Marvellous Multiplication from Reception to Year 6

Claire Roach

Maths Lead

March ‘26

- Look at Reception to Year 6 examples.
- Curriculum Progression – journey the children go on.
- Standardised Testing

Aim of this session – celebrate and continue to drive multiplication across the school.

From Reception...

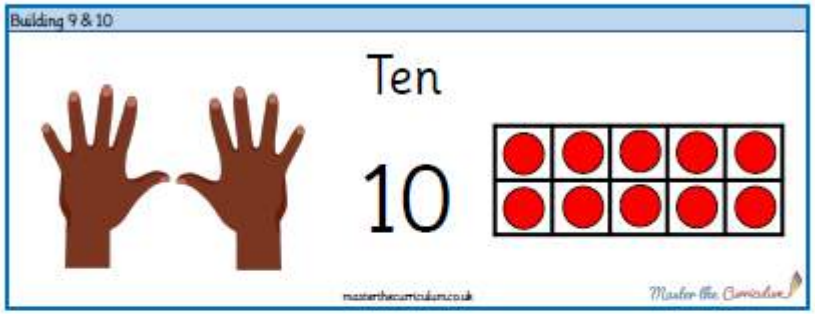
Counting

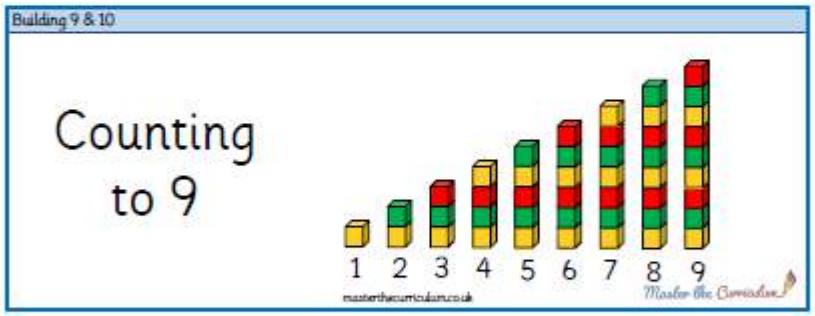
Development matters		Birth to 5 matters	
3 and 4 year olds	**Reception**	**Range 5**	**Range 6**
• Recite numbers past 5. • Say one number for each item in order: 1, 2, 3, 4, 5.	• Count beyond ten.	• May enjoy counting verbally as far as they can go • Points or touches (tags) each item, saying one number for each item, using the stable order of 1,2,3,4,5. • Uses some number names and number language within play, and may show fascination with large numbers • Begin to recognise numerals 0 to 10	• Enjoys reciting numbers from 0 to 10 (and beyond) and back from 10 to 0 • Increasingly confident at putting numerals in order 0 to 10 (ordinality)
Autumn 3, Autumn 5 Spring 3, Spring 5 Summer 1	Summer 1, Summer 6	Autumn 3, Autumn 5 Spring 1, Spring 5 Summer 1	Spring 5 Summer

Composition

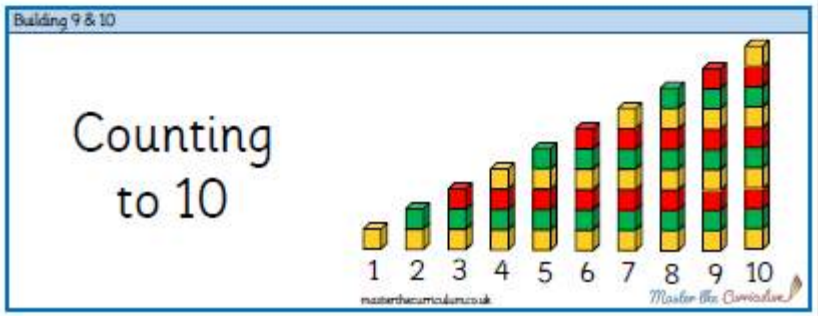
Development matters		Birth to 5 matters	
3 and 4 year olds	**Reception**	**Range 5**	**Range 6**
• Solve real world mathematical problems with numbers up to 5.	• Understand the 'one more than/one less than' relationship between consecutive numbers. • Explore the composition of numbers to 10. • Automatically recall number bonds for numbers 0-5 and some to 10.	• Through play and exploration, beginning to learn that numbers are made up (composed) of smaller numbers • Beginning to use understanding of number to solve practical problems in play and meaningful activities • Beginning to recognise that each counting number is one more than the one before • Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same	• Shows awareness that numbers are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects • Begins to conceptually subitise larger numbers by subitising smaller groups within the number, e.g. sees six raisins on a plate as three and three • In practical activities, adds one and subtracts one with numbers to 10 • Begins to explore and work out mathematical problems, using signs and strategies of their own choice, including (when appropriate) standard numerals, tallies and "+" or "-"
Autumn 5 Spring 1	Autumn 3, Autumn 5 Spring 1, Spring 3, Spring 5 Summer 2, Summer 4, Summer 6	Autumn 3, Autumn 5 Spring 1	Autumn 5 Spring 1, Spring 3, Spring 5 Summer 2, Summer 4, Summer 6

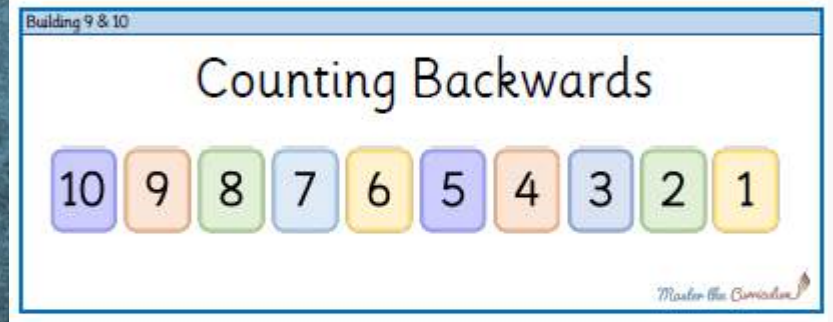
From Reception...



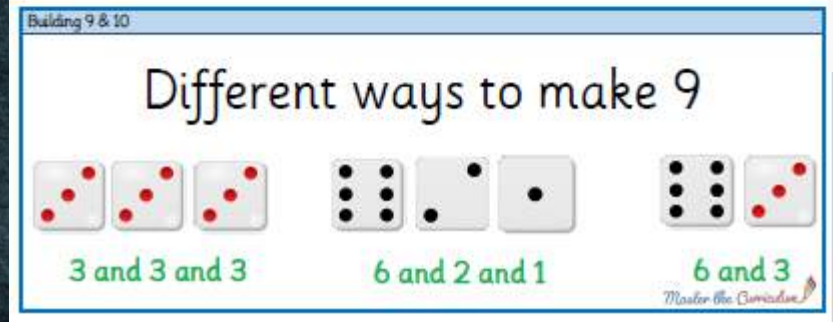


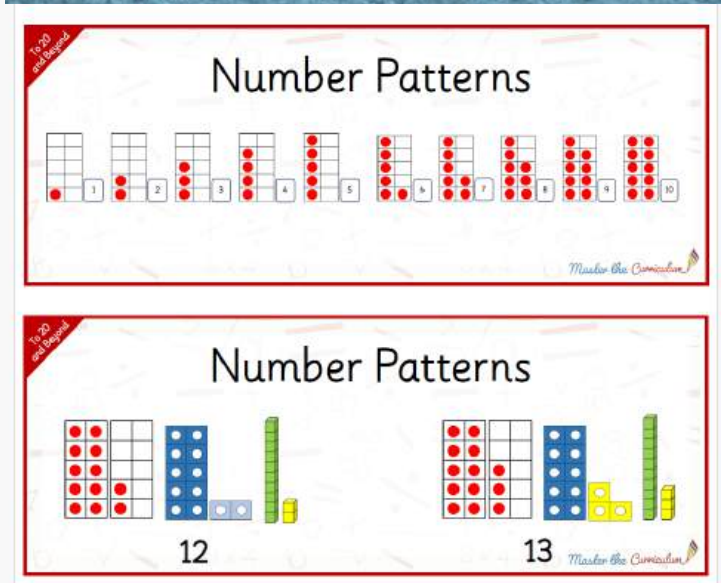
masterthecurriculum.co.uk





masterthecurriculum.co.uk

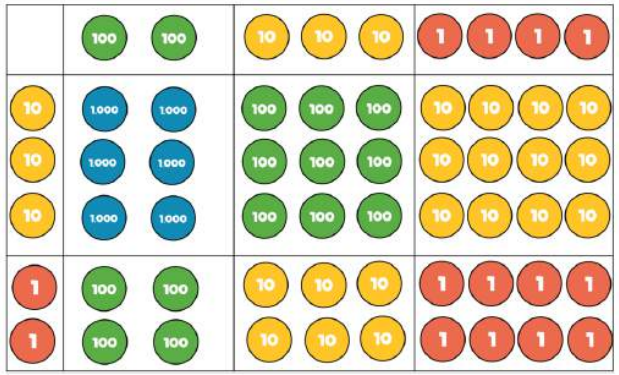




…to Year 6

Skill: Multiply 3-digit numbers by 2-digit numbers

Year: 5



Th	H	T	O
	2	3	4
×		3	2
	4	6	8
$^{1}7$	$^{1}0$	2	0
7	4	8	8

×	200	30	4
30	6,000	900	120
2	400	60	8

$234 \times 32 = 7{,}488$

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 th links with the grid method.

Skill: Multiply 4-digit numbers by 2-digit numbers

Year: 5/6

TTh	Th	H	T	O
	2	7	3	9
×			2	8
$^{2}2$	$^{5}1$	$^{3}9$	$^{7}1$	2
$^{1}5$	4	$^{1}7$	8	0
7	6	6	9	2
		1		

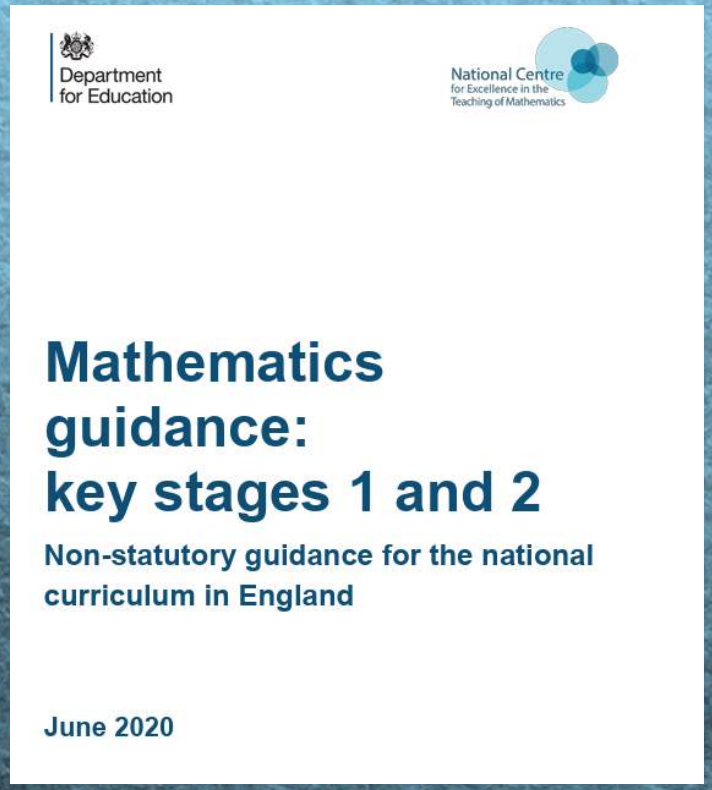
$2{,}739 \times 28 = 76{,}692$

When multiplying 4-digits by 2-digits, children should be confident in the written method.

If they are still struggling with times tables, provide multiplication grids to support when they are focusing on the use of the method.

Consider where exchanged digits are placed and make sure this is consistent.

Ready to Progress DfE



Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
MD		2MD–1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.	3MD–1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.	4MD–1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size. →	5MD–1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.	For year 6, MD ready-to-progress criteria are combined with AS ready-to-progress criteria (please see above).
		2MD–2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division).		4MD–2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.	5MD–2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors.	
				4MD–3 Understand and apply the distributive property of multiplication. →	5MD–3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.	
					5MD–4 Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context.	

- Where it all began!
- Progression across the curriculum
- Videos

Year 2

2MD–1 Multiplication as repeated addition

Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.

2MD–1 Teaching guidance

Pupils must first be able to recognise equal groups. To better understand and identify equal groups, pupils should initially explore both equal and unequal groups. Pupils should then learn to describe equal groups with words.

Figure 52: recognising equal groups – 3 groups of 5 eggs

Language focus

"There are 3 equal groups of eggs."

"There are 5 eggs in each group."

"There are 3 groups of 5."

Based on their existing additive knowledge, pupils should be able to represent equal-group contexts with repeated addition expressions, for example $5+5+5$. They should then learn to write multiplication expressions to represent the same contexts, for example

Making connections

Pupils must be able to write and solve addition problems with 3 or more addends before they can connect repeated addition to multiplication.

2MD–1 Example assessment questions

1. Write these addition expressions as multiplication expressions. The first one has been completed for you.

   $5+5+5+5+5=5\times5$

   $2+2+2+2+2=$ _____

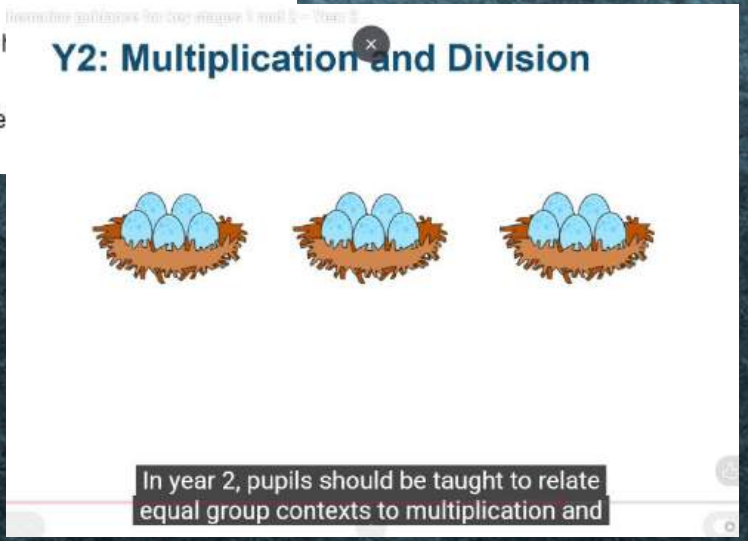
   $2+2+2=$ _____

   $10+10+10=$ _____

2. There are 7 year-groups in Winterdale School. Each year-group h many classes are in the school?

3. Sally buys 3 cinema tickets. Each ticket costs £5. How much doe the multiplication expression and calculate the cost.

- Repeated addition
- Watch video Year 2
- SATS – Maths paper



Year 2

4 $10 \times 10 =$ ☐

7 $5 \times 6 =$ ☐

9 $22 + 22 =$ ☐

13 $14 \div 2 =$ ☐

- Arithmetic paper

Year 2

12 Write the missing numbers in the sequence.

16	14	12			

1 mark

23 Ben has **five** marbles.

Kemi has **seven times** that number.

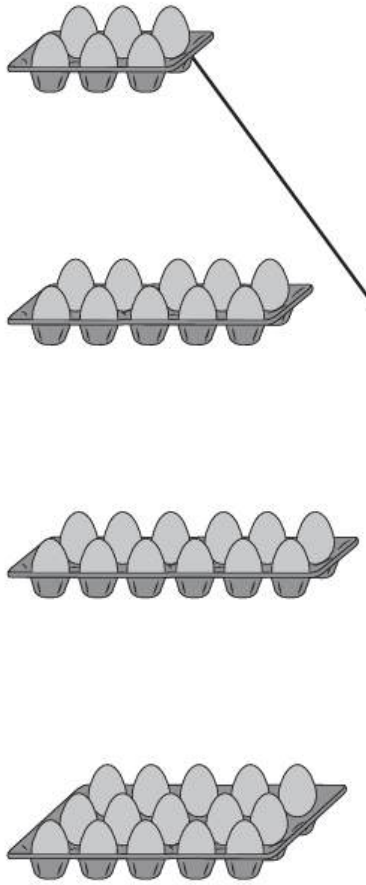
How many marbles does Kemi have?

marbles

1 mark

9 Match each egg box to the correct multiplication.

One is done for you.



6 × 2

5 × 3

3 × 2

5 × 2

1 mark

- Reasoning paper

Year 4

Overview of the multiplication tables check

The multiplication tables check (MTC) is statutory for all year 4 pupils registered at state-funded maintained schools, special schools or academies, including free schools, in England.

The purpose of the MTC is to determine whether pupils can recall their times tables fluently up to 12, through a set of 25 timed questions. This skill is essential for future success in mathematics, and the check will help schools identify pupils who have not yet mastered this and provide additional support.

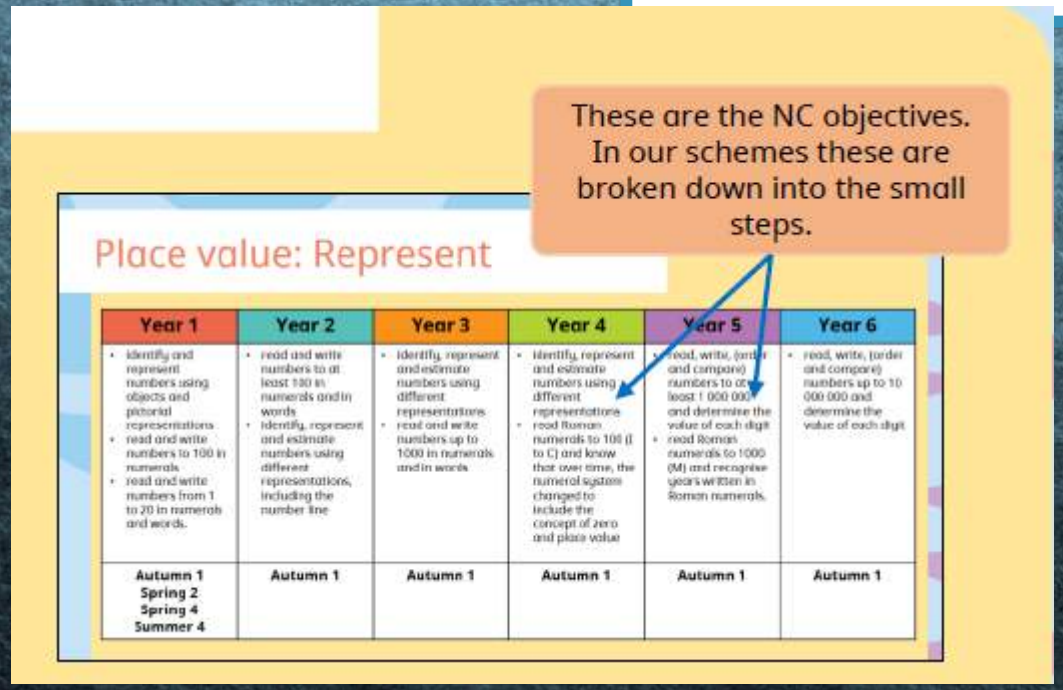
In 2026, schools must administer the MTC in the 2-week period between Monday 1 June and Friday 12 June. Schools can use the following week, from Monday 15 June to Friday 19 June, to administer it to any pupils who were absent during the first 2 weeks or in case of any check administration delays due to technical difficulties.

TTRS


TTRS
TIMES TABLES ROCK STARS
MULTIPLICATION & DIVISION.
SOLVED.

White Rose

- White Rose version.
- Progression document.
- Helps us to show where the children how come from and where they are going to be heading.



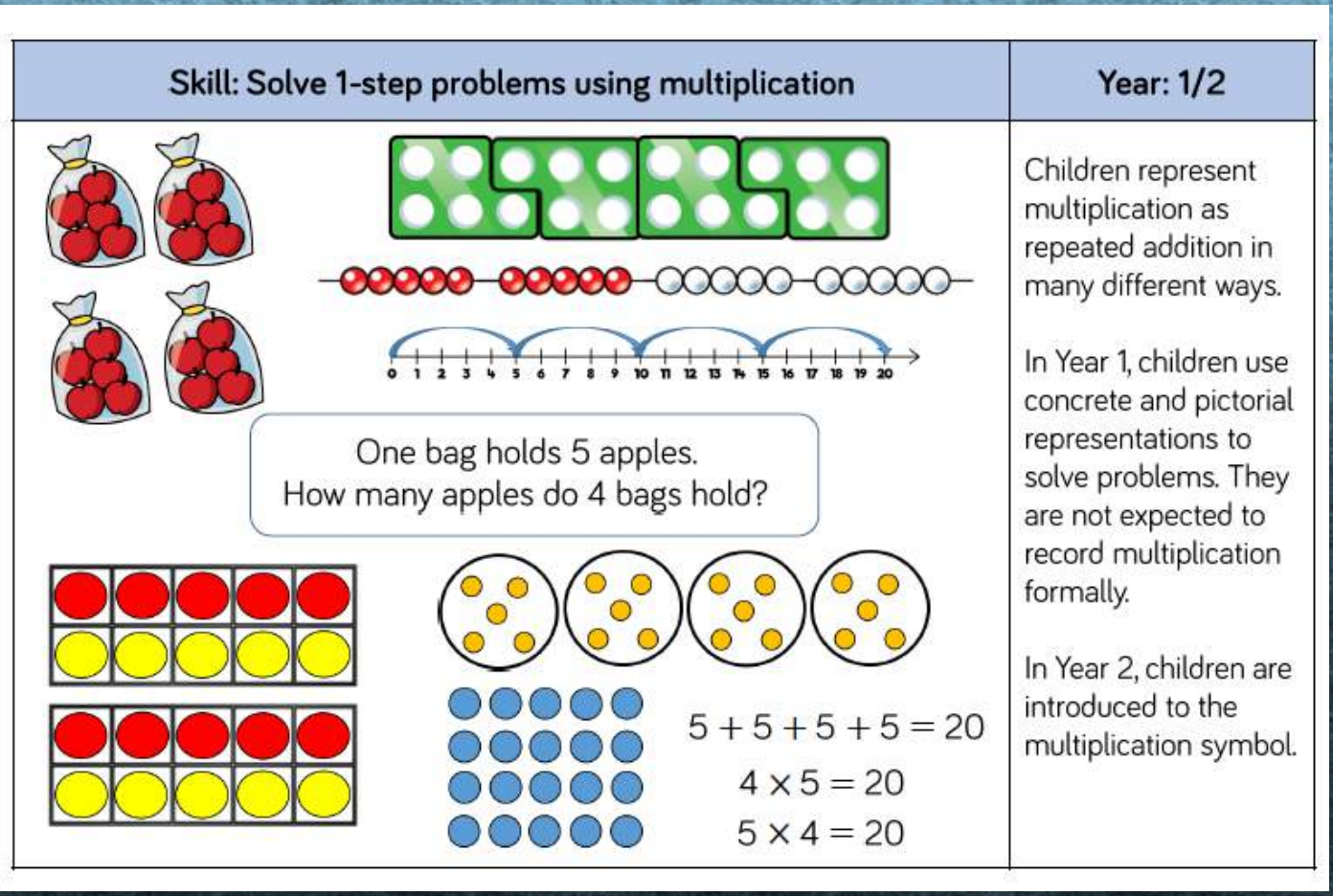
Multiplication & division: Problems

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	• solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	• solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	• solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects	• solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	• solve problems involving addition, subtraction, multiplication and division
Summer 1	Spring 2	Spring 1	Spring 1	Autumn 3 Spring 1	Autumn 2

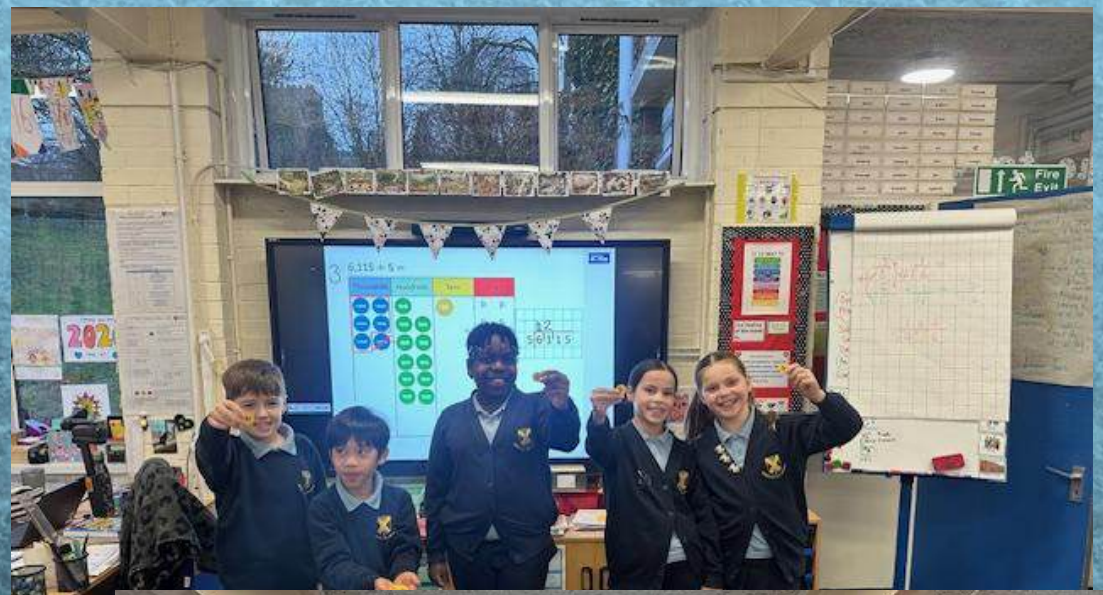
Calculation Policy

Skill	Year	Representations and models	
Solve one-step problems with multiplication	1/2	Bar model Number shapes Counters	Ten frames Bead strings Number lines
Multiply 2-digit by 1-digit numbers	3/4	Place value counters Base 10	Short written method Expanded written method
Multiply 3-digit by 1-digit numbers	4	Place value counters Base 10	Short written method
Multiply 4-digit by 1-digit numbers	5	Place value counters	Short written method

- Go to Multiplication section – Page 28.
- Page 29 – outlines representations and model
- Page 31 – look at Year 1 and Year 2.
- Importance of resources and visual aids
- Watch Year 3.



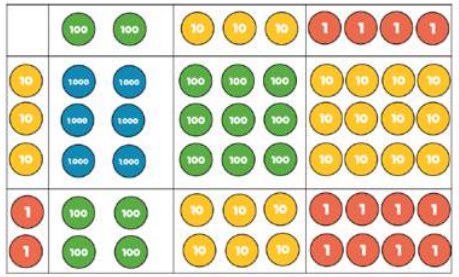
Example from Year 5



Power of Parents

Year 5 – Multiplication & Division Written Methods

Skill: Multiply 3-digit numbers by 2-digit numbers



Th	H	T	O
	2	3	4
×		3	2
	4	6	8
1	7	1 0	2	0
7	4	8	8

×	200	30	4
30	6,000	900	120
2	400	60	8

$234 \times 32 = 7{,}488$

Skill: Multiply 4-digit numbers by 2-digit numbers

TTh	Th	H	T	O
	2	7	3	9
×			2	8
2 2	1 5	9 3	1 7	2
1 5	4	7 1	8	0
7	6	6	9	2
		1		

$2{,}739 \times 28 = 76{,}692$

- Daily reinforcement
- Use W.R mini quizzes/assessments
- Use vocabulary from Master the Vocab
- Teachers will connect with parents
- Share resources/key facts
- Google Classroom

Year 4 Multiplication Check

Key Information:

The national times table check is a test for all year four pupils that will take place the week of 6th June 2022.

The purpose of the check is to determine whether your child can fluently recall their times tables up to 12, which is essential for future success in mathematics.

It is an on-screen check consisting of 25 times table questions. Your child will be able to answer 3 practice questions before taking the actual check. They will then have 6 seconds to answer each question. On average, the check should take no longer than 5 minutes to complete.

3. Quiz your child at home regularly. This could be when making dinner or on the journey to school.
4. Display a poster with all of the times tables facts at home.

5. We teach the children fun tricks at school such as the 9 times table finger trick. If you know this, you can practise it with

- ✓ Structured progression
- ✓ High quality resources
- ✓ Increased levels of confidence in Maths across the school
- ✓ Deeper understanding of mathematical concepts
- ✓ Enhanced reasoning and problem solving
- ✓ Improved academic achievement
- ✓ Effective assessment
- ✓ Set them up ready for next part of their learning journey

Maths across our school.