

Mastery Five Unit Overview: Autumn Term 2

Use opportunities as part of the daily routine to tell the time.

At some point in each day, not necessarily the maths lesson, addition and subtraction facts (number Bonds to 10, 20 and 100) and multiplication and division facts for the 2 to 12 times tables should be rehearsed following guidance provided.

Recall key conversions of time including 60 seconds = 1 minute, 60 minutes = 1 hour, 24 hours = 1 day and 7 days = 1 week and vice versa.

Recall key conversions of distance including 10mm = 1cm, 100cm = 1m, 1000m = 1km and vice versa 1000g = 1kg and vice versa and volume/capacity 1000ml = 1 litre and vice versa.

Recall multiplication and division facts for all the multiplication tables

Use knowledge of place value and multiplication facts to derive related multiplication and division facts

Autumn 2 Unit 6 (Weeks 1 & 2): Multiplication and Division		
Lesson	Starter	Lesson Focus
1	Order whole numbers up to 1,000,000 and decimals with 3 decimal places	Understand the term 'multiple' and identify multiples within known tables or counting patterns in hundreds and thousands Identify multiples of 2, 5, 10, 25, 50 and 100 using rules of divisibility
2	Identify and describe 2-D shapes (sides, parallel and perpendicular sides, vertices, angles and symmetry)	Use and derive multiplication and division facts to identify factors within known tables Recognise that a square number is the product of two equal integers and can be written using 2 notation, e.g. $7 \times 7 = 7^2$ Recognise and use square numbers up to 12^2
3	Use knowledge of place value and multiplication facts to multiply multiples of 100 and 1000 by a one-digit number Use knowledge of place value and multiplication facts to divide related larger numbers	Use known facts to derive factors of multiples of 10 and 100, e.g. 240 could be factorised to 6×40
4	Solve addition calculations that require mental partitioning	Use a list strategy to identify common factors of two numbers within known tables
5	Use partitioning to double any decimal number to two decimal places	Multiply a two-digit number by a one-digit number using a partitioning strategy Multiply a U.t number by a one-digit number using a partitioning strategy
6	Position numbers up to 1,000,000 on a number line	Divide a 4-digit number by a 1-digit number Estimate division by rounding to the nearest multiple of 10, 100 or 1,000 of the divisor and using related facts e.g. $3452 \div 6 \approx 3600 \div 6$
7	Round numbers up to 1,000,000 to the nearest 10,000, 1,000, 100 and 10	Divide a 4-digit number by a 1-digit number Estimate division by rounding to the nearest multiple of 10, 100 or 1,000 of the divisor and using related facts e.g. $3452 \div 6 \approx 3600 \div 6$

8	Identify and describe 3-D shapes (faces, curved surfaces, parallel and perpendicular faces, vertices, edges and symmetry)	Divide a 4-digit number by a 1-digit number and interpret remainders appropriately for the context Estimate division by rounding to the nearest multiple of 10, 100 or 1,000 of the divisor and using related facts e.g. $3452 \div 6 \approx 3600 \div 6$
9	Order all types of angles including measuring where appropriate	Divide a three-digit number by a one-digit number using a partitioning strategy e.g. $942 \div 6$ becomes $(600 \div 6) + (300 \div 6) + (42 \div 6)$
10	Use partitioning to halve any decimal number to two decimal places where all the digits are even and then not all even	Choose an appropriate strategy to solve a division calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)

Autumn 2 Unit 7 (Week 3): Fractions		
Lesson	Starter	Lesson Focus
1	Use knowledge of place value and multiplication facts to multiply decimals by a one-digit number	Identify, name and write equivalent fractions of a given fraction by using multiplication and division facts, e.g. $\frac{5}{7} = \frac{40}{56}$
2	Multiply a two-digit number by a one-digit number using a partitioning strategy	Compare two fractions where the denominator of one fraction is a multiple of the denominator of the other fraction, e.g. compare $\frac{2}{3}$ and $\frac{7}{9}$ Compare two fractions whose denominators are both multiples of the same number, e.g. compare $\frac{24}{32}$ and $\frac{35}{56}$ (only where the numerator allows a conversion to the common denominator)
3	Solve calculations that require a mental compensation method	Order more than two fractions whose denominators are all multiples of the same number (only where the numerator allows a conversion to the common denominator)
4	Find powers of 10 more and less than a given number	Recognise and use thousandths, e.g. $\frac{3}{1000} = 0.003$ and vice-versa Relate thousandths to tenths and hundredths, e.g. $\frac{70}{1000} = \frac{7}{100} = 0.07$, $\frac{900}{1000} = \frac{9}{10} = 0.9$
5	Read and write decimal numbers as fractions in tenths or hundredths	Identify, name and write equivalent fractions for tenths and hundredths, e.g. $\frac{85}{100} = \frac{17}{20}$

Autumn 2 Unit 8 (Weeks 4 and 5): Multiplication and Area		
Lesson	Starter	Lesson Focus
1	Multiply $T0 \times T0$ using knowledge of factorising and tables facts	Use compensation strategy to multiply $H99 \times U$
2	Use knowledge of place value and multiplication facts to multiply multiples of 100 and 1000 by a one-digit number	Multiply a 4-digit by a 1-digit number using grid method Estimate multiplication by rounding to the nearest multiple of 10, 100 or 1,000 and using related facts e.g. $3842 \times 6 \approx 4000 \times 6$
3	Multiply $T0 \times T0$ using knowledge of factorising and tables facts	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)
4	Count forwards and backwards in fractional thousandths ($\frac{1}{1000}$) including where hundredths boundaries are crossed	Solve problems involving multiplication, including understanding the meaning of the equals sign
5	Complete a variety of sorting diagrams with given information Identify the properties used to sort a set of numbers or shapes in a completed diagram	Solve problems involving multiplication, including scaling by simple fractions and problems involving simple rates (bar modelling)
6	Convert between different units of measure e.g. km to m; hour to minute	Use knowledge of arrays to understand why the area of rectangles can be calculated using length multiplied by width Calculate the area of rectangles (see progression in mental and written multiplication)
7	Count forwards and backwards in fractional thousandths ($\frac{1}{1000}$) including where hundredths boundaries are crossed	Compare rectangles by area

Autumn 2 Unit 9 (Week 5): Time		
Lesson	Starter	Lesson Focus
1	Compare two fractions where the denominator of one fraction is a multiple of the denominator of the other fraction	Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks
2	Read and write decimal numbers as fractions	Read and interpret information in a range of timetables with different contexts
3	Solve subtraction calculations that require counting on mentally to find the difference	Complete timetables by identifying missing information

Autumn 2 (Week 6): Assess and Review		
Lesson	Starter	Lesson Focus
1	Use Starters this week to revisit and rehearse any of the starters from the previous two half terms that the children have found difficult	During this week, administer the end of term Arithmetic and Reasoning Tests. When answering the questions, children should have access to the full kit boxes they have used throughout the term. Any other time this week should be spent revisiting and rehearsing any aspects from the term that children have found difficult.
2		
3		
4		
5		