Mastering Number at Key Stage 2

Year 5 overview

Term 1	Term 2	Term 3
Pupils will have an opportunity to consolidate multiplication facts that have been the focus of learning in previous years and use the core multiplication facts table (CMF) to practise those that are less secure. They will explore multiplicative contexts and scale known facts by 10 and 100 and explore relationships between factors and associated products when looking at larger numbers. The use of representations, such as arrays, and the use of gesture by the teacher and pupil will support pupils to see structure and to make connections. **Pupils will:** • continue to practise retrieving multiplication facts using their oral pattern and focus on those that are less secure • explore contexts where 1 is a factor • recap scaling by 10 and then apply to scaling by 100 (creating multiples of 10 and 100 - not looking at decimals) • applying scaling in the contexts of ratios • make links between multiplication and division expressions as well as	Pupils will continue to retrieve the core multiplication facts in a random order. They will practise these facts when using the written algorithms for multiplication and division. They will continue to develop multiplicative number sense and connect contexts to equations. When looking at division there will be a focus on remainders and knowledge of when a number is 1 more, 2 more, etc., than a given multiple. They will continue to sort improper fractions into those that will give a whole number quotient and those that do not, and use this knowledge to write improper fractions as mixed numbers and vice versa. **Pupils will:** • continue to practise retrieving multiplication facts using their oral pattern so that they know all the core multiplication facts • connect a multiplication and addition equation to a division equation with a remainder	Pupils will focus on multiplicative composition of number. When a context gives rise to more than two factors, they will use the associative and the commutative property of multiplication to make calculations more accessible. When working with larger numbers they will be encouraged to consider how they see the maths as you shift from one expression to another, for example 3 × 72 to 3 × 73, and 3 × 72 to 4 × 72, being able to explain what each number represents. They will also make connections when number facts have been scaled by 10 (or 100). For example, 5 × 6 = 30; 30 ÷ 5 = 6 and 50 × 6 = 300; 300 ÷ 5 = 6. They will also apply known facts to when a factor is $\frac{1}{10}$ the size making connections to decimal fractions where the denominator of a unit fraction is a multiple of 10. **Pupils will:** • continue to connect multiplicative contexts to writing and interpreting equations • apply scaling by, 10, 100, $\frac{1}{10}$ or $\frac{1}{100}$ to known facts

equations in different multiplicative contexts • write an improper fraction and as a whole number such as $\frac{36}{6}$ = 6.The dividend is a multiple of the divisor. • find a unit fraction of a number to connect the known division fact to scaling down. The dividend is a multiple of the divisor. • continue to explore multiplicative contexts.	• develop multiplicative number sense through using knowledge of divisibility laws • sort and classify improper fractions into those that give a whole number quotient and those that do not.	• look at the multiplicative composition of number • explore expressions with three factors and use brackets, considering how the associative property and commutative property can be used to make calculations easier to solve.
This term will and consolidate some of the Year 4 RtPs listed as well as support the pupils understanding of the following Year 5 RtP criteria: **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. **4NF–1** Recall multiplication and division facts up to 12 × 12, and recognise products in multiplication tables as multiples of the corresponding number. **4MD–3** Understand and apply the distributive property of multiplication. **5NF–1** Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.	This term will build and consolidate the Year 4 RtPs listed as well as support the pupils understanding of the following Year 5 RtP criteria. 4NF–1 Recall multiplication and division facts up to 12 × 12 and recognise products in multiplication tables as multiples of the corresponding number. 4NF–2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context. 4MD–2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication. 5NF–1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.	This term will build and consolidate the Year 4 RtPs listed, as well as support the pupils understanding of the following Year 5 RtP criteria: **4NF–1** Recall multiplication and division facts up to 12 × 12, and recognise products in multiplication tables as multiples of the corresponding number. **4MD–2** Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication. **5NPV–1** Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.

		5NF–1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice. **5NF–2** Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth). **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.