Mathematics Long Term Plan

"The poetry of logical ideas"

Vision:

At Oatlands Junior, the high-quality mathematics Curriculum provides children with a foundation for understanding the world; the ability to reason mathematically; an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

OJS Curriculum Threads

Our curriculum vision is based upon our knowledge of our pupils and community. Our three curriculum threads are:

- Promote Equality and Diversity
- Provoke Curiosity
- Embed Safe Behaviours

These threads are woven through each subject, alongside individual subject pedagogy, to ensure our learners benefit from a purposeful curriculum.

Fundamental British Values

-Democracy
-Rule of Law
-Individual Liberty
-Respect and Tolerance

The mathematics curriculum is inclusive and promotes respect, tolerance and appreciation of equality and diversity through their pedagogical approaches (see Curriculum Handbook). Children are immersed into interesting and fun topics, that develop lively, enquiring minds and are encouraged to make links through well-connected knowledge which also celebrates diversity. Links to Spiritual, Moral, Social and Cultural & FBV are made in Year Group OJS Passports and the wider curriculum offer in mathematics.

National Curriculum Aims

The national curriculum for mathematics aims to ensure that all pupils:

- *become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.*
- *reason mathematically by following a line of enquiry, conjecturing relationships, and generalisations, and developing an argument, justification or proof using mathematical language*
- *can solve problems by applying their mathematics 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*

Mathematics Long Term Plan

"The poetry of logical ideas"

Planning and Resources

At OJS, we follow the National Curriculum as a foundation for our mathematics planning. We then bespoke our planning by using a mixture of NCETM and White Rose support documentations. Our close links with Oatlands Infants School and our local secondary schools ensure that our mathematics curriculum is both fluid and progressive.

Wider Offer

In mathematics, our wider offer within the school day is: MyMaths, TTRS, Numbots, Sport Numeracy and pre-teaching. We celebrate mathematics through annual events such as the OJS Maths Competition, HGS Maths Competition and other local and national events such as NSPCC Number Day and Maths Week UK. We celebrate maths weekly/ monthly through TTRS winners, Achievement Awards and Mathematician of the Month. The OJS Maths Ambassadors support in planning for these events as well as supporting maths within the classroom.

Links to other documents:

- Curriculum Handbook
- Teaching and Learning Policy
- Assessment and Reporting policy
- Mathematics guidance
- Calculation policies

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	**Key Learning: Number: Place Value** • count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number • recognise the place value of each digit in a three-digit	**Key Learning: Number: Money linked to addition & subtraction** • estimate the answer to a calculation and use inverse operations to check answers • solve problems, including missing number problems, using number facts,	**Key Learning: Number: Fractions** • count and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 recognise, find, and write fractions of a	**Key Learning: Measurement: Time Statistics** • tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks • estimate and read time with	**Key Learning: Measurement – mass & capacity** • measure, compare, add, and subtract lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	**Key Learning: Measurement: Time Statistics** • interpret and present data using bar charts, pictograms, and tables • solve one-step and two-step questions [for example, 'How many more?' and 'How many

Mathematics Long Term Plan

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	number (hundreds, tens, ones) • compare and order numbers up to 1000 • identify, represent, and estimate numbers using different representations read and write numbers up to 1000 in numerals and in words • solve number problems and practical problems involving these ideas. **Number: Addition and Subtraction** • add and subtract numbers mentally, including: ➢ a three-digit number and ones ➢ a three-digit number and tens	place value, and more complex addition and subtraction. **Number: Multiplication and Division** • recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers of times one-digit numbers, using mental and progressing to formal written methods • solve problems, including missing	discrete set of objects: unit fractions and no unit fractions with small denominators • recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators • recognise and show, using diagrams, equivalent fractions with small denominators • add and subtract fractions with the same denominator within one whole [for example, 7 5 + 7 1 = 7 6] • compare and order unit fractions, and fractions with the same denominators • solve problems that involve all the above.	increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon, and midnight • compare durations of events [for example to calculate the time taken by events or tasks]. • know the number of seconds in a minute and the number of days in each month, year, and leap year **Measurement – money** • add and subtract amounts of money to give change, using both £ and p	**Geometry – properties of shapes** • draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them • recognise angles as a property of shape or a description of a turn • identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle • identify horizontal and vertical lines and pairs of	fewer?'] using information presented in scaled bar charts and pictograms and tables **Calculation problem solving:** • solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. • solve number problems and practical problems involving these ideas • solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and

Mathematics Long Term Plan

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	➢ a three-digit number and hundreds • add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction • estimate the answer to a calculation and use inverse operations to check answers **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month	number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month	**Measurement: Length & Perimeter** • measure the perimeter of simple 2-D shapes **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month, NSPCC Number Day 2023 **Curriculum**	in practical contexts **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month **Curriculum Threads**  We are curious about links within and between areas of mathematics.  We learn about famous mathematicians	perpendicular and parallel lines. **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month **Curriculum Threads**  We are curious about links within and between areas of mathematics.  We learn about famous mathematicians	correspondence problems in which n objects are connected to m objects **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month **Curriculum Threads**  We are curious about links within and between areas of mathematics. 

Mathematics Long Term Plan

"The poetry of logical ideas"

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Mathematics Long Term Plan

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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 4	**Key Learning: Number: Place Value** • count in multiples of 6, 7, 9, 25 and 1000 • find 1000 more or less than a given number • count backwards through zero to include negative numbers • recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) • order and compare numbers beyond 1000 • identify, represent, and estimate numbers using different representations	**Key Learning: Number: Multiplication and Division** • recall multiplication and division facts for multiplication tables up to 12 × 12 • use place value, known and derived facts to multiply and divide mentally, including multiplying by 0 and 1; dividing by 1; multiplying together three numbers • recognise and use factor pairs and commutativity in mental calculations • multiply two-digit and three-digit numbers by a one-digit number using formal written layout	**Key Learning: Number: Fractions** • recognise and show, using diagrams, families of common equivalent fractions • count and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. • solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number	**Key Learning: Decimals** • round decimals with one decimal place to the nearest whole number • compare numbers with the same number of decimal places up to two decimal places • solve simple measure and money problems involving fractions and decimals to two decimal places. **Measurement: Correspondence and Scaling problems** • Convert between different units of measure [for example, kilometer to meter, hour to minute]	**Key Learning: Geometry – Position and Direction** • describe positions on a 2-D grid as coordinates in the first quadrant • describe movements between positions as translations of a given unit to the left/right and up/down • plot specified points and draw sides to complete a given polygon **Geometry - Shape** • compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • identify acute and obtuse angles and	**Key Learning: Calculation problem solving** • estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. • 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.

Mathematics Long Term Plan

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	• round any number to the nearest 10, 100 or 1000 solve number and practical problems that involve all the above and with increasingly large positive numbers • read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value. **Number: Addition and Subtraction** • add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • estimate and use inverse operations to check answers	• 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. **Measures: Statistics** • interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. • solve comparison, sum and difference problems using information	• add and subtract fractions with the same denominator • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to 4 1, 2 1, 4 3 • find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths, and hundredths **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS	• measure and calculate the perimeter of a rectilinear figure (including squares) in centimeters and meters • find the area of rectilinear shapes by counting squares estimate, compare, and calculate different measures, including money in pounds and pence **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month	compare and order angles up to two right angles by size • identify lines of symmetry in 2-D shapes presented in different orientations • complete a simple symmetric figure with respect to a specific line of symmetry. **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month	**Measurement: Time** • read, write, and convert time between analogue and digital 12- and 24-hour clocks • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month

Mathematics Long Term Plan

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	to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month **Curriculum Threads** We are curious about links within and	presented in bar charts, pictograms, tables, and other graphs. **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month **Curriculum Threads** We are curious about links within and between areas of mathematics. We learn about famous mathematicians	winners, Achievement Awards, Mathematician of the Month, NSPCC Number Day 2023 **Curriculum Threads** We are curious about links within and between areas of mathematics. We learn about famous mathematicians across the world from different faiths and cultures. We are safe when accessing TTRS, Numbots and MyMaths.	**Curriculum Threads** We are curious about links within and between areas of mathematics. We learn about famous mathematicians across the world from different faiths and cultures. We are safe when accessing TTRS, Numbots and MyMaths.	**Curriculum Threads** We are curious about links within and between areas of mathematics. We learn about famous mathematicians across the world from different faiths and cultures. We are safe when accessing TTRS, Numbots and MyMaths.	**Curriculum Threads** We are curious about links within and between areas of mathematics. We learn about famous mathematicians across the world from different faiths and cultures. We are safe when accessing TTRS, Numbots and MyMaths.

Mathematics Long Term Plan

"The poetry of logical ideas"

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	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 5	**Key Learning: Number: Place Value** • read, write, order, and compare numbers to at least 1 000 000 and determine the value of each digit • count forwards or backwards in steps	**Key Learning: Number: Multiplication and Division** • identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers	**Number: Fractions Key Learning:** • compare and order fractions whose denominators are all multiples of the same number • identify, name, and write equivalent fractions of a given fraction,	**Key Learning: Number: Decimals and Percentages** • read and write decimal numbers as fractions [for example, 0.71 = 100 71] recognise and use thousandths and relate them to	**Key Learning: Geometry: Properties of Shapes** • identify 3-D shapes, including cubes and other cuboids, from 2-D representations • know angles are measured in	**Key Learning: Measurement: Conversions** • convert between different units of metric measure (for example, kilometer and meter; centimeter and meter; centimeter and

Mathematics Long Term Plan

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	of powers of 10 for any given number up to 1 000 000 • interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero • round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • solve number problems and practical problems that involve all the above • read Roman numerals to 1000 (M) and recognise years written in Roman numerals. **Number: Addition and subtraction**	• know and use the vocabulary of prime numbers, prime factors, and composite (non-prime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19 multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers • multiply and divide numbers mentally drawing upon known facts • divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders	represented visually, including tenths and hundredths • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 5 2 + 5 4 = 5 6 = 1 5 1] • add and subtract fractions with the same denominator and denominators that are multiples of the same number • multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • equivalents of 2 1, 4 1, 5 1, 5 2, 5 4	tenths, hundredths, and decimal equivalents • round decimals with two decimal places to the nearest whole number and to one decimal place • read, write, order, and compare numbers with up to three decimal places • solve problems involving number up to three decimal places • recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal • solve problems which require	degrees: estimate and compare acute, obtuse, and reflex angles • draw given angles, and measure them in degrees (o) • identify: ➢ angles at a point and one whole turn (total 360o) ➢ angles at a point on a straight line and 2 1 a turn (total 180o) ➢ other multiples of 90o • use the properties of rectangles to deduce related facts and find missing lengths and angles • distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	millimeter; gram and kilogram; liter and milliliter) • understand and use approximate equivalences between metric units and common imperial units such as inches, pounds, and pints • estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] • solve problems involving converting between units of time • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using

Mathematics Long Term Plan

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	• add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • add and subtract numbers mentally with increasingly large numbers • use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. **Key Vocabulary** • From OJS key vocabulary for subject.	appropriately for the context • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) • solve problems involving multiplication and division including using their knowledge of factors and multiples, squares, and cubes • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the	and those fractions with a denominator of a multiple of 10 or 25. **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month, NSPCC Number Day 2023 **Curriculum Threads**  We are curious about links within and between areas of mathematics. 	knowing percentage and decimal **Measures: Statistics** • solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables. **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month	**Geometry: Position and direction** • identify, describe, and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed. **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month **Curriculum Threads**	decimal notation, including scaling. **Measures: Perimeter and Area** • measure and calculate the perimeter of composite rectilinear shapes in centimeters and meters • calculate and compare the area of rectangles (including squares), and including using standard units, square centimeters (cm2) and square meters (m2) and estimate the area of irregular shapes **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer**

Mathematics Long Term Plan

"The poetry of logical ideas"

	Wider Offer MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month **Curriculum Threads**  We are curious about links within and between areas of mathematics.  We learn about famous mathematicians across the world from different faiths and cultures.  We are safe when accessing TTRS,	meaning of the equal's sign • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month **Curriculum Threads** 	We learn about famous mathematicians across the world from different faiths and cultures.  We are safe when accessing TTRS, Numbots and MyMaths.	**Curriculum Threads**  We are curious about links within and between areas of mathematics.  We learn about famous mathematicians across the world from different faiths and cultures.  We are safe when accessing TTRS, Numbots and MyMaths.	 We are curious about links within and between areas of mathematics.  We learn about famous mathematicians across the world from different faiths and cultures.  We are safe when accessing TTRS, Numbots and MyMaths.	MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month **Curriculum Threads**  We are curious about links within and between areas of mathematics.  We learn about famous mathematicians across the world from different faiths and cultures.  We are safe when accessing TTRS, Numbots and MyMaths.

Mathematics Long Term Plan

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	Numbots and MyMaths.	We are curious about links within and between areas of mathematics.  We learn about famous mathematicians across the world from different faiths and cultures.  We are safe when accessing TTRS, Numbots and MyMaths.				
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 6	**Key Learning: Number: Place Value** • read, write, order, and compare numbers up to 10 000 000 and determine the value of each digit	**Key Learning: Number: Fractions** • use common factors to simplify fractions; use common multiples to express fractions in the same denomination	**Key Learning: Number: Decimals** • identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving	**Key Learning: Number: Algebra** • use simple formulae • generate and describe linear number sequences express missing number problems algebraically find	**Key Learning: Geometry: Properties of shape** • draw 2-D shapes using given dimensions and angles • recognise, describe, and build simple 3-	**Key Learning: Investigations and problem solving** • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

Mathematics Long Term Plan

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	• round any whole number to a required degree of accuracy • use negative numbers in context, and calculate intervals across zero • solve number and practical problems that involve all the above **Number: Addition, Subtraction, Division and Multiplication** • multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • divide numbers up to 4 digits by a two-digit whole number using the formal written method of long	• compare and order fractions, including fractions > 1 • add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 4 1 × 2 1 = 8 1] • divide proper fractions by whole numbers [for example, 3 1 ÷ 2 = 6 1] • associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 8 3]	answers up to three decimal places • multiply one-digit numbers with up to two decimal places by whole numbers • use written division methods in cases where the answer has up to two decimal places • solve problems which require answers to be rounded to specified degrees of accuracy • recall and use equivalences between simple fractions, decimals, and percentages, including in different contexts. **Number: Ratio** • solve problems involving the relative sizes of two quantities	pairs of numbers that satisfy an equation with two unknowns enumerate possibilities of combinations of two variables. **Measurement: Converting Units** • solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate • use, read, write, and convert between standard units, converting measurements of length, mass, volume, and time from a smaller unit of measure to a larger unit, and vice versa, using decimal	D shapes, including making nets • compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons • illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. **Geometry: Position and Direction** • describe positions on the full	• solve problems involving addition, subtraction, multiplication, and division • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. • solve problems which require answers to be rounded to specified degrees of accuracy • recall and use equivalences between simple fractions, decimals, and percentages, including in different contexts. • solve problems involving the calculation and conversion of units of measure, using

Mathematics Long Term Plan

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	division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context • divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context • perform mental calculations, including with mixed operations and large numbers • identify common factors, common multiples, and prime numbers • use their knowledge of the	**Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month **Curriculum Threads**  We are curious about links within and between areas of mathematics.  We learn about famous mathematicians across the world from different faiths and cultures.	where missing values can be found by using integer multiplication and division facts **Number: Percentages** • solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison • solve problems involving similar shapes where the scale factor is known or can be found • solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	notation to up to three decimal places convert between miles and kilometers **Measurement: Perimeter, area, and volume** • recognise that shapes with the same areas can have different perimeters and vice versa • recognise when it is possible to use formulae for area and volume of shapes • calculate the area of parallelograms and triangles • calculate, estimate, and compare volume of cubes and cuboids using standard units, including cubic centimeters (cm3) and cubic meters	coordinate grid (all four quadrants) • draw and translate simple shapes on the coordinate plane and reflect them in the axes. **Year 6 Mock SATs in Hall.** **Measures: Statistics** • interpret and construct pie charts and line graphs and use these to solve problems • calculate and interpret the mean as an average **Revision SATs** **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer**	decimal notation up to three decimal places where appropriate **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month **Curriculum Threads**  We are curious about links within and between areas of mathematics. 

Mathematics Long Term Plan

"The poetry of logical ideas"

	order of operations to carry out calculations involving the four operations • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • solve problems involving addition, subtraction, multiplication, and division • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. **Key Vocabulary** • From OJS key vocabulary for subject.	 We are safe when accessing TTRS, Numbots and MyMaths.	**Year 6 Mock SATs in Class** **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month, NSPCC Number Day 2023 **Curriculum Threads**  We are curious about links within and between areas of mathematics.  We learn about famous mathematicians across the world from	(m3), and extending to other units [for example, mm3 and km3]. **Key Vocabulary** • From OJS key vocabulary for subject. **Wider Offer** MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month **Curriculum Threads**  We are curious about links within and between areas of mathematics. 	MyMaths, TTRS, Numbots, Sport Numeracy, pre-teaching, weekly TTRS winners, Achievement Awards, Mathematician of the Month **Curriculum Threads**  We are curious about links within and between areas of mathematics.  We learn about famous mathematicians across the world from different faiths and cultures.  We are safe when accessing TTRS, Numbots and MyMaths.	We learn about famous mathematicians across the world from different faiths and cultures.  We are safe when accessing TTRS, Numbots and MyMaths.

Mathematics Long Term Plan

"The poetry of logical ideas"

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