Hazlewood
Community Primary School

**Progression Coverage and
vocabulary progression 2022-2023**

Expectations for progress: Place value

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recognise some numerals of personal significance.	Count, read and writenumbers to 100 in numerals.	Recognise the place valueof each digit in a two- digit number.	Recognise the place value of each digit in athree-digit number.	Recognise the place valueof each digit in a four- digit number.	Interpret negative numbers in context, countforwards and backwards with positive and negative whole numbers, including through zero.	Use negative numbers incontext, and calculate intervals across zero.
Count objects, actionsand sounds.	Read and write numbersto 20 in numerals and words.	Compare and order numbers from 0 up to100; use <, > and = signs.	Compare and order numbers up to 1000.	Order and compare numbers beyond 1000.	Read, write, order and compare numbers up to 1000 000 and determine the value of each digit.	Read, write, order and compare numbers up to10 000 000 and determine the value of each digit.
Subitise	Partition 2 digit numbersinto tens and units.	Identify, represent and estimate numbers usingdifferent representations, including the number line.	Identify, represent and estimate numbers usingdifferent representations.	Round any number to thenearest 10, 100 or 1000.	Round any number up to1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.	Round any whole numberto a required degree of accuracy.
Link number symbolswith its cardinal number value.	Identify and represent numbers using objects and pictorial representations including the number line.	Read and write numbersto at least 100 in numerals and in words.	Read and write numbersto 1000 in numerals and in words.	Identify, represent and estimate numbers usingdifferent representations.	Read Roman numerals to1000 (M) and recognise years written in Roman numerals.	
Count beyond 10.				Read Roman numerals to100 (I to C) and know that over time, the numeral system changedto include the concept of zero and place value.	Recognise and use squarenumbers and cube numbers, and the notation for squared (²) and cubed (³).	
Compare numbers						

Expectations for progress: Addition

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Understand one more than and therelationship between consecutive numbers.	Count to, read and writenumbers across 100.	Use partitioning and add2 digit number.	Partition using columns for addition – involve crossing10 then 100.	Formal column method ofaddition (4 digit numbers).	Introduce adding decimalin a column.	Add negative integers.
Understand the composition of numbers up to 10.	Number bonds 10, 20 & 100.	Apply written methods aswell as concrete objects.	add and subtract numbersmentally, including: HTO+O, HTO+T and HTO+H	Involve 2 step problems.	Read, write & comparenumbers to at least 1,000,000.	Consolidating & applying knowledge tosolve problems.
Automatically recall number bonds for 0-5 andto 10.	Add 1 & 2 digit numbers to20 including 0.	Adding 3 digit numbersusing partitioning.	Add and subtract numberswith up to three digits, using formal written methods of columnar addition.	Adding 3 lots of four digitnumbers.	Interpret negative numbers in context, calculate intervals acrosszero.	Perform mental calculations, including with mixed operations and large numbers.
In practical activities and discussion, beginning to usethe vocabulary involved in addition.	Solve one step problems that involve addition usingconcrete objects and mentally.	Understanding of commutative law inrelation to addition.	Estimate the answer to a calculation and use inverseoperations to check answers	Doubling & halving 2, 3& 4 digit number (odd numbers).	Solve number problems & practical problems.	
	Doubling & halving simplenumbers.	Use inverse to checkmissing number problems.	Solve problems, includingmissing number problems,using number facts, place value, and more complex addition and subtraction.	Estimate and use inverse operations to check answers to a calculation.	Add and subtract numbers mentally withincreasingly large numbers	
	Missing & number problems.	Doubling & halving including multiples of 12.		Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	Add and subtract wholenumbers with more than4 digits, including usingformal written methods.	
	Use language of equal to,more than.	Extend mental mathsstrategies to include number bonds			Use rounding to check answers to calculationsand determine in the	

					context of a problem, levels of accuracy.	
	Add simple 2 digit numberstogether				Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	

Expectations for progress: Subtraction

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Understand one less than and the relationship between consecutive numbers.	Subtract by finding the difference on a numberline.	Subtract by finding the difference on a numberline.	Subtract by finding the difference on a numberline.	Subtract using formalcolumn method.	Subtract using formalcolumn method.	Subtract using formalcolumn method.
Uses the language of 'more' and 'fewer' to compare two sets of objects.	Numbers should extend as children become more confident. This then needs applying to problems both written and practical.	Begin to do larger jumpsof 10 or 2.	Use a number line to make bigger jumps. Mixture of numbers counting onto the nextwhole 10, 100.	Application to number challenges using inverseto check.	Decimals (as money)	Decimals (as money)
In practical activitiesand discussion, beginning to use thevocabulary involved in subtraction.	Missing number sentences.	Extension work to involve3 digit numbers.	Doubling / halving 2, 3and 4 digit number.	Estimate and use inverse operations to check answers to a calculation.	Application to number challenges using inverseto check.	Application to number challenges using inverseto check.
	Application to number challenges using inverseto check.	Application to number challenges using inverseto check.	Application to number challenges using inverseto check.	Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.		
			add and subtract numbers mentally, including: HTO+O, HTO+T and HTO+H			
			Add and subtract numbers with up to three digits, using formal written methods of columnar addition.			

			Estimate the answer to a calculation and use inverse operations to check answers			
			Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.			

Expectations for progress: Multiplication

Year 1	Year 2	Year 3	Year 4	Year 5 & Year 6
Solve simple one step problems involving 'groupof' concrete and pictorial objects.	2, 5, 10 times table and understand it as repeated addition.	Children should know all times tablesby end of year.	Consolidate all times tables.	Consolidate all times tables.
	Learn these tables, extend to 3, 4 when confident.	Introduce multiplication in formal method. 2 by 1 digit	Formal column multiplication methods	Multiply multi digit numbers up to 4 digit whole numbers using formal method.
	Solve problems using materials, array & repeated addition.	Application to number challenges. Real life situations & problems.	2 & 3 digit x 1 digit. Extend to 4 digits in columns.	Multiply decimal numbers by 10, 100 and 1000.
	Calculate simple number sentencesusing table they know – begin to use grid method with higher ability.	Counting in multiples of 4, 8, 50 & 100. (6, 7, 9, 25 & 1000 extension)	Application to number challenges. Reallife situations & problems.	Identify multiples, factors, commonfactors and prime numbers.
	Understand cumulative law with x link to +.			Recognise squared and cubed numbers.
	Application to number challenges. Real life situations & problems.			Application to number challenges. Real life situations & problems.

Expectations for progress: Division

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Solve simple one step problems involving divisionusing concrete / pictorial objects.	Share between physicallyinto groups, then put ontoa number line.	Divide using formal methodstarting at 0.	Use place value to recall multiplication and divisionfacts for all tables.	Use place value to recall multiplication and divisionfacts for all tables.	Use place value to recall multiplication and division factsfor all tables.
Using sharing to understand the concept.	Larger numbers.	Calculate with small remainders when confident.	Divide mentally using known facts.	Divide mentally using known facts.	Divide mentally using known facts.
Application into number challenges, use invers of known x tables to check answers.	Simple remainders.	Larger number.	Use times tables to divide by2 & 3 digit number.	Use times tables to divide 4digit by 2 & 3 digit numbers.	Use times tables to divide 4 digitby 2 & 3 digit numbers.
	To understand the inverse to prove it.	Apply to fractions.		Give remainders as a fraction / decimal.	Use knowledge of BODMAS to carry out calculations.

	Application into number challenges, use invers of known times tables to check answers.	Application into number challenges, use invers of times tables to check answers.			Give remainders as a fraction /decimal.

Expectations for progress: Fractions

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recognise, find and name ahalf as one of two equal parts of an object, shape or quantity.	Recognise, find, name and write fractions 1/3, `1/4, 2/4and 3/4 of a length, shape, set of objects or quantity.	Count up or down intenths.	Count up or down inhundredths.	Recognise mixed numbers and improper fractions andconvert from one to the other.	Use common factors tosimplify fractions.
Recognise, find and name aquarter as one of four equal parts of an object, shape or quantity.	Write simple fractions and recognise the equivalence of2/4 and 1/2.	Recognise that tenths arise from dividing an object into10 equal parts and in dividing one digit numbersof quantities by 10.	Recognise that hundredths arise from dividing an objectby 100 and dividing tenths by 10.	Write mathematical statements > 1 as a mixednumber.	Use common multiples to express fractions in the samedenomination.
		Compare and order unit fractions and fractions withthe same denominators.	Recognise and show, usingdiagrams, families of common equivalent fractions.	Compare and order fractionswhose denominators are all multiples of the same number.	Add and subtract fractionswith different denominatorsand mixed numbers, using the concept of equivalent fractions.
		Recognise and show, usingdiagrams, equivalent fractions with small denominators.	Solve problems involving increasingly harder fractionsto calculate quantities, and fractions to divide quantities, including non- unit fractions where the answer is a whole number.	Identify, name and write equivalent fractions of a given fraction, representingvisually, including tenths and hundredths.	Multiply simple pairs of proper fractions, writing theanswer in its simplest form.
		Recognise, find and write fractions of a discrete set ofobjects with small denominators.	Add and subtract fractions with the same denominator.	Add and subtract fractions with the same denominator and denominators that are multiples of the same number.	Divide proper fractions bywhole numbers.
		Add and subtract fractionswith the same denominatorwithin one whole.	Solve simple measure andmoney problems involvingfractions and decimals totwo decimal places.	Multiply proper fractions andmixed numbers by whole numbers, supported by materials and diagrams.	
		Solve problems using all fraction knowledge.			

Expectations for progress: Decimals and percentages

Year 4	Year 5	Year 6
Recognise and write decimal equivalents of any number of tenths or hundredths	Read and write decimal numbers as fractions	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction
Recognise and write decimal equivalents to 1/4, 1/2 and 3/4	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Identify the value of each digit in numbers given to three decimal places
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	Round decimals with two decimal places to the nearest whole number and to one decimal place.	Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.
Round decimals with one decimal place to the nearest whole number	Read, write, order and compare numbers with up to three decimal places	Multiply one-digit number with up to two decimal places by whole numbers
Compare numbers with the same number of decimal places up to two 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	Se written division methods in cases where the answer has up to two decimal places
	Solve problems involving number up to three decimal places	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 which require knowing percentage and decimal equivalents of 1/2 , 1/4 , 1/5 , 2/5 , 4/5 and those fractions with a denominator of a multiple of 10 or 25	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
		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.

Expectations for progress: Measurement

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
They use past, presentand future forms accurately when talking about events that have happened or are to happen in the future. They develop their own narratives and explanations by connecting ideas or events.	Compare, describe and solve practical problems for: length/height, weight/mass, capacity/volume & time.	Choose and use appropriate standard units to estimate and measure length/height (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to thenearest appropriate unit, using rulers, scales, thermometers and measuring vessels.	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).	Convert between differentunits of measure estimate, compare and calculate different measures, including money in pounds and pence.	Convert between differentunits of metric measure.	Solve problems involvingthe calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.
Can describe their relative position suchas 'behind' or 'next to'.	Measure and begin to record length/height, weight/mass, capacity/volume & time.	Compare and order lengths, mass, volume/capacity and record the results using >, < and =.	Measure the perimeter ofsimple 2-D shapes.	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.	Understand and use approximate equivalencesbetween metric units and common imperial units such as inches, pounds and pints.	Use, read, write and convert between standardunits, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit,and vice versa, using decimal notation to up to three decimal places.
Compare weight, length and capacity.	Recognise and know thevalue of different denominations of coinsand notes.	Recognise and use symbols for pounds (£) and pence (p); combineamounts to make a particular value.	Add and subtract amounts of money to give change, using both £ and p in practical contexts.	Find the area of rectilinear shapes bycounting squares.	Estimate volume and capacity.	Convert between milesand kilometres.
Select, rotate and manipulate shapes todevelop spatial reasoning.	Sequence events in chronological order usinglanguage recognise and use language relating to dates, including days of the week, weeks, months and years.	Find different combinations of coinsthat equal the same amounts of money.	Tell and write the time from an analogue clock,including using Roman numerals from I to XII, and 12-hour and 24- hour clocks.	Convert between differentunits of measure (e.g. Hours to minutes).	Measure and calculate theperimeter of composite rectilinear shapes in centimetres and metres.	Recognise that shapes with the same areas canhave different perimetersand vice versa.

Continue, copy and create repeating patterns.	Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.	Estimate and read time with 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.	Read, write and convert time between analogue and digital 12- and 24- hour clocks.	Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes.	Recognise when it is possible to use formulae for area and volume of shapes.
Beginning to use everyday language related to money.		Compare and sequence intervals of time	Know the number of seconds in a minute and the number of days in each month, year and leap year and compare durations of events.	Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.	Calculate the area of parallelograms and triangles.
Orders and sequences familiar events.		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.			Solve problems involving converting between units of time.	Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units.
		Know the number of minutes in an hour and the number of hours in a day.				

Expectations for progress: Geometry

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
They recognise, create and describe patterns.	Recognise and name common 2-D shapes (e.g. Square, circle, triangle).	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	Compare and classify geometric shapes, including quadrilaterals and triangles, based on properties and sizes.	Use the properties of rectangles to deduce related facts and find missing lengths and angles.	Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.
They explore characteristics of everyday objects and shapes and use mathematical language to describe them.	Recognise and name common 3-D shapes (e.g. Cubes, cuboids, pyramids & spheres).	Compare and sort common 2-D and 3-D shapes and everyday objects.	Draw 2D shapes.	Identify lines of symmetry in 2-D shapes presented in different orientations.	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	Compare and classify geometric shapes based on their properties and sizes.
	Describe position, direction and movement, including whole, half, quarter and three-quarter turns.	Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.	Make 3-D shapes using modelling materials.	Complete a simple symmetric figure with respect to a specific line of symmetry.	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.	Draw 2-D shapes using given dimensions and angles and recognise, describe and build simple 3-D shapes, including making nets.
		Identify 2-D shapes on the surface of 3-D shapes.	Recognise 3-D shapes in different orientations and describe them.	Identify acute and obtuse angles and compare and order angles up to two right angles by size.	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.	Find unknown angles in any triangles, quadrilaterals, and regular polygons.
		Compare and sort common 2-D and 3-D shapes and everyday objects.	Recognise angles as a property of shape or a description of a turn.	Describe positions on a 2-D grid as coordinates in the first quadrant.	Draw given angles, and measure them in degrees (°).	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

		Order and arrange combinations of mathematical objects in patterns and sequences.	Identify right angles, recognise that two right angles make a half- turn, three make three quarters of a turn and four a complete turn.	Describe movements between positions as translations of a given unit to the left/right and up/down.	Identify angles at a point and one whole turn (total 360°); at a point on a straight line and ½ a turn (total 180°) and identify other multiples of 90°.	Describe positions on the full coordinate grid (all four quadrants).
		Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and 1/4 turns.	Identify whether angles are greater or less than right angle.	Plot specified points and draw sides to complete a given polygon.	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.	Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

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LIMITLESS POTENTIAL   **IGNITE PASSION**   **EMBRACE DIFFERENCE**

<u>**Vocabulary coverage -**</u>
<u>**Mathematics**</u>

"The national curriculum for mathematics reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others, and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions."
National Curriculum in England, Department for Education, 2013

Using correct mathematical language is crucial for thinking, learning and communicating mathematically. Children may build knowledge through remembering information thatthey hear, but it is only when they put these ideas into their own words that it becomes clear whether concepts have been learned effectively. It is in listening to children talking about mathematics that we, as teachers, can best assess what they are actually learning and understanding. This enables us to identify and address any misconceptions that might be developing.
We need to encourage children to explain what they are doing and why they are doing it. We must offer them opportunities to use mathematical language frequently, for example by participating in paired activities, group discussions and games as well as other dialogues. This will help children to learn new vocabulary, to use words they already know more accurately, and to express new ideas and new thinking.

It is important to introduce children to the correct vocabulary at the appropriate time and within a suitable context. It is often helpful to do this using relevant real-life objects, mathematical manipulatives and visual representations such as pictures and diagrams. All children need regular, planned opportunities to develop their mathematical vocabulary in order that they become familiar with the language and are not confused by mathematical terms. They need to acquire the words necessary for them to take part in lessons and activities, respond to questions correctly and carry out tasks successfully. Fun games and activities, such as the following example, can be a useful way to rehearse words and their meanings regularly.

Please note: progression through each year group's vocabulary is intended to build on that taught in the previous year group.

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number	Zero *Nothing at all* Number *Used to count* one, two, three … to twenty and beyond equal *is the same as* pattern *a repeated sequence* count *to list the numbers* *to find the total*	In addition to all previous vocabulary… numeral / digit *A symbol which represents an amount* forwards *Counting by adding one more every time* Backwards *Counting by removing one every time* > *greater than* < less than Numbers up to 100	In addition to all previous vocabulary… tally *a record of an amount* sequence *a list of number or objects in a special order*	In addition to all previous vocabulary… Roman numerals *Letters representing numbers in the Roman numerical system* Numbers up to 1000	In addition to all previous vocabulary… Consecutive *Numbers that follow each other, in the right order* Integer *A whole number* negative number *A number less than zero* Ascending *From smallest to largest* Descending *From largest to smallest*	In addition to all previous vocabulary… ≥ *Greater than or equal to* ≤ *Less than or equal to* Numbers up to 1 million	In addition to all previous vocabulary… Numbers to 10 million
Place Value	Greater *Bigger than* Less *Smaller than* one more *The number that comes next* one less *The number that comes before* order compare *What is the same and different* ones *single symbol used to make a numeral*	In addition to all previous vocabulary… equal to *the same as* tens ten ones half-way *between the exact middle* representation *A visible model*	In addition to all previous vocabulary… Hundreds *Ten tens* one-, two- or three-digit number *A number represented by _ digits* place value *the value of each digit in a number* exchange *to take an equivalent amount in ones*	In addition to all previous vocabulary… three-digit *A number represented by 3 digits*	In addition to all previous vocabulary… thousands *one hundred tens* tenths *ten equal parts in a whole* hundredths *one hundred equal parts in a whole*	In addition to all previous vocabulary… Thousandths *one thousand equal parts in a whole* Unitising *To count as a single unit*	In addition to all previous vocabulary… Ten thousandths *ten thousand equal parts in a whole*

			Getting bigger Decrease *Getting smaller*				

Estimating	nearly *close to*	In addition to all previous vocabulary… Estimate *A sensible guess*	In addition to allprevious vocabulary… Exact *A precise amount*	In addition to all previous vocabulary… approximate *close to the actualamount* round *To the closest group of*	In addition to allprevious vocabulary… Conjecture *a conclusion basedon evidence*	Consolidate previously taught	Consolidate previously taught
Addition and subtraction	answer *a solution to aproblem* add *bring two or more numbers together tomake a total* double *same number addedtwice* take away *remove a number ofitems from a set* total *how many altogethe requal is the same as*	In addition to all previous vocabulary… Pictorial Representation *to use pictures to show the maths* Concrete objects *To use objects to show the maths* Mental *do it in your head* subtract *take away* addition *a number to be addedto another* number bonds *a pair of numbers witha particular total* partitioning *splitting numbers into tens and ones* inverse *the opposite of anotheroperation*	In addition to all previous vocabulary …sum *the result of one or more additions* subtract *take away, the inverse of addition* column addition/ subtraction *addition/subtractio nby writing one number below the other and working from right to left* tens boundary *when numbers jump over a multiple of 10* difference *numerical differencefound by comparing quantities* commutative *can be done in any order*	In addition to all previous vocabulary… Hundreds boundary *when numbers jump over a multiple of 100near double one away from adouble operation* *a mathematical process: addition, subtraction, multiplication anddivision*	In addition to all previous vocabulary… Two-step problema *problem that requires two operations to solve it*	In addition to all previous vocabulary… Minuend *The number to besubtracted from* Subtrahend *The number being subtracted* Addend *A number being added to another*	In addition to all previous vocabulary… Order of operations *Sequence in which operations should besolved*

| and division | Exactly the same
Sharing
put into equalgroups
Doubling
same number addedtwice
halving
Dividing into twoequal groups
lots of
groups of | previous vocabulary…

Multiply /multiplication
add equal groups
Divide / division
Sharing into equal groups
array
arranged objects inrows and columns | previous vocabulary…
repeated addition
adding the same number repeatedly
repeated subtraction
subtracting the samenumber repeatedly odd numbers
whole number which can't be divided into two equal groups1,3,5,7,9 | previous vocabulary…

multiple
The result of multiplying an integerby another integer Factor
Two or more numbers which divides a numberwithout a remainder product
the result of multiplying two numbers | previous vocabulary…

Derived facts
Taken from otherknown facts
remainder
the amount left over after a division | previous vocabulary…

Factor pairs
Pair of numberswhich multiply together to give aproduct
square number
A number multipliedby itself
prime number | previous vocabulary…

Factorise
Express an integer asthe product of its factors
prime factor
The factors of anumber that areprime
long division |

						Can only be divided by itself and one long multiplication *Multiplying two numbers by a number with two ormore digits* short division Bus stop method when the divisor isless than 10 remainders *The amount left overafter a division* Quotient *The result of a division*	*Division by more than a single digit(chunking)* common factor *An integer which is a factor of two or moreintegers.* common multiple *An integer which is amultiple of two or more integers.*
			even numbers *whole number whichcan be divided into two equal groups 0,2,4,6,8*	inverse *the opposite of anotheroperation* formal method *setting out working incolumn form*			
Fractions (including decimals, percentages, ratio and proportion)	Half *One of two equalparts* Double *Same amount added twice* Whole *All of* Share *Split into equal groups*	In addition to all previous vocabulary… quarter *One of four equal parts* Fraction *An equal part of awhole* equal part *All parts exactly thesame size*	In addition to all previous vocabulary… Three quarters *Three out of four equal parts* One third *One of three equalparts* Equivalent *The same*	In addition to all previous vocabulary… equivalent fraction *Two or more fractionswith the same value* Numerator *The number of parts outof the whole* denominator *The number of equalparts in the whole* Tenths *One out of ten equalparts* Unit fraction *A fraction where thenumerator is one* Non-unit fraction *A fraction where the numerator is greater than one* Compare	In addition to all previous vocabulary… Decimal *An integer and a partseparated by a decimal point* One/two decimal place *The number of digitsafter the decimal point* decimal equivalent *A decimal which hasthe same value as afraction* Tenth *One of ten equalparts* Hundredth *One of one hundred equal parts*	In addition to all previous vocabulary… Proper fraction *The numerator is less than the denominator* Improper fraction *The numerator is greater than the denominator* Mixed number fraction *An integer and afraction* Simplify *A fraction in its simplest form by finding the lowestcommon factor* Percent *One part per hundred*	In addition to all previous vocabulary… Ratio *The relative sizes o two or more values* Simplest form *A fraction in its simplest form by finding the lowest common factor* Degree of accuracyA *measure of the accuracy of a quantity.*

				To say which is greater or smaller		thousandth One of one thousand equal parts	
Algebra							formula a way to represent calculations using letters variable

							An unknown number in an equation whichcan take different values – shown by aletter or number Substitute Put in the place ofanother Linear number sequence A set of numbers ordered according to a rule.
Measurement Length Capacity and volume Weight Temperature	Measure *To find the size* Mass *How heavy something is* wide *More than normalwidth* Narrow *Less than normalwidth* Balances *Both sides have thesame mass* Heavy *More than normalmass* light *Less than normalmass* Full *Containing as muchas possible* Empty *Containing nothing*	In addition to all previous vocabulary… ruler *Used to measure distances with regularintervals* volume *The amount of space a3D object takes up* Capacity *The amount something can hold* half/quarter full *Holding half/quarter ofits capacity* Length *The distance betweentwo points* Height *The distance betweentop to bottom*	In addition to all previous vocabulary… Weighing scale *Measure the mass sitting on them* Gram/Kilogram *Unit of measure forweight and mass* Meter/millimeter *Unit of measure forlength* Temperature *A measure of warmthof an object* Degree *A unit to measure temperature*	In addition to all previous vocabulary… Distance *How far it is from one thing to another* Perimeter *The length around theoutside of a shape* Centigrade *A unit used to measure temperature*	In addition to all previous vocabulary… Depth *The distance fromtop to bottom or back to front* Width *The measurement ofthe distance of the side of an object* Area *A measure of the space inside of a 2Dshape* Measuring cylinder *A container used to measure volumes ofliquid* Convert *To change a value from one to another*	In addition to all previous vocabulary… Imperial unit *Old units of lengthincluding miles, ft and inch.* Pint/gallon *Imperial units to measure volume ofliquid* Metric unit *Used to measure length, weight or volume in mm, cm, m and km.*	In addition to all previous vocabulary… Circumference *The distance aroundthe edge of a circle* Tonne *A unit of mass equalto 1000 kg* Pound/Ounce *Imperial unit of mass* Miles *Imperial unit of distance*

	When something happens or how long it takes Today *The present day* Yesterday *The day before today*	previous vocabulary… Hour *60 minutes* Minute *60 seconds* o'clock *The hour*	previous vocabulary… Fortnight *Two weeks, 14 days* Month *Unit of time used in calendars*	previous vocabulary… Century *100 years* a.m *Ante meridiem – before noon* p.m	previous vocabulary… leap year *Extra day added to the shortest month, 366 days in total* Millennium	previous vocabulary… Timetable *A table information showing when things will happen* Arrive	previous vocabulary… Greenwich MeanTime *Time calculated using the sun at its highest point*

	Tomorrow *The day after today* Clock / Watch *A device to measure time* Week *Seven days* Weekend *Saturday and Sunday* *Children should use confidently:* days of the week, Monday, Tuesday …day, week morning, afternoon, evening, night bedtime, dinner time playtime	Half past *30 minutes after the hour* Hands *Parts on a clock showing how many hours and minutes* *Children should use confidently:* months of the year (January, February ...)seasons: spring, summer, autumn, winter	Year *365 days* Quarter past *15 minutes after the hour* Quarter to *45 minutes after the hour, 15 minutes before the next hour*Digital *A clock where time is shown by digits* Analogue *A clock where time is shown by hands on a dial*	*Post meridiem – after noon* 12-hour clock time *24 hours are divided into am and pm* 24-hour clock time *Runs from midnight to midnight*	*1000 years*	Reach a place at the end of a journey Depart *Leave a place at the start of a journey*	British Summer Time *Daylight savings time in summer when clocks go forward*
Money	Money *What people use to buy things* Coin *A piece of metal money that is small, flat and round* Spend *To pay money* Pay *To give money to*	In addition to all previous vocabulary… Pence *The smallest unit of money* Pound *100 pence* Dear *Costs a lot of money* Cheap *Costs little money* Total *How much altogether*	In addition to all previous vocabulary… Change *How much is returned after paying*	Consolidate previously taught	Consolidate previously taught	In addition to all previous vocabulary… Discount *A reduction in price* Currency *Official money of a country*	In addition to all previous vocabulary… Profit *The amount of money made that is more than was put in at the start* Loss *Making less money than is spent*

shape	The form of an object						
	pattern *a repeated sequence* flat *A straight and even surface* Round *Shaped like a circle or a ball*	Symmetrical *Either side is a reflection of the other repeating pattern* *A series repeated more than one time* cuboid *3D shape with 6 flat*	Surface *A face of a 3D shape* line symmetry *A line which cuts a shape perfectly in half* Pentagon	Perimeter *The length around the outside of a shape* Angle *Measure of a turn in degrees* degree *A measure for angles*	Area *A measure of the space inside of a 2D shape* Quadrilateral *A 4 sided 2D shape* center	Congruent *Two shapes that are the same size and shape* axis of symmetry *A line through a shape so that each*	Circumference *The distance around the outside of a shape* Net *A pattern you can cut and fold to make*

	Straight *A side with no curves* rectangle *A shape with 4 straight sides and 4 vertices* square *A shape with 4 even straight sides* Circle *A shape with one curved side* triangle *A shape with 3 straight sides*	*faces* cylinder *3D shape with 2 flat circular faces and 1 curved face* 3D *Three dimensional, solid shape can be touched* 2D *Two dimensional, flat shape* Face *Flate or curved surface on a 3D shape* Edge *Where 2 faces on a shape come together* Vertices *corners* Pyramid *3D shape with a square base and 4 triangular faces.* Sphere *3D shape with 1 curved face* Cone *3D shape with a circular base, one curved face and a point*	*A 2D shape with 5 edges and 5 vertices* Hexagon *A 2D shape with 6 edges and 6 vertices* Octagon *A 2D shape with 8 edges and 8 vertices*	perpendicular lines *Lines that cross another line at a 90 degree angle* parallel lines *Two lines that are always the same distance apart and never meet* right-angled *90 degree angle* prism *3D shape with 2 identical triangular bases and 4 flat sides*	Acute angle *An angle between 0 and 90 degrees* Obtuse angle *An angle greater than 90 degrees* Reflect *A transformation resulting in a mirror image* Regular *2D shape where all interior angles and sides measure the same* Irregular *A shape where all sides and angles are any length and size* Rectilinear *A shape with straight sides and right angles* Equilateral triangle All 3 sides are an equal length, all 3 angles are equal Isosceles triangle *2 sides are an equal length, 2 angles are an equal size* Scalene triangle *All sides and angles are different* Heptagon *A 2D shape with 7 angles and 7 sides* Quadrilateral	*side is a mirror image* reflective symmetry *A share or pattern reflected in a mirror or a line of symmetry* x-axis *horizontal line in a graph* y-axis *The vertical line in a graph* Octahedron *3D shape with 8 faces, 12 edges and 6 vertices* Parallelogram *4 sided shape with 2 pairs of parallel lines that are equal in length* Tetrahedron Polyhedron	*a model of a solid shape* Kite *Quadrilateral with 2 pairs of sides which are equal length* Intersecting lines *A pair of lines which cross at a point* scale factor *Enlarge a shape and each side is multiplied by the same number* Radius *The distance half way across the circle* Diameter *The distance across the middle of a circle* Quadrant *A quarter of a circle or its circumference* Reflex angle *An angle greater than 180 degrees and less than 360 degrees*

					A 4 sides shape *Spherical* *Like a sphere round*		
Position and direction	Position *Where something is* Over *Directly on top* Underneath *Directly below*	In addition to all previous vocabulary… Center *The exact middle* Whole turn	In addition to all previous vocabulary… Route *A way taken to get*	In addition to all previous vocabulary… Compass point *North, South, East or West*	In addition to all previous vocabulary… Translate *Moving a shape up,*	In addition to all previous vocabulary… Coordinate	Consolidate previously taught

	Opposite *Facing something* Between *In the middle*	*A turn through all four parts of a circle: facing in the same direction to where it started* Half turn *A turn through two of the four parts of a circle: facing in the opposite direction to where it started* Quarter turn *A turn through one of the four parts of a circle* Three quarter turn *A turn through three of the four parts of a circle*	*from start to a destination.* Clockwise *In the same direction as the hands on a clock* Anticlockwise *In the opposite direction as the hands on a clock*	Horizontal *A line that runes right and left across a page* Vertical *A line that runs up and down across a page* Diagonal *A straight line joining two opposite corners*	*down or from side to side* Rotate *A circular movement* Reflection *A transformation resulting in a mirror image* Compass *Shows the direction of magnetic North*	*A point on a grid with 2 numbers to identify its position* Protractor *An instrument used to measure angles in degrees*	

to list the numbers to find the total sort *To group in a special way*	previous vocabulary… Vote *Decide on something by saying what you want* Table *Information in rows and columns* Tally chart *A table used for counting using marks*	previous vocabulary… Graph *Shows information as an image* Block graph *Shows information using blocks* Pictogram *Chart using pictures or symbols to give information* Key The part of a graph that explains the symbols used Compare *Say what is the same and what is different*	previous vocabulary… Chart *A visual representation of data* Bar chart *Displaying information by using rectangular bars of different heights* Frequency table *The number of times something occurs* Carroll diagram *A way of sorting numbers and shapes by their traits.* Venn diagram *Uses circles to show the relationship among groups of things* Axis *The reference line used to measure on graphs and grids* x-axis (horizontal) y-axis (vertical)	previous vocabulary… Data *A collection of information gathered by observation or measurement* Comparison *What is the same or different about two or more things* Continuous data *Data which can take any value* Line graph *Shows information which changes over time*	previous vocabulary… Bar line chart *Show quantity alongside changes over time* Timetable *A table information showing when things will happen* Two-way table *Presenting data from more than one category to see the frequency of each category.*	previous vocabulary… Pie chart *A graph where a circle is divided into sectors to represent a proportion* Mean *Average; a central value of a set of values. Add up all the numbers and divide by how many numbers there are.* Statistics *Gathering information, summarising it and deciding what it means.* Distribution *How data is spread out* Outcome *A result that depends on probability* Proportion *A portion or part in relation to a whole*