

PICKHURST ACADEMY

MATHS MEDIUM TERM PLAN

WHERE EVERY CHILD COUNTS

OUR CORE VALUES

We want all of our children to BE **P.I.C.K.H.U.R.S.T**

Proud

Inquisitive

Confident

Kind

Healthy

Understanding

Respectful

Successful

Trustworthy

INTENT

At Pickhurst, we are committed to ensuring that all pupils achieve mastery in the key concepts of mathematics. The curriculum allows for genuine progress to take place and aims to avoid gaps in their understanding that provide barriers to learning as they move through education.

Maths Mastery, the concrete, pictorial and abstract approach, an emphasis on enrichment tasks, problem solving, the development of mathematical thinking and concepts are essential components of our approach to teaching this subject.

Our pupils are given opportunities to reason, solve problems and be exposed to rich and enjoyable experiences where they are encouraged to verbally reason with their peers and engage in discussions using declarative, procedural and conditional knowledge.

We intend for all pupils to become fluent in the fundamentals of mathematics, including through varied and frequent practise with increasingly complex problems over time so that pupils develop conceptual understanding and the ability to recall and apply knowledge accurately and rapidly. We intend for all pupils to reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language. We intend for all pupils to solve problems by applying their mathematical to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Year 3

Term

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Autumn 1

Place Value

- To represent numbers to 100.
- To partition numbers to 100.
- To use a number

Baseline Assessment Week

Place Value

- To explore hundreds.
- To represent numbers to 1,000.
- To partition

Place Value

- To explore hundreds, tens and ones.
- To find 1, 10 or 100 more or less

Place Value

- To compare numbers to 1,000.
- To order numbers to 1,000.
- To count in 50s.

Addition and Subtraction

- To add and subtract 1s.
- To add and subtract 10s.

	line to 100.		numbers to 1,000. To explore flexible partitioning of numbers to 1,000.	than a given number. - To use a number line to 1,000. - To estimate on a number line to 1,000.	Addition and Subtraction To apply number bonds within 10.	- To add and subtract 100s. - To spot the pattern.
Autumn 2	Addition and Subtraction - To add 1s across a 10. - To add 10s across a 100. - To subtract 1s across a 10. - To subtract 10s across a 100.	Addition and Subtraction - To make connections. - To add two numbers (no exchange). - To subtract two numbers (no exchange). - To add two numbers (across a 10).	Addition and Subtraction - To add two numbers (across a 100). - To subtract two numbers (across a 10). - To subtract two numbers (across a 100). - To add 2-digit and 3-digit numbers.	Addition and Subtraction - To subtract a 2-digit number from a 3-digit number. - To find complements to 100. - To estimate answers. - To use inverse operations.	Assessment Week	Multiplication and Division - To find equal groups by using arrays to share and group. - To explore multiples of 2, 5 and 10. - To multiply by 3. - To divide by 3.
Spring 1	Multiplication and Division - To multiply by 4. - To divide by 4. - To multiply by 8. - To divide by 8.	Multiplication and Division - To find multiples of 10. - To explore related calculations and reasoning about multiplication. - To multiply a 2-digit number by a 1-digit number – no exchange. - To multiply a 2-digit number by a 1-digit number – with exchange.	Multiplication and Division - To divide a 2-digit number by a 1-digit number – no exchange. - To divide a 2-digit number by a 1-digit number – flexible partitioning. - To divide a 2-digit number by a 1-digit number – with remainders. - To use scaling and explore how many ways to solve a question.	Length and Perimeter - To measure in metres and centimetres. - To measure in millimetres. - To measure in centimetres and millimetres - To measure metres, centimetres and millimetres.	Length and Perimeter - To equivalent lengths (metres and centimetres). - To find equivalent lengths. (centimetres and millimetres). - To compare lengths. - To add lengths.	Length and Perimeter - To subtract lengths. - To explore what is perimeter? - To measure perimeter. - To calculate perimeter.
Spring 2	Fractions To understand the denominators of	Fractions To compare and order non-unit	Fractions To explore equivalent	Mass and Capacity To measure mass in kilograms and	Assessment Week	Mass and Capacity To measure capacity and

	unit fractions. - To compare and order unit fractions. - To understand the numerators of non-unit fractions. - To understand the whole.	fractions. - To explore fractions and scales. - To explore fractions on a number line. - To count in fractions on a number line.	fractions on a number line. - To explore equivalent fractions as bar models. Mass and Capacity - To use scales. - To measure mass in grams.	grams. - To explore equivalent masses (kilograms and grams). - To compare mass. - To add and subtract mass.		volume in millilitres and litres. - To explore equivalent capacities and volumes (litres and millilitres). - To compare capacity and volume. - To add and subtract capacity and volume.
Summer 1	Fractions - To add fractions. - To subtract fractions. - To partition the whole. - To explore unit fractions of a set of objects.	Fractions - To explore non-unit fractions of a set of objects. - To reason with fractions of an amount. - To explore pounds and pence.	Money - To convert pounds and pence. - To add money - To subtract money. - To find change.	Time - To explore Roman numerals to 12. - To tell the time to 5 minutes. - To tell the time to the minute. - To read time on a digital clock.	Time - To use am and pm. - To explore years, months and days. - To explore days and hours. - To explore hours and minutes.	Time - To explore hours and minutes - use durations. - To explore minutes and seconds. - To explore units of time. - To solve problems with time.
Summer 2	Shape - To explore turns and angles - To explore right angles. - To compare angles. - To measure and draw accurately.	Shape - To explore horizontal and vertical. - To explore parallel and perpendicular. - To recognise and describe 2-D shapes. - To draw polygons.	Shape - To recognise and describe 3-D shapes. - To make 3-D shapes. Statistics - To interpret pictograms. - To draw pictograms.	Maths Week	Assessment week	Statistics - To interpret bar charts. - To draw bar charts. - To collect and represent data. - To explore two-way tables.

Year 4

Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Autumn 1	Place Value - To represent numbers to 1,000. - To partition numbers to 1,000. - To explore numbers on a number line to 10,000.	Baseline Assessment Week	Place Value - To explore thousands. - To represent numbers to 10,000. - To partition numbers to 10,000. - To find 1, 10, 100, 1,000 more or less.	Place Value - To estimate on a number line to 10,000. - To compare numbers to 10,000. - To order numbers to 10,000. - To explore Roman numerals.	Place Value - To round to the nearest 10 - To round to the nearest 100. - To round to the nearest 1,000. - To add and subtract 1s, 10s, 100s and 1,000s.	Addition & Subtraction - To add up to two 4-digit numbers – no exchange. - To add two 4-digit numbers – one exchange. - To add two 4-digit numbers – more than one exchange. - To subtract two 4-digit numbers – no exchange.
Autumn 2	Addition & Subtraction - To subtract two 4-digit numbers – one exchange. - To subtract two 4-digit numbers – more than one exchange. - To explore efficient subtraction. - To estimate answers and explore checking strategies.	Area - To explore what is area? - To count squares. - To make shapes. - To compare areas.	Multiplication & Division - To multiply and divide by 6. - To explore the 6 times-table and division facts. - To multiply and divide by 9. - To explore the 9 times-table and division facts.	Multiplication & Division - To multiply and divide by 7. - To explore the 7 times-table and division facts. - To explore the 11 times-table and division facts. - To explore the 12 times-table and division facts.	Assessment Week	Multiplication & Division - To multiply by 1 and 0. - To divide by itself and 1. - To multiply three numbers. - To explore factor pairs.
Spring 1	Multiplication & Division - To use factor pairs. - To multiply by 10 and 100. - To divide by 10 and 100. - To explore related facts – multiplication and division.	Multiplication & Division - To explore informal written methods for multiplication. - To multiply a 2-digit number by a 1-digit number. - To multiply a 3-digit number by a 1-digit number.	Multiplication & Division - To divide a 2-digit number by a 1-digit number. - To divide a 2-digit number by a 1-digit number. - To divide a 3-digit number by a 1-digit number. - To explore correspondence	Length & Perimeter - To measure in kilometres and metres. - To explore equivalent lengths (kilometres and metres). - To explore perimeter on a grid. - To explore perimeter of a	Length & Perimeter - To explore perimeter of rectilinear shapes. - To find missing lengths in rectilinear shapes. - To calculate perimeter of rectilinear shapes. - To explore perimeter of regular and	Fractions - To understand the whole. - To count beyond 1. - To partition a mixed number. - To explore number lines with mixed numbers.

			problems and efficient multiplication.	rectangle.	irregular polygons.	
Spring 2	Fractions - To compare and order mixed numbers. - To understand improper fractions. - To convert mixed numbers to improper fractions. - To convert improper fractions to mixed numbers.	Fractions - To explore equivalent fractions on a number line. - To explore equivalent fraction families. - To add two or more fractions. - To add fractions and mixed numbers.	Fractions - To subtract two fractions. - To subtract from whole amounts. - To subtract from mixed numbers.	Decimals - To explore tenths as fractions. - To explore tenths as decimals. - To explore tenths on a place value chart. - To explore tenths on a number line.	Assessment Week	Decimals - To divide a 1-digit number by 10. - To divide a 2-digit number by 10. - To explore hundredths as fractions. - To explore hundredths as decimals.
Summer 1	Decimals - To explore hundredths on a place value chart - To divide a 1- or 2-digit number by 100.	Decimals - To make a whole with tenths. - To make a whole with hundredths. - To partition decimals. - To flexibly partition decimals.	Decimals - To compare decimals. - To order decimals. - To round to the nearest whole number. - To explore halves and quarters as decimals.	Money - To write money using decimals. - To convert between pounds and pence. - To compare amounts of money. - To estimate with money.	Money - To calculate with money. - To solve problems with money. Time - To explore years, months, weeks and days. - To explore hours, minutes and seconds.	Time - To convert between analogue and digital times. - To convert to the 24-hour clock. - To convert from the 24-hour clock.
Summer 2	Shape - To understand angles as turns. - To identify angles. - To compare and order angles. - To explore triangles.	Shape - To explore quadrilaterals. - To explore polygons. - To explore lines of symmetry. - To complete a symmetric figure.	Statistics - To interpret charts. - To explore comparisons, sum and difference. - To interpret line graphs. - To draw line graphs.	Maths Week	Assessment Week	Position & Direction - To describe position using coordinates. - To plot coordinates. - To draw 2-D shapes on a grid. To translate on a grid - To describe translation on a grid.

Year 5

Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Autumn 1	Place Value - To explore Roman numerals to 1,000. - To explore numbers to 10,000. - To explore numbers to 1,000,000.	Baseline Assessment Week	Place Value - To read and write numbers to 1,000,000. - To explore Powers of 10. - To explore 10/100/1,000/10,000/100,000. more or less - To partition numbers to 1,000,000.	Place Value - To explore numbers on a number line to 1,000,000. - To compare and order numbers to 100,000. - To compare and order numbers to 1,000,000. - To round to the nearest 10, 100 or 1,000.	Place Value - To round within 1,000,000. Addition & Subtraction - To explore mental strategies. - To add whole numbers with more than four digits. - To subtract whole numbers with more than four digits.	Addition & Subtraction - To round to and using inverse check answers and using inverse operations. - To explore multi-step addition and subtraction problems. - To compare calculations and find missing numbers. Multiplication & Division - To explore multiples and common multiples.
Autumn 2	Multiplication & Division - To explore factors and common factors. - To explore prime numbers. - To explore square numbers. - To explore cube numbers.	Multiplication & Division - To multiply by 10, 100 and 1,000. - To divide by 10, 100 and 1,000. - To explore multiples of 10, 100 and 1,000. Fractions - To find fractions equivalent to a unit fraction.	Fractions - To find fractions equivalent to a non-unit fraction. - To recognise equivalent fractions. - To convert improper fractions to mixed numbers. - To convert mixed numbers to improper fractions.	Fractions - To compare fractions less than 1. - To order fractions less than 1. - To compare and order fractions greater than 1. - To add and subtract fractions with the same denominator.	Assessment Week	Fractions - To add fractions within 1. - To add fractions with total greater than 1. - To add to a mixed number. - To add two mixed numbers.
Spring 1	Fractions To subtract fractions.	Multiplication & Division To multiply up to a	Multiplication & Division To multiply a 4-	Multiplication & Division To divide with	Fractions To multiply a non-unit fraction by an	Fractions - To find the whole. - To use fractions as

	- To subtract from a mixed number. - To subtract from a mixed number – breaking the whole. To subtract two mixed numbers.	4-digit number by a 1-digit number. - To multiply a 2-digit number by a 2-digit number (area model). - To multiply a 2-digit number by a 2-digit number. - To multiply a 3-digit number by a 2-digit number.	- digit number by a 2-digit number. - To solve problems with multiplication. - To explore short division. - To divide a 4-digit number by a 1-digit number.	- remainders. - To explore efficient division. - To solve problems with multiplication and division. Fractions - To multiply a unit fraction by an integer.	- integer. - To multiply a mixed number by an integer. - To calculate a fraction of a quantity. - To find the fraction of an amount.	- operators. Decimals and percentages - To explore decimals up to 2 decimal places. - To explore equivalent fractions and decimals (tenths and hundredths).
Spring 2	Decimals & Percentages - To find equivalent fractions and decimals. - To convert thousandths as fractions and decimals. To explore thousandths on a place value chart. - To order and compare decimals (same number of decimal places).	Decimals & Percentages - To order and compare any decimals with up to 3 decimal places. - To round to the nearest whole number. - To round to 1 decimal place. - To understand percentages.	Decimals & Percentages - To convert percentages as fractions and decimals. - To find equivalent fractions, decimals and percentages. - To explore perimeter and area. - To find the perimeter of rectangles.	Perimeter & Area - To find the perimeter of rectilinear shapes. - To find the perimeter of polygons. - To estimate and find the area of rectangles. - To estimate and find the area of compound shapes.	Assessment week	Statistics - To draw line graphs. - To read and interpret line graphs. - To read and interpret tables. - To read and interpret timetables and 2-way tables.
Summer 1	Shape - To understand and use degrees. - To classify angles. - To estimate angles. - To measure angles up to 180°.	Shape - To draw lines and angles accurately. - To calculate angles around a point. - To calculate angles on a straight line. - To find the lengths and angles in shapes.	Shape - To explore regular and irregular polygons. - To explore 3-D shapes. Position & Direction - To read and plot coordinates. - To problem solve with coordinates.	Position & Direction - To explore translation. - To explore translation with coordinates. - To find lines of symmetry. - To explore reflection in horizontal and vertical lines.	Decimals - To use known facts to add and subtract decimals within 1. - To find complements to 1. - To add and subtract decimals across 1. - To add decimals with the same number of decimal places.	Decimals - To subtract decimals with the same number of decimal places. - To add decimals with different numbers of decimal places. - To subtract decimals with different numbers of decimal places. - To explore efficient

						strategies for adding and subtracting decimals.
Summer 2	Decimals - To explore decimal sequences. - To multiply by 10, 100 and 1,000. - To divide by 10, 100 and 1,000. - To multiply and divide decimals – missing values.	Negative numbers - To understand negative numbers and counting through zero in 1s and multiples. - To compare and order negative numbers. Converting Units - To explore kilograms and kilometres. - To explore millimetres and millilitres.	Converting Units - To convert units of length. - To convert between metric and imperial units. - To convert units of time. - To calculate with timetables.	Maths Week	Assessment Week	Volume - To explore cubic centimetres. - To compare volume. - To estimate volume. - To estimate capacity.
Year 6						
Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Autumn 1	Place Value - To explore numbers to 1,000,000. - To explore numbers to 10,000,000. - To read and write numbers to 10,000,000. - To explore powers of 10.	Baseline Assessment Week	Place Value - To explore number line to 10,000,000. - To compare and order any integers. - To round any integer. - To explore negative numbers.	Addition, Subtraction, Multiplication & Division - To add and subtract integers. - To explore common factors and common multiples. - To explore the rules of divisibility. - To explore primes to 100.	Addition, Subtraction, Multiplication & Division - To explore square and cube numbers. - To multiply up to a 4-digit number by a 2-digit number. - To solve problems with multiplication. - To explore short division.	Addition, Subtraction, Multiplication & Division - To explore division using factors. - To explore long division with remainders. - To solve problems with division. - To solve multi-step problems.

Autumn 2	Addition, Subtraction, Multiplication & Division - To explore order of operations. - To explore mental calculations and estimation. - To reason from known facts. Fractions - To find equivalent fractions and simplifying.	Fractions - To find equivalent fractions on a number line. - To compare and order (denominator). - To compare and order (numerator). - To add and subtract simple fractions.	Fractions - To add and subtract any two fractions. - To add mixed numbers. - To subtract mixed numbers. - To solve multi-step problems.	Fractions - To multiply fractions by integers. - To multiply fractions by fractions. - To divide a fraction by an integer. - To divide any fraction by an integer.	Assessment Week	Fractions - To find fraction of an amount. - To covert units. - To explore and convert metric measures. - To calculate with metric measures.
Spring 1	Converting units - To explore miles and kilometres. - To explore imperial measures. Ratio - To add or multiply? - To use ratio language and introduction to the ratio symbol.	Ratio - To explore ratio and fractions. - To scale drawings. - To use scale factors. - To explore similar shapes.	Ratio - To solve ratio problems. - To solve proportion problems. - To explore recipes. Algebra - To explore 1-step and 2 step function machines.	Algebra - To form expressions. - To explore substitution. - To explore formulae. - To form equations.	Algebra - To solve 1-step equations. - To solve 2-step equations. - To find pairs of values. - To solve problems with two unknowns.	Decimals - To explore place value within 1. - To explore place value – integers and decimals. - To round decimals - To add and subtract decimals.
Spring 2	Decimals - To multiply by 10, 100 and 1,000. - To divide by 10, 100 and 1,000. - To multiply and divide decimals by integers. - To multiply and divide decimals in context.	Fraction, Decimals & Percentages - To explore decimal and fraction equivalents. - To explore fractions as division. - To understand percentages. - To convert fractions to percentages.	Fraction, Decimals & Percentages - To explore and order equivalent fractions, decimals and percentages. - To find the percentage of an amount – one step and multi-step problems. - To find percentages – missing values.	Perimeter, Area & Volume - To find the area of a triangle – counting squares. - To find the area of any triangle including right-angled triangle. - To find the area of a parallelogram. - To find the volume of a cuboid – counting cubes.	Assessment Week	Statistics - To explore line graphs. - To explore dual bar charts. - To read and interpret pie charts with percentages. - To draw pie charts.

Summer 1

Statistics

- To explore the mean.

Shape

- To measure and classify angles.
- To calculate angles.
- To explore vertically opposite angles and angles in a triangle.

Shape

- To explore angles in a quadrilateral and in polygons.
- To explore circles.
- To draw shapes accurately.
- To explore nets of 3-D shapes.

Position & Direction

- To read and plot points in four quadrants.
- To solve problems with coordinates.
- To explore translations.
- To explore reflections.

SATS week

Project Work Bakery

These projects have been designed to explore maths in real life contexts, allowing children to see how important maths is in all aspects of life. As well as this, it will provide cross-curricular links where appropriate, for example, including tasks that develop design and technology skills and geographical knowledge. It also provides a great opportunity to explore and develop enterprise.

Project Work Bakery

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Summer 2

Residential Trip

Consolidation Project work – Tours

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Maths Week Investigations Preparation for KS3 (Transition)

Assessment Week

Investigations Preparation for KS3 (Transition)

		explore and develop enterprise.	explore and develop enterprise.			
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