Cranmore Infant School

We love to learn and together we grow

Vision Statement

Mathematics

At Cranmore, we believe that Maths is an important life skill. Our vision is that all children will be able to achieve excellence in Maths through an intrinsic love of learning the subject. We strive to enable fascination and an excitement to discover mathematical concepts.

At Cranmore, we provide rich mathematical learning environments and opportunities, which enable children to make links in their learning. Our Maths curriculum will challenge and develop fluency, reasoning and problem solving skills, through the use of a wide range of resources, representations and technologies. Being confident, resilient, able to persevere and show determination is at the core of what we want to achieve.

AIMS

- To implement the current statutory requirements of the Foundation stage and National curriculum.
- To ensure all of our children develop a “can do” attitude and perceive themselves as mathematicians.
- To give children opportunities (through mathematical enquiry and investigation) to experience the awe and wonder of pattern, connections and relationships.
- To ensure pupils become fluent in the fundamentals of mathematics, developing conceptual knowledge and have an ability to recall and apply knowledge accurately.
- To challenge children to think mathematically and engage in rich mathematical discussion using appropriate vocabulary to explain their reasoning and ideas concisely.
- To broaden children’s knowledge and understanding of how Maths is used in the wider world.
- For children to feel comfortable to make mistakes and embrace what can be learned from them.
- To foster strong links between home and school and provide a range of opportunities for parents to be involved with their child’s mathematical learning (for example parent workshops).

NURSERY

Mathematics curriculum

	Autumn	Spring	Summer
counting	• Listen to, join in and respond to number rhymes, songs, stories and games. • Move and count saying numbers to match numerals to 5. • Count objects using number names and number language. • Say number names in order to 10. • Place objects on grid in order counting out from left to right.	• Demonstrate 1:1 correspondence. • Count reliably using everyday objects up to 5/10 and say the last number you counted. • Counting out from a larger group with a given numeral up to 5. • Start to count objects that cannot be moved up to 10.	• Recite numbers confidently to 10 and begin to recite numbers to 20. • Start to recite numbers in order continuing the count forwards from a given number (within 10). • Estimate the size of a set of objects up to 6 and check by counting. • Count an irregular arrangement of objects up to 10.
Place value	• Begin to recognise some number symbols of personal significance and in the environment. • Begin to explore Numicon.	• Recognise some numbers in print within school/home environment. • Begin to recognise Numicon up to 5. • Recite numbers to 10 in order. • Begin to recognise numbers to 5.	• To begin to recognise number symbols to 10. • Begin to write numerals to 10. • Recognise Numicon up to 5 and begin to recognise Numicon to 10. • Ordering Numicon to 5 with support. • Begin to order numbers to 5 with support.
Problem solving	• Begin to find sets of objects that have the same amount.	• Compare 2 or more sets of objects identifying similarities/differences in terms of number.	• Compare sets of objects identifying more/less. • Solve problems and puzzles in every day/role play activities using developing mathematical skills and knowledge to make comparisons. • Begin to use maths vocabulary accurately in problem solving.
vocabulary	zero, one, two, three… to twenty and beyond count, count (up) to how many…?	none count on (from, to) Of two objects/amounts: greater, more, larger, bigger less, fewer, smaller	more, less, many, the same number as Of two or more objects/amounts: greatest, most, biggest, largest, least, fewest, smallest one more, one less, order
Addition and subtraction	• Make comparisons between 2 sets of objects, identifying similarities in terms of number. • Begin to count the total of two groups with support up to 6.	• Begin to say one number more than a given number up to 5 using a number line or practically with objects. • Begin to relate addition by counting objects in 2 sets. • Begin to count the total of 2 groups up to 10.	• Use mathematical language of more than/less than when adding one/taking one away. • Select 2 groups of objects to make a given total (up to 10). • Say the number that is 1 more/ 1 less up to 5.

	Autumn	Spring	Summer
Problem solving			• Practical concept - if the hen added one more egg how many would there be? If I ate one how many would be left? • Use Numicon - how could I make number 4 using Numicon?
vocabulary	make, altogether	add, more, total	one more, one less take (away), leave
Multiplication Division		• **With support, split a group of objects into two groups and begin to recognise the total stays the same.**	• **Split a group of objects into two groups and recognise the total stays the same.**
Problem solving		• Practical - We have 2 fields and 4 cows. Some of the cows have escaped from the barn into the fields - which field could they have gone into?	• Practical - 2 chickens have laid a total of 8 eggs? How many eggs could each of them laid?
Vocabulary	group, count, sort	puzzle answer match	How did you work it out?
Length/Height	• **Begin to explore and compare objects of different length.**	• **Begin to use mathematical language of longer/shorter with support.**	• **Compare 2 objects according to size and length.** • **Use mathematical language of longer/shorter independently.**
Mass/Weight	• **Begin to use language of size (big/little) and weight**	• **Begin to use mathematical language - heavy/heavier, light/lighter.**	• **Compare 2 objects according to weight.** • **Use mathematical language - heavy/heavier, light/lighter,**
Money	• **Use money in role play**	• **Begin to recognise 1p and 2p coins and use in role play situations**	• **Recognise 1p. 2p and 5p coins and use in role play situations**
vocabulary	length, height, long, short, tall high, low wide, narrow thick, thin longer, shorter, taller, higher… and so on	full , empty holds, container measure , size compare, guess, estimate enough, not enough too much, too little too many, too few nearly, close to, about the same as just over, just under	count out, share out money, coin, penny, pence price, cost, buy, sell spend, spent , pay weigh, weighs, balances heavy/light, heavier/lighter, balance, weight, scales

	Autumn	Spring	Summer
2D and 3D shape	• *Introduce, explore and begin to use the names of some familiar 3D and 2D shapes* • *Begin to sort and match sets of objects using a given criteria such as shape, size.*	• *Begin to recognise and use names of familiar 3D and 2D shapes* • *Sort and match sets of objects using a given criteria according to shape and size.*	• *Begin to recognise and describe some of the features of 3D and 2D shapes eg. Flat, curved, straight* • *Use mathematical names for 3D and 2D shapes with support in relation to experiences.*
Problem solving	• *Explore pattern in a range of activities.*	• *Be able to use shapes to match simple patterns.*	• *Recognise and repeat simple patterns* • *Explore which shapes will roll and which will slide.*
vocabulary		circle triangle square rectangle oblong star sides	cube pyramid sphere cone faces corners
Position and Direction		• *Begin to understand and respond to positional language correctly.*	• *To begin to respond to a wider range of positional language correctly.* • *To begin to follow simple positional instructions correctly in terms of position, direction and movement with support.*
Vocabulary	top, bottom, side on, in outside, inside	around in front, behind front, back before, after beside, next to	far, near, close position over, under above, below corner direction up, down

RECEPTION

Mathematics Curriculum

	Autumn	Spring	Summer
counting	*Count 1-1 reliably in all play and focused activities to 10 and beyond (including irregular arrangements). *Counts out up to 10 objects from a larger group. *Begin to estimate a number within a range up to 10 that they can see. Check by counting. *To recite numbers confidently to 20. *Recite numbers in order continuing the count forwards or backwards from a given number (within 10).	*Count 1-1 reliably in all play and focused activities to 15 and beyond (including irregular arrangements). *Estimate a number within a range up to 10, that can be counted reliably and checked by counting. *To begin to recite numbers to 50. *Recite numbers in order continuing the count forwards or backwards from a given number (within 20 and with support).	*Count 1-1 reliably in all play and focused activities to 20 and beyond. (including irregular arrangements). *Estimate a number within a range up to 20, that can be counted reliably and checked by counting. * To begin to recite numbers to 100. *Recite numbers in order continuing the count forwards or backwards from a given number (within 20).
Place value	*To recognise numerals to 10. * To order numbers to 10 with support. *Order a given set of selected numbers up to 10 with support. *To begin to understand the value of numbers to 20 especially place value of teen numbers (Numicon and other strategies). *To write numbers confidently to 10. * To begin to respond correctly to the use of ordinal numbers in relation to lining up and races.	*To begin to recognise and use correct number symbols to 20 and beyond. *Order a given set of selected numbers up to 20 with support. *To begin to understand the value of numbers to 50 especially place value of teen numbers (Numicon and other strategies). *To write numbers with support to 20. To begin to write numbers beyond 20. *Begin to understand and use ordinal numbers in different contexts (e.g. describe position of objects, people or events).	*Recognise and use correct number symbols to 20 and beyond. *Order a given set of selected numbers up to 20 independently. *To begin to understand the value of numbers to 100 especially place value of teen numbers (Numicon and other strategies). *To confidently write numbers to 20 and begin to write numbers to 100. *To understand and use ordinal numbers more independently in different contexts (e.g. describe position of objects, people or events).
Problem solving	*Compare 2 numbers up to 10 and say which is more/less or fewer.	*Compare 2 numbers up to 10 and say which is more/less or fewer and say a number which lies between 2 given numbers. *Begin to identify and explain odd and even numbers to 10 (e.g. Numicon).	*Compare 2 numbers up to 20 and say which is more/less/greater/fewer and say a number which lies between 2 given numbers. *Begin to identify and explain odd and even numbers to 20 (e.g. Numicon).

	Autumn	Spring	Summer
Addition and subtraction	**Find the total number of items in two groups up to 10 by counting all of them (also using Numicon).* **Begin to understand subtraction as 'take away' (Numicon, number line and objects).* **Begin to use the vocabulary involved in adding and subtracting.* **Find one more or one less from a group of objects (up to 5 and then up to 10).* **To begin to work out doubles of numbers up to 5+5 with support.* ** To see mental calculations written using the + - and + signs.*	**Work out the total of two groups to 10 by counting on, using Numicon, fingers, whole part model and number-line.* **Remove a smaller number from a larger number up to 10 and find how many are left (i.e. taking objects/ Numicon away number/using a number line).* **Find one more or one less from a group of objects up to 20 with support).* **Begin to identify Number bonds to 10.* ** To work out and begin to identify doubles of numbers up to 5+5.* ** To begin to write simple mental calculations using the + - and + signs with support.*	**Begin with support to work out the total of two groups to 20 by counting on, using Numicon, fingers, whole part model and number-line.* **Remove a smaller number from a larger number up to 20 and find how many are left (i.e. counting back from the larger number/using a number line).* **Find one more or one less from a group of objects up to 20).* **Identify and begin to recall Number bonds to 10.* **To begin to work out doubles of numbers up to 10+10 with support.* ** To write simple mental calculations using the + - and + signs with growing independence.*
Problem solving	**Begin to talk about the difference between numbers up to 10.* **Select 2 groups of objects to make a given total (up to 10 with support).* **How many ways can I make 5, 6 or 7 using Numicon shapes? Can I make 5 for example using 2/3 or 4 numbers?* **Begin to work out how many more are needed to make a larger number up to 10.*	**To identify the difference between numbers up to 10.* **Select 2 groups of objects to make a given total (up to 10).* **How many ways can I make 8 or 9 using Numicon shapes? Can I make 7 for example using 2/3 or 4 numbers?* **Work out how many more are needed to make a larger number up to 10.*	**Begin to identify the difference between numbers up to 20 with support.* **Select 2 groups of objects to make a given total (up to 20) with support.* **How many ways can I make 10 using Numicon shapes? Can I make 10 for example using 2/3 or 4 numbers?* **Begin to work out how many more are needed to make a larger number up to 20.*
vocabulary	Add/more, difference less/ take away Equals/makes/altogether.	Add/more, difference. less/fewer/ subtract/take away Equals/makes/altogether.	Add/ plus/ more, difference. less/fewer/ subtract/take away/minus Equals/makes/altogether.
Multiplication Division	****To share into equal groups up to 10 with support.*** ****To begin to count in 10's with support.***	****To share into equal groups up to 10.*** ****Count in 10's.*** ****To begin to know doubles of numbers up to 5+5 and relate it to halving.***	****To share into equal groups up to 20 with support.*** **** To begin to count in 2's and 5's with support.*** ****To know doubles of numbers up to 5+5 and begin to relate it to halving with support.***
Problem solving	**With support children will work out how many groups of 2 they can make from 10? How many groups of 3 can we make from 10? Do we have any leftover?* **With support children will solve how many legs do 3 people have? How many legs do 5 people have altogether?*	** Children will work out how many groups of 2 they can make from 12? How many groups of 3 can we make from 12? Do we have any leftover?* ** Children will solve how many legs do 4 people have? How many legs do 6 people have altogether?*	** Children will work out how many groups of 4 they can make from 12? How many groups of 3 can we make from 15? Do we have any leftover?* ** Children will solve how many legs do 3 dogs have? How many legs do 5 dogs have altogether?*

	Autumn	Spring	Summer
vocabulary	Share/half Groups of/ how many	Share/half Double/groups of/ how many	Divide/share/half Double/groups of/lots of/ how many
Length/Height	*Compare two or more objects by length or height making direct comparisons (taller/ longer or shorter). *Begin to correctly order objects by length or height with support.	*Compare three or more objects by length or height making direct comparisons. (starting to use the vocabulary of taller/ tallest or longer/ longest or shorter/ shortest when comparing with support). *Begin to correctly order objects by length or height with growing independence.	*Compare four or more objects by length or height making direct comparisons. (more independently using the vocabulary of taller/ tallest or longer/ longest or shorter/ shortest when comparing). *Be able to correctly order objects by length or height independently.
Mass/Weight	*Compare two or more objects by mass or weight making direct comparisons. (heavier or lighter). *Begin to correctly order objects by mass or weight with support. *Begin to understand how scales can help us measure weight	*Compare three or more objects by mass or weight making direct comparisons. (starting to use the vocabulary of heavier/ heaviest or lighter/ lightest when comparing with support).	*Compare four or more objects by mass or weight making direct comparisons. (more independently using the vocabulary of heavier/ heaviest or lighter/ lightest when comparing). *Begin to correctly order objects by mass or weight using scales with growing independence.
Capacity/Volume/ Temperature	*Compare two or more containers by capacity making direct comparisons. *Begin to correctly order, containers by capacity with support. *To begin to fill, empty and half fill containers and use the appropriate language.	*Compare three or more containers by capacity making direct comparisons. *Begin to correctly order, containers by capacity with growing independence.	*Compare four or more containers by capacity making direct comparisons. *Begin to correctly order, containers by capacity with growing independence.
Time	*To know the sequence of the days of the week confidently and begin to use the language of yesterday and tomorrow. *Order and sequence familiar events in their everyday life. *To develop an awareness of the 4 seasons of the year.	* To begin to tell the time to the hour with support. *To begin to know the sequence of the months of the year. *To begin to know the differences and similarities between the 4 seasons of the year.	*To talk about own personal timeline and start to relate "o'clock" times to familiar events in own life. *To tell the time confidently to the hour. * To begin to relate specific months to the different seasons of the year.
Money	*Use, sort, describe and recognise money practically- 1p,2p,5p,10p coins (e.g. in role play).	*Use and begin to recognise money practically- 1p,2p,5p,10p,20p coins (e.g. in role play).	*Use and begin to recognise money practically- 1p,2p,5p,10p,20p,50p,£1.00 and £2.00 coins (e.g. in role play).

	Autumn	Spring	Summer
Problem solving	***To match coins to Numicon shapes to understand the value of the coins.*** ***How many pennies are the same value as each coin?***	***To begin with support to work out what coins they can use to pay for items that cost up to 10p.***	***To begin with support to work out what change they might need from items that cost up to 10p.***
vocabulary	*Begin to measure, compare and order. Use everyday language related to: -Time (before, after, minutes, hours, clock, day, week, tomorrow, yesterday, first, next, last, seasons). -Money- coin, pay, penny, price, shopping. -Capacity- holds more/ holds less	*To measure, compare and order. Use everyday language related to: - Time (minutes, hours, o'clock, watch and hands, before, first, next, after, finally, morning, night, seasons, months). -Money- pence, buy, sell, value, total. -Capacity- half full.	*To confidently measure, compare and order. To use everyday language related to: - Time (minutes, hours, seconds, o'clock, watch and hands, first, next, after, finally, morning, afternoon, evening, seasons, months, years). Money- pound, spend, value, exchange, change. -Capacity- holds more or most/ holds less or least.
2D and 3D shape	***Name, recognise and sort 2D shapes (see below).*** ***Begin to name, recognise and sort 3D shapes (see below).*** ***Selects a particular named shape.***	***Name, recognise and sort 2D shapes and 3D shapes (see below).*** ***Start to describe and discuss the properties of shapes using increasing mathematical vocabulary. (see below).***	***Name, recognise and sort 2D shapes and 3D shapes (see below).*** ***Describe and discuss the properties of shapes using increasing mathematical vocabulary.(see below).***
Problem solving	***Use familiar objects and common shapes to create and recreate patterns and build models.***	***Use these shapes to make models, pictures and patterns in relation to experiences, activities and the learning theme.***	***Use these shapes to make more complex models, pictures and patterns in relation to experiences, activities and the learning theme.***
vocabulary	-Circle, triangle, oblong, square. -Cube, cone, sphere, faces, corners.	- Circle, triangle, oblong, square, hexagon. - Cube, cuboid, cone, sphere. -Flat, solid, surface, curved, straight, round, corner, face and side.	- Circle, triangle, oblong, square, star, pentagon and hexagon. -Cube, cuboid, cone, sphere and cylinder. - Flat, curved, straight, round, hollow, solid, corner, surface, face, side, edge and end.
Fractions	***To begin to understand that when you halve an object you get two equal sized parts.***	**** To begin to understand that when you halve a quantity you get two equal amounts.***	***To begin to split quantities up to 10 with support.*** **** To begin to understand that when you split an object into 4 equal sizes they are called quarters.***

YEAR ONE

Mathematics curriculum

	Autumn	Spring	Summer
Number - Number and Place Value / Fractions	*- sort objects* *- count objects* *- represent objects* *- count, read and write forwards from any number 0-10* *- count, read and write backwards from any number 0-10* *- count 1 more* *- count 1 less* *- 1 to 1 correspondence to start to compare groups* *- compare groups using language, such as equal, more, greater, less and fewer* *- introduce > and < and = symbols* *- compare numbers* *- order groups of objects* *- order numbers* *- ordinal numbers* *- the number line*	*Place value (within 50)* *Multiples 2, 5, 10* *Numbers to 50* *Tens and ones* *Represent numbers to 50* *One more one less* *Compare objects within 50* *Compare numbers within 50* *Order numbers within 50* *Count in 2s* *Count in 5s*	*Place value to 100.* *counting to 100* *Partitoning numbers* *Comparing numbers* *Ordering numbers* *One more, one less* ***Find a half*** ***Find a quarter***
	Count to and across 100 forwards and backwards, beginning with 0 or 1, or from any given number. **Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s** **Given a number, identify 1 more and 1 less.** **Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.** **Recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity** **Recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity**		

YEAR ONE

Key vocabulary:

Number - Number and Place Value	number, zero, one, two, three… to twenty and beyond zero, ten, twenty… none how many…? count, count (up) to count on (from, to) count back (from, to) count in ones, twos… tens… more, less, many, few odd, even every other how many times? pattern, pair	units, ones tens digit 'teens' number partition, part-whole diagram the same number as, as many as equal to Of **two** objects/amounts: greater, more, larger, bigger less, fewer, smaller Of **three** or more objects/amounts: greatest, most, biggest, largest	least, fewest, smallest one more, ten more one less, ten less compare order size first, second, third… tenth, eleventh… twentieth last, last but one before, after next between, half-way between above, below

YEAR ONE

Mathematics curriculum

	Autumn	Spring	Summer
Calculation	**Addition and Subtraction** *Part whole model* *Addition symbol* *Fact families - Addition facts* *Find/recall number bonds within 10* *Systematic methods for number bonds within 10* *Compare number bonds* *Addition: Adding together or adding more.* *Finding a part* *Subtraction: Taking away, how many left?* *Crossing out* *Introducing the subtraction symbol* *Subtraction: Finding a part, breaking apart* *Fact families - The 8 facts* *Subtraction: Counting back* *Subtraction: Finding the difference* *Comparing addition and subtraction statements a + b > c* *Comparing addition and subtraction statements a + b > c + d*	**Addition and Subtraction** *Add by counting on* *Recall number bonds to 10 and find number bonds to 20.* *Add by making 10* *Subtraction - Not crossing 10* *Subtraction - Crossing 10* *Related Facts* *Compare Number Sentences*	**Multiplication and Division** *Count in 10s* *Recall number bonds to 20.* *Make equal groups* *Add equal groups* *Make arrays* *Make doubles* *Make equal groups -grouping* *Make equal groups -sharing*
	Read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs. **Represent and use number bonds and related subtraction facts within 20.** **Add and subtract one-digit and two-digit numbers to 20, including 0.** **Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representation, including missing number problems {e.g. 4 + ? = 9, 7 = ? - 9}** **Recognise, find, name and write fractions 12, 13, 14 , 24and 34 of a length, shape, set of objects or quantity.** **Write simple fractions for example, 12 of 6 = 3 and recognise the equivalence of 24 and 12.**		

YEAR ONE

Key vocabulary:

Calculation	Addition, add, more, plus make, sum, total altogether one more, two more… ten more how many more to make…? how many more is… than…? *how much more is…?* Subtraction, subtract, take (away), minus	how many are left/left over? how many are gone? one less, two less, ten less… how many fewer is… than…? *how much less is…?* difference between =, equals, sign, is the same as Part- whole diagram score, double, *near double*

YEAR ONE

Mathematics curriculum

	Autumn	Spring	Summer
Geometry: **Properties of Shape / Position and Direction**	Recognise and name 3D shapes Sort 3D shapes Recognise and name 2D shapes Sort 2D shapes		Describe turns Describe Position (1) Describe Position (2)
	Recognise and name common 2-D and 3-D shapes, including: 2-D shapes [for example, rectangles (including squares), circles and triangles Describe position, direction and movement, including whole, half, quarter and three-quarter turns.		

Key vocabulary:

Geometry: **Properties of Shape / Position and Direction**	shape, pattern, flat curved, straight round hollow, solid corner vertices face, side, edge, end sort	make, draw circle, triangle, square, rectangle, cube, pyramid, sphere, cone, cuboid, cylinder, face, points, corners, vertices, solid

YEAR ONE

Mathematics curriculum

	Autumn	Spring	Summer
Measurement: **Length and Height / Weight and Volume / Money/ Time**		Compare lengths and heights Introduce weight and mass Measure and compare mass Introduce capacity Measure and compare capacity	Recognising coins and notes Counting in coins Before and After Dates Time to the hour and half hour

Compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short, double/half].
Measure and begin to record lengths and heights. Recognise and know the value of different denominations of coins and notes
Compare, describe and solve practical problems for time (hours, minutes, quicker, slower, earlier, later)
Measure and begin to record time (hours, minutes, seconds)
Sequence events in chronological order using language (before, after, next, first, today, yesterday, tomorrow, morning, afternoon and evening)
Recognise and use language relating to dates, including days of the week, weeks, months and years
Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times

Key vocabulary:

Measurement: **Length and Height / Weight and Volume / Money/ Time**	**Coin, penny, pence, pound, *(£)*** **price, cost, total** **buy, sell, pay** **spend, spent, change** **how much…? how many…?** length, width, height long, short, tall, high, low wide, narrow, thick, thin longer, shorter, taller longest, shortest, tallest far, further, furthest, near, close ruler, metre (*m*), *centimetre (cm)* Compare, guess, estimate	**Mass** weigh, weighs, balances, kilogram heavy/light, heavier/lighter, heaviest/lightest balance, scales, weight **Capacity** *Capacity, litre* full, half full, empty holds most/ least, *contains* container.	Time *days of the week:* Monday, Tuesday… *months of the year: January, February…* *seasons:* spring, summer, autumn, winter day, week, *fortnight*, month, year, weekend morning, afternoon, evening, night, midnight bedtime, dinnertime, playtime next, last, after how long will it take to… hour, *minute, second* o'clock, half past, clock, watch, hands

YEAR TWO

Mathematics curriculum

	Autumn	Spring	Summer
Number - Number and Place Value / Fractions	*Count objects to 100, read and write numerals in numbers and words.* *Tens and ones with a part whole model.* *Use a place value chart.* *Compare numbers and objects.* *Count in 2s, 5s and 10s confidently.*	*Make equal parts* *Recognise a half* *Find a half* *Recognise a quarter* *Find a quarter* *Recognise a third* *Find a third* *Unit fractions* *Non-unit fractions* *Equivalence of 12 and 24* *Find three quarters* *Count in fractions*	

*Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward.

*Recognise the place value of each digit in a two-digit number (tens, ones).

*Identify, represent and estimate numbers using different representations, including the number line.
*Compare and order numbers from 0 up to 100; use <, > and = signs.
*Read and write numbers to at least 100 in numerals and in words.

YEAR TWO

Key vocabulary:

Number - Number and Place Value	Two hundred… one thousand Count in threes, fours, fives and so on multiple of sequence continue predict rule Place value and ordering hundreds one-, two- or three-digit number place, place value stands for, represents exchange twenty-first, twenty-second… < > symbols Making decisions and reasoning calculate, calculation mental calculation correct Estimating exact, exactly guess how many, estimate nearly, close to, about the same as just over, just under too many, too few, enough, not enough	units, ones tens, *hundreds* digit *one-, two- or three-digit number* 'teens' number *place, place value* *stands for, represents* *exchange* the same number as, as many as equal to *Of two objects/amounts:* greater, more, larger, bigger less, fewer, smaller *Of three or more objects/amounts:* greatest, most, biggest, largest least, fewest, smallest one more, ten more one less, ten less compare order size	Two hundred… one thousand Count in threes, fours, fives and so on multiple of sequence continue predict rule

YEAR TWO

Mathematics curriculum

	Autumn		Spring
Calculation	Fact families – Addition and subtraction bonds to 20 Check calculations Compare number sentences Related facts Bonds to 100 (tens) Add and subtract 1s 10 more and 10 less Add and subtract 10s Add a 2-digit and 1-digit number – crossing ten Subtract a 1-digit number from a 2-digit number – crossing ten Add two 2-digit numbers – not crossing ten – add ones and add tens Add two 2-digit numbers – crossing ten – add ones and add tens	Subtract a 2-digit number from a 2-digit number – not crossing ten Subtract a 2-digit number from a 2-digit number – crossing ten – subtract ones and tens Bonds to 100 (tens and ones) Add three 1-digit numbers Recognise equal groups Make equal groups Add equal groups Multiplication sentences using the × symbol Multiplication sentences from pictures Use arrays 2 times-table 5 times-table 10 times-table	Recognise equal groups Make equal groups Add equal groups Multiplication sentences using the × symbol Multiplication sentences from pictures Use arrays 2 times-table 5 times-table 10 times-table
	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 ***Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones ,a two-digit number and tens, two two-digit numbers , adding three one-digit numbers.** ***Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.** ***Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.** ***Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs.** *Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. *Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. *Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. *Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.		

YEAR TWO

Key vocabulary:

Calculation	**Addition and subtraction** addition, one hundred more , one hundred less , tens boundary **Multiplication and division** lots of, groups of x, times, multiply, multiplied by multiple of , once, twice, three times, four times, five times… ten times… times as (big, long, wide and so on) repeated addition , array row, column , share equally , one each, two each, three each… , group in pairs, threes… tens , equal groups of , ÷, divide, divided by, divided into.	Lots of, groups of, x, times, multiply, once, twice, array, pairs, equal groups *lots of, groups of* *x, times, multiply, multiplied by* *multiple of* *once, twice, three times,* *four times, five times… ten times…* *times as (big, long, wide and so on)* *repeated addition* *array* *row, column* double, halve share, *share equally* *one each, two each, three each…* *group in pairs, threes… tens* *equal groups of* ÷, *divide, divided by, divided into*, left, left over

YEAR TWO

Mathematics curriculum

	Autumn	Spring	Summer
Geometry: **Properties of Shape / Position and Direction**	Recognise 2D and 3D shapes Count sides on 2D shapes Count vertices on 2D shapes Draw 2D shapes Lines of symmetry Sort 2D shapes Make patterns with 2D shapes Count faces on 3D shapes Count edges on 3D shapes Count vertices on 3D shapes Sort 3D shapes Make patterns with 3D shapes		Describe movement Describe turns Describe movement and turn Describe position (2) Make patterns with shape.
	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. **Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.** **Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid.]** **Compare and sort common 2-D and 3-D shapes and everyday objects.** **Order and arrange combinations of mathematical objects in patterns.** **Use mathematical vocabulary to describe position, direction and movement including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise), and movement in a straight line.**		

YEAR TWO

Key vocabulary:

Geometry:

Properties of Shape / Position and Direction

Identify and describe the properties, 2D shape quadrilaterals, polygons, sides, edges, vertices.
Surface, faces, prisms, pyramids, cylinders cones.
cube
cuboid
pyramid
sphere
cone
cylinder
circle, *circular*
triangle, *triangular*
square
rectangle, *rectangular*
star
pentagon
hexagon
octagon

position
over, under, underneath
above, below
top, bottom, side
on, in
outside, inside
around
in front, behind
front, back
before, after
beside, next to
opposite
apart
between
middle, edge
centre
corner
direction
journey, *route*
left, right
up, down
higher, lower
forwards, backwards, sideways
across
close, far, near
along
through
to, from, towards, away from
clockwise, anti-clockwise
movement
slide
roll
whole turn, half turn, *quarter turn*
right angle
straight line
stretch, bend

YEAR TWO

Mathematics curriculum

	AUTUMN	Spring	Summer
Measurement: **Length and Height / Weight and Volume / Money/ Time**	count money – pence Count money – pounds (notes and coins) Count money – notes and coins Select money Make the same amount Compare money Find the total Find the difference Find change Two-step problems	Measure length (cm) Measure length (m) Compare lengths Order lengths Four operations with lengths	O'clock and half past, Quarter past and quarter to Telling time to 5 minutes, Hours and days Find durations of time, Compare durations of time Compare mass, Measure mass in gram,s Measure mass in kilograms, Compare volume Millilitres Litres Temperature
	Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. **Find different combinations of coins that equal the same amounts of money** **Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels** **Compare and order lengths, mass, volume/capacity and record the results using >, < and =** **Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels Compare and order lengths, mass, volume/capacity and record the results using >, < and =** **Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. Know the number of minutes in an hour and the number of hours in a day. Compare and sequence intervals of time.**		

YEAR TWO

Key vocabulary:

Measurement:

Length and Height / Weight and Volume / Money/ Time

money
coin
penny, pence, pound, *(£)*
price, cost
buy, *bought*, sell, *sold*
spend, spent
pay
change
dear, costs more
cheap, costs less, cheaper
how much…? how many…?
total

length, width, height, depth
long, short, tall, high, low
wide, narrow, deep, shallow, thick, thin
longer, shorter, taller, higher… and so on
longest, shortest, tallest, highest… and so on
far, further, furthest, near, close
metre (*m*), *centimetre (cm)*
ruler, metre stick, tape measure
measure
size
compare
measuring scale
guess, estimate
enough, not enough
too much, too little
too many, too few
nearly, roughly, about, close to, about the same as
just over, just under

Mass

weigh, weighs, balances
heavy/light, heavier/lighter, heaviest/lightest
kilogram (kg), half-kilogram, gram(g)
balance, scales, weight

Capacity

capacity
full, half full
empty
holds, *contains*
litre (l), half-litre, millilitre (ml)
container.

temperature
degree

time
days of the week: Monday, Tuesday…
months of the year: January, February…
seasons: spring, summer, autumn, winter
day, week, *fortnight*, month, year
weekend
birthday, holiday
morning, afternoon, evening, night, midnight
bedtime, dinnertime, playtime
today, yesterday, tomorrow
before, after
next, last
now, soon, early, late
quick, quicker, quickest, quickly
fast, faster, fastest
slow, slower, slowest, slowly
old, older, oldest
new, newer, newest
takes longer, takes less time
how long ago?/how long will it be to…?
how long will it take to…
hour, *minute, second*
o'clock, half past, *quarter to, quarter past*
clock, watch, hands
digital/analogue clock/watch, timer
how often?
always, never, often, sometimes, usually
once, twice

YEAR TWO

Key vocabulary:

Measurement:

Length and Height / Weight and Volume / Money/ Time

penny, pence, pound, *(£)*
price, cost, coin
buy, sell, pay
spend, spent
change
how much…? how many…?
total

length, width, height
long, short, tall, high, low
wide, narrow, thick, thin
longer, shorter, taller
longest, shortest, tallest
far, further, furthest, near, close
metre (*m*), *centimetre (cm)*
ruler,
Compare, guess, estimate

Mass

weigh, weighs, balances
heavy/light, heavier/lighter, heaviest/lightest
kilogram (kg), half-kilogram, gram(g)
balance, scales, weight

Capacity

capacity
full, half full
empty
holds, *contains*
litre (l), half-litre, millilitre (ml)
container.

temperature
degree

time
days of the week: Monday, Tuesday…
months of the year: January, February…
seasons: spring, summer, autumn, winter
day, week, *fortnight*, month, year
weekend
birthday, holiday
morning, afternoon, evening, night, midnight
bedtime, dinnertime, playtime
today, yesterday, tomorrow
before, after
next, last
how long will it take to…
hour, *minute, second*
o'clock, half past,
clock, watch, hands
always, never, often, sometimes

YEAR TWO

Mathematics curriculum

	Autumn	Spring	Summer
Fractions		Make tally charts Draw pictograms (1-1) Interpret pictograms (1-1) Draw pictograms (2, 5 and 10) Interpret pictograms (2, 5 and 10) Block diagrams	
	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables		

Key vocabulary:

Fractions	count, *tally*, sort, vote *graph, block graph, pictogram* *represent* group, set list, table *label, title* *most popular, most common* *least popular, least common*