



KEY STAGE 3

SUMMER 2

Themed projects, consolidation & problem solving.

SUMMER 1

Shape: Measure with a protractor / calculate angles / identify vertically opposite angles / calculate angles in a triangle including special cases / calculate missing angles in a triangle / calculate angles in special quadrilaterals / calculate angles in regular polygons / draw shapes accurately / draw nets of 3D shapes.

Position & direction: Plot coordinates in the first quadrant / plot coordinates in all four quadrants / translate shapes in all four quadrants / reflect shapes in all four quadrants.

SPRING 2

Fractions, decimals & percentages: Use division to solve problems / convert between decimals and fractions / convert fractions to percentages / order FDP / find percentages of an amount.

Area, perimeter & volume: Calculate missing lengths when shapes have the same area / calculate the area of a triangle / calculate the area of a parallelogram / calculate the volume of a cuboid.

Statistics: Read and interpret line graphs / draw line graphs / use line graphs to solve problems / read and interpret pie charts / draw pie charts / calculate the mean.

SPRING 2

Decimals and percentages: Understand thousandths / round decimals / order & compare decimals / understand percentages / write percentages as fractions & decimals / Know and use equivalent FDP.

Perimeter and area: Measure perimeter / calculate perimeter / calculate the area of rectangles / calculate the area of compound shapes & irregular shapes.

Statistics: Read and interpret line graphs / draw line graphs / use line graphs to solve problems / read and interpret tables / read and interpret two-way tables / read and interpret timetables.

SUMMER 1

Shape: Measure angles in degrees / measure angles with a protractor / draw lines and angles accurately / calculate angles on a straight line / calculate angles around a point / calculate lengths and angles in shapes / regular and irregular polygons / reasoning about 3D shapes.

Position & direction: Read and plot coordinates in the first quadrant / translate shapes / translate with coordinates / reflect shapes on a coordinate grid.

Decimals: Adding & subtracting decimals within 1 / find complements to 1.

SUMMER 2

Decimals: Add & subtract decimals with the same number of decimal places & different number of decimal places / add & subtract wholes and decimals / continue decimal sequences / multiply and divide decimals by 10, 100 and 1000.

Negative numbers: use negative numbers in context.

Converting units: Convert between kg and g & km and m / convert between metric units / convert between metric and imperial units / convert units of time.

Volume: Compare volume / estimate volume and capacity.

AUTUMN 1

Place Value: Understand place value for numbers up to 10 million / compare and order any numbers / round any number / understand and calculate with negative numbers

Addition, subtraction, multiplication & division: Recap and consolidate Y5 number work + Multiply up to a 4-digit number by a 2-digit number / use short division / divide using factors / use long division / identify common factors / identify common multiples / identify prime numbers to 100 / identify square and cube numbers.

AUTUMN 2

Addition, subtraction, multiplication & division: Use order of operations / calculate mentally and use estimation / reason from known facts.

Fractions A: Simplify fractions / identify fractions on a number line / compare and order fractions (denominator) / compare and order fractions (numerator).

Fractions B: Add & subtract fractions (denominators are multiples of each other and then not) / multiply fractions by integers / multiply fractions by fractions / divide fractions by integers / use four rules with fractions / find fractions of an amount – find the whole.

Converting units: Convert metric measures / calculate with metric measures / convert between miles and kilometres / calculate with imperial measures.

SPRING 1

Ratio: Use ratio language / use the ratio symbol / calculate ratio / use scale factors / calculate scale factors / solve ratio and proportion problems.

Algebra: Find a rule – one and two step / form expressions / substitute into expressions / substitute into formulae / form equations / solve one and two-step equations / find pairs of values to solve equations.

Decimals: Compare and order decimals up to 3dp / multiply and divide by 10, 100 and 1000. Multiply & divide decimals by integers.

SPRING 1

Multiplication and division: Multiply 4-digits by 1-digit / multiply 2-digits (area model) / multiply 2-digits by 2-digits / multiply 3-digits by 2-digits / multiply 4-digits by 2-digits / divide 4-digits by 1-digit / divide with remainders.

Fractions B: Multiply unit fractions by an integer / multiply non-unit fractions by an integer / multiply mixed numbers by integers / calculate fractions of an amount / using fractions as operators / fraction problem solving.

Decimals and percentages: Identify place value in decimals with 2 dp / Convert decimals to fractions.

AUTUMN 2

Multiplication & division: Identify square and cube numbers / multiply by 10, 100 and 1000. divide by 10, 100 and 1000 / identify multiples of 10, 100 and 1000.

Fractions A: Identify equivalent fractions / Convert between improper fractions and mixed numbers / continue number sequences involving fractions / compare and order fractions less than 1 / compare and order fractions greater than 1 / add & subtract fractions / add fractions within 1 / add 3 or more fractions / add & subtract mixed numbers / subtraction – breaking the whole / subtract 2 mixed numbers.

AUTUMN 1

Place Value: Understand place value for numbers up to 10,000 / round to the nearest 10, 100 and 1000 / understand place value for numbers up to 100,000 / compare and order numbers to 100,000 / round numbers within 100,000 / counting in 10s, 100s, 1000s, 10,000s and 100,000s / compare and order numbers to one million / round numbers to one million.

Addition & subtraction: Add & subtract numbers with more than 4 digits (column method) / round to estimate and approximate / use inverse operations / solve multi-step + and – problems.

Multiplication & division: understand and identify multiples and factors / identify common factors / identify prime numbers.

SUMMER 2

Consolidation: 1 week.

Shape: Identify angles / compare and order angles / recognise and describe 2D shapes / identify properties of triangles / identify properties of quadrilaterals / identify lines of symmetry / complete a symmetric figure.

Statistics: Interpret charts / answer comparison, sum & difference questions about data from graphs / introducing line graphs / interpret data from line graphs.

Position & direction: Describe position / plot coordinates and draw shapes on a grid / move a shape on a grid / describe movement on a grid.

SUMMER 1

Decimals: Make a whole / write, compare and order decimals / round decimals / find equivalents of half, quarter and three-quarters.

Money: Count money in pounds and pence / order money / estimate money / give change / use all four operations with money.

Time: Recap and consolidate Y3 time work – telling the time to 5 mins & to the minute, using am and pm / read and record time from a 24-hour clock etc / Recall facts about conversions between hours, minutes, seconds, etc / convert time on an analogue clock to digital (12- and 24-hour).

SUMMER 1

Fractions: Find fractions of a set of objects / find equivalent fractions / compare fractions / add fractions / subtract fractions.

Money: Count money in pence / count money in pounds / convert pounds and pence / add money / subtract money / give change.

Time: Tell the time to 5 minutes & to the minute / Use am and pm / Read and record time from a 24-hour clock / find the duration / compare durations.

SUMMER 2

Time: Calculate start and end times / measure time in seconds / problem solving with time.

Shape: Identify turns and angles / Identify right angles in shapes / compare angles / draw lengths accurately / identify horizontal and vertical lines / identify parallel and perpendicular lines / recognise & describe 2D & 3D shapes / make 3D shapes.

Statistics: Recap and consolidate Y2 statistics work – tallies / pictograms / read data from bar charts and tables.

AUTUMN 1

Place Value: Round to the nearest 10 and 100 / count in 1000s / understand and use place value of 1000s, 100s, 10s and 1s / partition 4-digit numbers / use a number line for numbers up to 10,000 / find 1000 more or less / compare 4-digit numbers / order numbers / round to the nearest 1000 / count in 25s / compare negative numbers / understand & use Roman numerals for 3-digit numbers.

Addition & subtraction: Add & subtract 1s, 10s, 100s and 1000s / add and subtract two 4-digit numbers – no exchange, one exchange & more than 1 exchange.

AUTUMN 2

Addition and subtraction: Use efficient subtraction strategies / estimate answers / check addition & subtraction strategies.

Area: Count squares to find the area of shapes / make shapes with a given area / compare areas.

Multiplication & division: Multiply by 10 & 100 / divide by 10 & 100 / multiply by 1 and 0 / divide by 1 and itself / multiply and divide by 6, 9 and 7 / Recall and use 6, 9 and 7-times table and division facts.

Consolidation: 1 week.

SPRING 1

Multiplication and Division: Recall and use 11 and 12 times-table and division facts / multiply 3 numbers / identify factor pairs / use efficient multiplication strategies / use written methods for multiplication / multiply and divide 2-digits and 3-digits by 1-digit / answer correspondence problems.

Length & perimeter: Find the perimeter by counting squares on a grid / calculate the perimeter of a rectangle / calculate the perimeter of rectilinear shapes.

Fractions: Recap and consolidate Y3 fractions work – tenths / equivalent fractions etc.

SPRING 2

Fractions: Understand and use fractions greater than 1 / Count in fractions / Add two or more fractions / subtract two fractions / subtract from whole amounts / calculate fractions of a quantity / problem solving by calculate quantities.

Decimals: Recognise tenths & hundredths / write tenths as decimals, on a place value grid and on a number line / divide 1 or 2-digits by 10 / divide 2-digits by 10 / write hundredths as decimals, on a place value grid / divide 1 or 2-digits by 100.

SPRING 2

Fractions: Recap and consolidate Y2 fraction work – halves, quarters and thirds / calculate unit and non-unit fractions / investigate equivalence of a half and 2 quarters / count in fractions / making the whole / counting in tenths / convert between tenths and decimals / fractions on a number line.

Mass and capacity: Measure, compare, add & subtract mass / measure volume & compare, add & subtract capacity / problem solving with temperatures.

SPRING 1

Multiplication and division: Compare statements involving x and ÷ / identify related calculations / multiply 2-digits by 1-digit (with and without exchange) / divide 2-digits by 1-digit / divide 100 into 2, 4, 5 and 10 equal parts / divide with remainders / use multiplication knowledge for scaling / calculate the number of combinations.

Length & perimeter: Measure length in m / Find equivalent lengths using m and cm / Find equivalent lengths using cm and mm / compare lengths / add and subtract lengths / measure perimeter / calculate perimeter.

AUTUMN 2

Addition and subtraction: Add and subtract 3-digit and 2-digit numbers – not crossing and crossing. Add and subtract 100s / spot the pattern – making it explicit / solve mixed addition and subtraction problems / add two 3-digit numbers – not crossing and crossing 10 or 100 / estimate answers to calculations / check answers to calculations.

Multiplication and division: Use equal groups for multiplication / multiply and divide by 3, 4 and 8 / Recall facts from the 3, 4 and 8 times-table.

AUTUMN 1

Place Value: Represent numbers to 100 / understand the place value of numbers up to 1000 / use a number line up to 1000 / Find 1, 10, 100 more or less / compare objects / compare numbers / order numbers / count in 50s.

Addition and subtraction: Add and subtract multiples of 100 / add and subtract 3-digit and 1-digit numbers - not crossing and crossing 10 / add and subtract 3-digit and 2-digit numbers – not-crossing and crossing 100 / add and subtract 100s / spot the pattern – making in explicit.

SUMMER 2

Position & direction: Describe movement / describe turns / make patterns with shapes.

Problem solving: covering all maths topics covered so far in the year.

Time: telling the time to the hour / telling the time to the half hour / telling the time – quarter past and quarter to / telling the time to 5 minutes / writing time / calculate with hours and days / find durations of time / compare durations of time.

SUMMER 1

Statistics: Make tally charts / draw pictograms (1-1) / interpret pictograms (1-1) / draw pictograms (2, 5 and 10) / interpret pictograms (2, 5 and 10) / interpret data from block diagrams

Fractions: Working with parts & wholes / make equal parts / recognize a half / find a half / recognise a quarter / find a quarter / recognise a third / find a third / find unit fractions of a shape / find non-unit fractions of a shape / understand the equivalence of a half and 2 quarters / find three quarters / count in fractions / problem solving with fractions.

Position & direction: describe position / problem solving with position / describe movement /

Y2

AUTUMN 1

Place Value: count objects to 100 by making tens / recognise tens and ones / use a place value chart / partition numbers to 100 / compare objects & numbers / order objects and numbers / count in 2s, 5s and 10s / count in 3s.

Addition and subtraction: use + & - to 10 and 20 to find related facts to 100 / add & subtract 1s / add by making 10 / add three 1-digit numbers / add to the next 10 / add across a 10 / subtract across 10 / subtract from a 10 / subtract a 1-digit number from a 2-digit number (across a 10) / find 10 more and 10 less / add and subtract 10s.

AUTUMN 2

Addition and subtraction: Add two 2-digit numbers (not across a 10) / add two 2-digit numbers (across a 10) / subtract two 2-digit numbers (not across a 10) / Subtract two 2-digit numbers (across a 10) / Mixed addition & subtraction / Compare number sentences / Missing number problems.

Shape: Recognise 2D and 3D shapes / count sides & vertices on 2D shapes / draw 2D shapes / identify lines of symmetry on shapes / use lines of symmetry to complete shapes / sort 2D shapes / count faces, edges and vertices on 3D shapes / sort 3D shapes / make patterns with 2D and 3D shapes.

SPRING 1

Money: Recognise coins and notes / count money in pence / count money in pounds (notes and coins) / count money using notes and coins / select money / make the same amount / compare money / find the total / find the difference / find change / solve two-step problems.

Multiplication and division: make equal groups / redistribute from unequal to equal groups / add equal groups / make arrays / multiplication sentence using the x symbol / multiplication sentences from pictures / use arrays / make doubles / recall facts from the 2, 5 and 10 times-tables / make equal groups for sharing & sharing.

SPRING 2

Multiplication and division: divide by 2 / identify odd and even numbers / divide by 5 / divide by 10.

Length & height: compare lengths and heights / measure length in cm and m / compare lengths / order lengths / use the four operations with lengths / problem solving with lengths.

Mass, capacity & temperature: Compare mass / measure mass in grams and kilograms / compare volume / measure volume in millilitres and litres / use the four operations with volume / Read temperature from a scale / problem solving