$
1	5	3	7	2
	-	3	0	0
			7	2
	-		6	0
			1	2

$$372 \div 15 = 24 \frac{4}{5}$$

When a remainder is left at the end of a calculation, children can either leave it as a remainder or convert it to a fraction. This will depend on the context of the question.

Children can also answer questions where the quotient needs to be rounded according to the context.