



Maths

at Bank Lane Infant and Nursery School
Working together, nurturing excellence.

Subject Lead – Dawn Ella
Under Construction – Oct 23
We judge our Maths curriculum to be
Gold Standard



Effort



Ethel

Collaboration



Cornelius

Excellence



Eberhardt

Respect



Radmilla

Banks Lane Infant Intent

At Banks Lane Infant and Nursery School, we strongly promote our belief that maths plays a central role in everyday life, enabling our children to measure, organise, and make sense of the world. Our aim is to make maths an inspiring and engaging subject that empowers our children to confidently and efficiently apply problem-solving, reasoning, and logic skills in their daily lives.

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Maths Concepts

Knowledge and enquiry in maths are divided into distinct areas and children need to be able to move fluidly between these and be able to make connections when solving sophisticated problems. These areas are: ● Number and Place Value ● Addition and Subtraction ● Multiplication and Division ● Measurement ● Properties of Shape ● Position and Direction ● Statistics. In the early years foundation stage they are: ● Number ● Shape, Space and Measure.

Children need substantive knowledge in mathematics (e.g. number facts, times tables) and disciplinary knowledge (how to work things out, reason and problem solve).

Substantive Concepts - Pupils need a comprehensive understanding, including knowledge of number bonds and multiplication facts, to effectively grasp intricate concepts. Through intentional and repeated practice, children develop confidence, fluency and efficiency, embedding this essential knowledge in their long-term memory. Children are guided to establish connections between various mathematical elements, enhancing their substantive knowledge. Our school adopts a mastery approach, utilising White Rose Maths to structure units, ensuring seamless continuity and progression. This methodology empowers pupils to construct a robust foundational understanding.

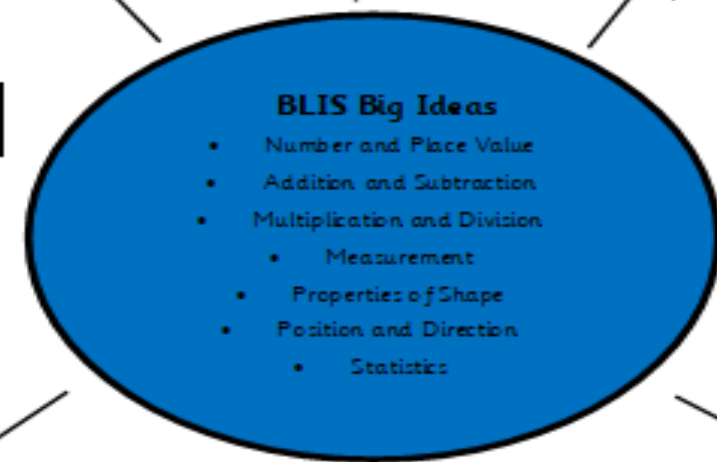
Disciplinary knowledge - Children will apply their Substantive Knowledge through reasoning and problem-solving activities. These opportunities are woven into their daily maths and Mastering Number lessons. Mathematical Sentence Stems and Can you Still? retrieval activities are taught and displayed in all classrooms to support this.

Fingertip Knowledge

Substantive Concepts

BLIS Big Ideas

- Number and Place Value
- Addition and Subtraction
- Multiplication and Division
 - Measurement
- Properties of Shape
- Position and Direction
 - Statistics



Disciplinary Knowledge

EYFS

Using and Applying
Investigating
Reasoning
Problem Solving
Analysing, justifying and proving

KS1

Using and Applying
Investigating
Reasoning
Problem Solving
Analysing, justifying and proving

Lower KS2

Using and Applying
Investigating
Reasoning
Problem Solving
Analysing, justifying and proving

Curriculum plans – How are knowledge and skills built across throughout school?

- Our Progression Grids start in EYFS, using the EYFS Framework, Development Matters, our school 'Progression of Skills' and the ELGs as end points.
- Maths Planning starts in Nursery with planning taken from Master the Curriculum and then moving on to Mastering Number and WRM in Reception, Year 1 and Year 2.
- Our Progression Grids continue for maths for KS1. These are based upon The National Curriculum Programmes of Study. They are split into Year 1 and Year 2.
- The Progression Grids cover 'Number and Place Value', 'Addition and Subtraction', 'Multiplication and Division' and 'Fractions'.
- Vocabulary also features in our Progression Grid and is split in each year group.
- All maths Progression Grids are in staff Curriculum Files so everyone knows where their 'bit' fits in and what is coming next for the children.
- There is also a Progression Grid which shows the long term progression of skills from EYFS to Year 3. This enables teachers to check what the children have learned in previous year groups, what is to come and where children are expected to be at the end of each year.

ET Overview of Progression			
Educational Programme EYFS Framework		Early Learning Goals	
<p>Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them, and the patterns within these numbers. By providing frequent and varied opportunities to build and apply this understanding – such as using manipulatives, including small games and tens frames for organising counting – children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, have a go, talk to adults and peers about what they notice and not be afraid to make mistakes.</p>			
Nursery Development Matters	Reception Development Matters	Number	
<ul style="list-style-type: none"> First reception class 18 objects without having to count them individually (labelling) Recite numbers past 5 Say one number for each item in order: 1, 2, 3, 4, 5 Know that the last number recited when counting a small set of objects will give how many there are in total (cardinal principle) Show 'finger numbers' up to 5 Link numbers and amounts, for example, showing the right number of objects to match the number, up to 5 Experiment with their own symbols and marks as well as numerals Solve real world mathematical problems with numbers up to 5 Compare quantities using language 'more than', 'fewer than' 	<ul style="list-style-type: none"> Count objects, actions and sounds Join Link the number symbol (numeral) with its cardinal number value Count beyond ten Compare numbers Understand the 'one more than/one less than' relationship between consecutive numbers Explore the composition of numbers to 10 Automatically recall number bonds for numbers 0-6 and some to 10 Identify, create and manipulate shapes to develop spatial reasoning skills Compare and describe shapes so that children recognise a shape can have other shapes within it, just as numbers can Continue, copy and create repeating patterns Compare length, weight and capacity 	<ul style="list-style-type: none"> Have a deep understanding of number to 10, including the composition of each number Subtly recognise quantities without counting up to 5 Automatically recall number bonds up to 5 (including consecutive numbers and some number bonds to 10), including double facts <p>Numerical Patterns</p> <ul style="list-style-type: none"> Verbally count beyond 20, recognising the pattern of the counting system Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity Explore and represent patterns within numbers up to 10, including even and odd, double facts and how quantities can be distributed equally 	

Year	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<p>1.1 Big Question: How did the dinosaurs leave their mark on the world? What will your Year 1 footprint look like?</p> <p>Topic: The Land before Time Theme: Forever changing Book: Kate And The Dinosaurs</p> <p>1.2 Big Question: How do we all help each other?</p> <p>Topic: Into the Woods Theme: Respect Book: 50 Stars With A Seed, The Tree, The Gruffalo</p> <p>2.1 Big Question: What can we learn from fairy tales?</p> <p>Topic: Once Upon A Time Theme: Action/sequence/light and wrong/keeping safe Book: Little Red Riding Hood & Various Fairy Tales</p> <p>2.2</p>	Number Place value (within 10)					Number Addition and subtraction (within 10)					Consolidation Emergency Strategy	
	Number Place value (within 20)		Number Addition and subtraction (within 20)		Number Place value (within 50)		Measurement Length and height		Measurement Mass and volume			

Banks Lane Infant & Nursery School | Year 1 Maths End Point: Number

Year	2014 NC: Number and Place Value	2014 NC: Addition and Subtraction	2014 NC: Multiplication and Division	2014 NC: Fractions
Year One	<ul style="list-style-type: none"> 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 tens, five and tens Give a number, identify one more and one 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 Read and write numbers from 1 to 20 in numerals and words 	<ul style="list-style-type: none"> 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 ones Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as: $7 + \square = 10$ 	<ul style="list-style-type: none"> Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher 	<ul style="list-style-type: none"> Recognise, find and name a half as one of two equal parts of an object, shape or quantity Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity

Mastering Number

Year 1 Overview

Term 1	Term 2	Term 3
<p>Pupils will have an opportunity to consolidate the Early Learning Goals and continue to explore the composition of numbers within 10, and the composition of these numbers in the linear number system.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> subitize within 5, including when using a rekenrek, and re-cap the composition of 5 develop their understanding of the numbers 5 to 9 using the '5 and a bit' structure compose numbers within 10 and use precise mathematical language when doing so re-cap the order of numbers within 10 and connect this to '1 more and 1 less' than a given number 	<p>Pupils will continue to explore the composition of numbers within 10 and explore addition and subtraction structures and the related language (without the use of symbols).</p> <p>Pupils will:</p> <ul style="list-style-type: none"> explore the composition of each of the numbers 7 and 9 explore the composition of odd and even numbers, seeing that even numbers can be made of two odd or two even parts, and that odd numbers can be composed of one odd part and one even part identify the number that is two more or two less than a given odd or even number, identifying that two more/less than an odd number is the next previous odd number, and two more/less than an even number is the next previous even number 	<p>Pupils will explore the composition of numbers within 20 and their position in the linear number system. They will connect addition and subtraction expressions and equations to number stories.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> explore the composition of the numbers 11 to 19 as '10 and a bit' and compare numbers within 20 connect the composition of the numbers 11 to 19 to their position in the linear number system, including identifying the midpoints of 5, 10 and 15 compose numbers within 20 understand how addition and subtraction equations can represent previously explored structures of addition and subtraction (aggregation/partitioning/augmentation/reduction)

Banks Lane Infant and Nursery School
Whole-School Mathematics Progression Map

Addition and Subtraction	EYFS (3 to 4 years to ELG)	KS1 Statutory Curriculum Guidance Non-Statutory Curriculum Guidance Teacher Assessment Framework		KS2 Statutory Curriculum Guidance Non-Statutory Curriculum Guidance
	3 and 4 year olds	Year 1	Year 2	Year 3
Mental calculations	<p>3 and 4 year olds</p> <p>Early Learning Goals</p> <p>Automatically recall number bonds for numbers 0-5 and some to 10.</p> <p>Automatically recall (without reference to fingers, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.</p>	<p>To add and subtract one-digit and two-digit numbers to 20, including zero.</p> <p>To realise the effect of adding or subtracting zero.</p>	<p>To extend the language of addition and subtraction to include sum and difference.</p> <p>To show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.</p> <p>To add and subtract numbers using an efficient strategy, explaining their mental working, using concrete objects, pictorial representations, and mentally, including a two-digit number and ones, a two-digit number and tens, two two-digit numbers, add three one-digit numbers.</p>	<p>To add and subtract numbers mentally, including two-digit numbers, where the answer could exceed 100, a three-digit number and ones, a three-digit number and tens and a three-digit number and hundreds.</p>



Curriculum Plans – What are the plans for progression of vocabulary?

Possible sentence stems to further support children's mathematical language and to develop their reasoning skills.

- Vocabulary is planned for in each subject's Progression Grid.
- Stem Sentences are used to further support children's mathematical language and to develop reasoning skills. They help with retention and recall.
- Year 1 and 2 has a list of Stem Sentences that are relevant to their year group and that can be used in relation to the retention and recall of number bonds.
- Reception have their own Stem Sentences that they use when teaching Mastering Number. These are used throughout the day to aid with retention and recall.
- WRM planning used in Reception, Year 1 and 2 has possible Stem Sentences that can be used in lessons and key questions to prompt children's thinking and verbal reasoning.

Stem sentence - 1 and another 1 is 2.

Stem sentence - _ has more than _.

These are the number bonds encountered in Year 1 and Year 2 in weeks 1 to 10 of the Mastering Number programme. The call and response activity can be used when you have a few spare moments during the day. The core structures and representations are included so you can remind children of these and ask them to visualise a familiar image as they say the stem sentence. For example, can they see a square 3 x 3 grid with one row colored yellow and two rows colored red as they say, '9 is made of 3 and 6; 3 and 6 make 9'.



Number bonds	Week		Stem sentences	Core structures and representations	Call and response	
	Y1	Y2			Teacher	Children
2, 3, 4, 5	1	1	I have 3, I have 2, together we have 5.	<u>Subitising</u> Subitising dot patterns	I have 3, I have 2, together we have 5.	6 is made of 3 ... and 3 and 3 make 6.
5 and a bit	2	2	4 is made of 5 and 1; 5 and 1 make 4.	5 and a bit on a <u>calendar</u> Conceptual subitising Dice pattern	7 is made of 5 ... and 2; 5 and 2 make 7.	7 is made of 5 ... and 2; 5 and 2 make 7.
			8 is made of 5 and 3; 5 and 3 make 8.		8 is made of 5 ... and 3; 5 and 3 make 8.	
			9 is made of 5 and 4; 5 and 4 make 9.		9 is made of 5 ... and 4; 5 and 4 make 9.	
All 4	5	5	6 is made of 4 and 2; 4 and 2 make 6.	2 x 3 grid Odd and even pairs	1 needs 5 to make 4; 1 and 5 make 4.	6 is made of 4 ... and 2; 4 and 2 make 6.
			8 is made of 7 and 1; 7 and 1 make 8.		8 is made of 7 ... and 1; 7 and 1 make 8.	
5 and 8	6	6	5 needs 3 to make 8; 5 and 3 make 8.	2 x 4 grid Odd and even pairs	3 needs ... 3 to make 8; 5 and 3 make 8.	7 is made of 6 ... and 1; 6 and 1 make 7.
			7 is made of 6 and 1; 6 and 1 make 7.		7 is made of 6 ... and 1; 6 and 1 make 7.	
All 7	8	8	5 needs 2 to make 7; 5 and 2 make 7.	<u>Subitising</u> 7 ducks swimming	5 needs ... 2 to make 7; 5 and 2 make 7.	9 is made of 8 ... and 1; 8 and 1 make 9.
			9 is made of 8 and 1; 8 and 1 make 9.		4 needs ... 5 to make 9; 4 and 5 make 9.	10 is made of 9 ... and 1; 9 and 1 make 10.
All 9	9	9	4 needs 5 to make 9; 4 and 5 make 9.	3 x 3 square grid	9 is made of 8 ... and 1; 8 and 1 make 9.	10 is made of 9 ... and 1; 9 and 1 make 10.
			10 is made of 9 and 1; 9 and 1 make 10.		10 is made of 9 ... and 1; 9 and 1 make 10.	
All 10	10	10		Ten row of rekenrek		

Year 1 | Autumn term | Block 1 – Place value | Step 1

Sort objects

Notes and guidance

In this small step, children learn that collections of objects can be sorted into sets based on attributes such as colour, size or shape. Sorting enables children to consider what is the same about all the objects in one set and how they differ from the objects in other sets. Children need to understand that the same collection of objects can be sorted in different ways and should be encouraged to come up with their own criteria for sorting objects into sets. Practical activities should be used to support the learning in this step and ideas are suggested in Key Learning. The concept of sorting can also be reinforced during daily activities such as lining up. Children could be asked to line up based on certain criteria, for example whether they have a sister.

Things to look out for

- Children may think that a group of objects can only be sorted in one way.
- Children may not focus on a single similarity, but instead on different attributes, leading to incorrect placement of objects in some sets.

Key questions

- What is the same about all the objects in the set?
- What is different about the sets?
- Can you find an object that belongs to this set?
- Can you find an object that does not belong to this set? Why does it not belong?
- Can you think of a different way to sort the objects?

Possible sentence stems

- This set of objects has been sorted by _____
- I could also sort the objects by _____
- _____ does belong in the set because _____
- _____ does not belong in the set because _____

National Curriculum links

- 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

YEAR 1 NUMBER

Number and place value

Number
number
numeral
zero
one, two, three ... twenty
teens numbers, eleven, twelve ... twenty
twenty-one, twenty-two ... one hundred
none
how many ...?
count, count (up) to, count on (from, to), count back (from, to)
forwards
backwards
count in ones, twos, fives, tens
equal to
equivalent to
is the same as
more, less
most, least
many
odd, even
multiple of
few
pattern
pair

Place value

ones
tens
digit
the same number as, as many as
more, larger, bigger, greater
fewer, smaller, less
fewest, smallest, least
most, biggest, largest, greatest
one more, ten more

one less, ten less
equal to
one more, ten more
one less, ten less
compare
order
size
first, second, third ... twentieth
last, last but one
before, after
next
between
half-way between
above, below

Estimating
guess
how many ...?
estimate
nearly
roughly
close to
about the same as
just over, just under
too many, too few
enough, not enough

Addition and subtraction

addition
add, more, and
make, sum, total
altogether
double
near double
half, half
one more, two more ... ten more
how many more to make ...?
how many more is ... than ...?
how much more is ...?

Fractions

fraction
equal part
equal grouping
equal sharing
parts of a whole
half
one of two equal parts
quarter
one of four equal parts

Subtraction

take away
how many are left/left over?
how many have gone?
one less, two less, ten less ...
how many fewer is ... than ...?
how much less is ...?
difference between
equals
is the same as
number bonds/pairs
missing number

Multiplication and division

multiplication
multiply
multiplied by
multiple
division
dividing
grouping
sharing
doubling
halving
array
number patterns

MEASUREMENT

measure
measurement
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

Length
centimetre, metre
length, height, width, depth
long, short, tall
high, low
wide, narrow
track, line
longer, shorter, taller, higher ... and so on
longest, shortest, tallest, highest ... and so on
far, near, close
ruled
metre stick

Weight

kilogram, half kilogram
weigh, weighs, balances
heavy, light
heavier than, lighter than
heaviest, lightest
scales

Capacity and volume

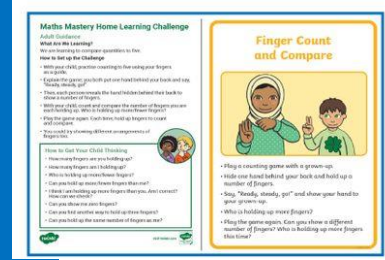
litre, half litre
capacity
volume
full
empty
more than
less than
half full
quarter full
holds
container

Time

time
days of the week, Monday, months of the year (January), seasons: spring, summer, autumn, winter, day, week, weekend, month, birthday, holiday
morning, afternoon, evening
bedtime, dinner time, party, today, yesterday, tomorrow
before, after
earlier, later
next, first, last
minutes
date
now, soon, early, late
quick, quicker, quickest, quickly
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 ...?
how often?
always, never, often, sometimes



Curriculum plans – What are the plans for retention of knowledge and skills? Linking learning and remembering learning.



These are the number bonds encountered in Year 1 and Year 2 in weeks 1 to 10 of the Mastering Number programme. The odd and response activity can be used when you have a few spare moments during the day. The core structures and representations are included as you need children of these and are shown by touching a number bond as they say the stem sentence. For example, when they see a 2 and 3, a 2 and 3 grid with one red and one yellow and two more coloured and so they say, "I have 2 and 3, together we have 5."

Number bonds	Week	Stem sentence	Core structures and representations	Odd and response
Y1	Y2			Teacher
5, 8, 4, 8	1	I have 5, I have 2, together we have 8.	5 and 2 8 and 2	I have 8, I have 2, together we have 8.
8 and 8	2	8 is made of 8 and 0, 1 and 1, 2 and 6, 3 and 5, 4 and 4, 5 and 3, 6 and 2, 7 and 1.	8 and 0 8 and 1 8 and 2 8 and 3 8 and 4 8 and 5 8 and 6 8 and 7 8 and 8	8 is made of 8, and 0, 1 and 1, 2 and 6, 3 and 5, 4 and 4, 5 and 3, 6 and 2, 7 and 1.
10	3	10 is made of 10 and 0, 1 and 1, 2 and 8, 3 and 7, 4 and 6, 5 and 5, 6 and 4, 7 and 3, 8 and 2, 9 and 1.	10 and 0 10 and 1 10 and 2 10 and 3 10 and 4 10 and 5 10 and 6 10 and 7 10 and 8 10 and 9 10 and 10	10 is made of 10, and 0, 1 and 1, 2 and 8, 3 and 7, 4 and 6, 5 and 5, 6 and 4, 7 and 3, 8 and 2, 9 and 1.

Stem sentence - 1 and another 1 is 2.

Stem sentence - 1 and another 1 makes 3.

- Working walls are used to help remind children of what they have previously learned.
- Relevant stem sentences are added to maths working walls and also current vocabulary being used in lessons.



Mastering Number is aimed at strengthening the understanding of number and fluency with number facts. This is taught for 10/15 minutes 4x week. Stem sentences are modelled and repeated to help embed mathematical concepts.

- Can You Still?** Retention and recall activities start new pieces of maths work in Y1 and Y2.

'Tap It Out' is used to consolidate new vocab and calculations in maths. These are displayed on classroom doors as a 'password' to tap as children enter and exit the classroom.



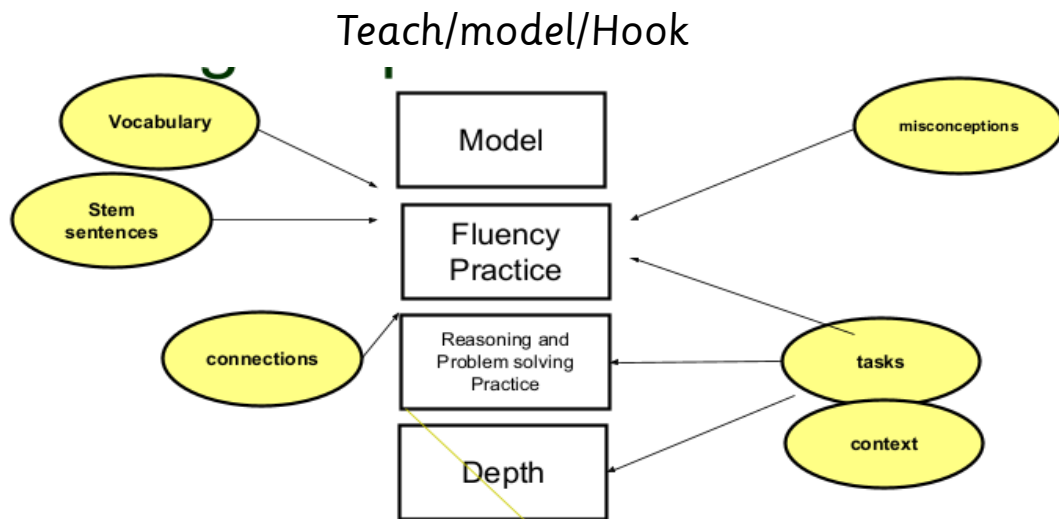
18.09.20
Can you still..?
Can you still partition 2 digit numbers?

Nursery Development Matters		Reception Development Matters		Early Learning Goals															
<ul style="list-style-type: none"> Fast recognition (up to 5) objects Recognise numbers up to 5 Know that the last number named when counting a set of objects tells you how many there are in total (cardinal principle) Order three numbers up to 5 Link numbers and amount for example, arranging the right number of objects to match the number, up to 5 Experiment with their own symbols and marks to tell a story. Use real world mathematical problems with numbers up to 5 Compare quantities using language 'more than', 'fewer than' Use dots and explore 2D and 3D shapes (for example, circles, rectangles, triangles) not contained using adjacent mathematical language 'label', 'corner', 'length', 'flat', 'round' Understand position through words above, below, 'the top is under the table', 'with its ending' Describe a familiar room Classify objects and pictures, using words like 'the same' and 'different' Make comparisons between objects relating to length, weight, and capacity. 	<ul style="list-style-type: none"> Classify objects, actions and events. Subitise Link the number symbol (numeral) with its cardinal number value. Count forward and Count backwards Understand the one more objective (e.g. that 1 additional object creates one more) Explore the composition of numbers up to 10 Acknowledge that number bonds can be broken down and joined in 10 ways and recognise shapes to develop spatial reasoning skills. Compare and describe shapes as they children, using language to describe shapes with their own number words. Create, copy and extend repeating patterns. Compare length, weight and capacity. 	<ul style="list-style-type: none"> Count Matching Sorting Number 1 Number 2 Pattern Classification 	<ul style="list-style-type: none"> Counting Cardinal language More than/less than Shape 2D Shape 3D Calculation Number comparison What comes after? What comes before? Numbers to 5 Classification 																
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- Whole school planning is set out so teachers know their part, what has come before and what comes after.
- Planning from EYFS, to Year 1 then to Year 2 builds upon what has been previously taught.

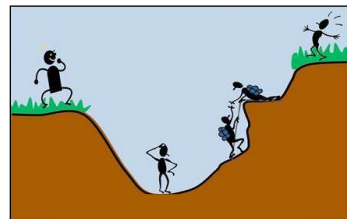
Pedagogy – *How are lessons structured?*


A Teaching Sequence – Main lesson




C-P-A Concrete, Pictorial, Abstract

Digging Deeper



- Can you still? 
- Misconceptions from previous lesson or it could be True/False, Do you agree? – focusing on misconceptions and opportunities to reason about teacher initiated mistakes to challenge conceptual understanding.
- Practical (concrete) activities used to address Fluency. A range of Pictorial images used in books to show this also.
- Problem solving and reasoning activities incorporated into every lesson. The children are encouraged to use their mathematical skills, thinking and understanding to find solutions and solve problems.
- Digging Deeper activity/activities for those children who require them to address challenge.
- Mastering Number sessions take place 4x week from Reception to Year 2 in addition to the main maths teaching.

Assessment – Measuring children’s progress, key findings

Data	Maths On a Page 2022/ 23	Data
<p>EYFS</p> <ul style="list-style-type: none"> GLD 78.4% (All), 65.2% National Maths 85.2 % (All), 75.9% National Maths 82.9 % (Boys), 73.3% National Maths 87.2% (Girls), 78.7% National Maths 33.3% (E) , 43.1% and 13.8% National Maths 85.2% (PP/ FSM), 75.9% National 	<p>KS1</p> <ul style="list-style-type: none"> 75% Exp+ (All), 67.7% National 23.9% GDS, 15.1% National 72.3% Exp+ (Boys), 68.1% National 25.5% GDS, 17.7% National 78% Exp+ (Girls), 67.2% National 22% GDS, 12.4% National 37.5% Exp+ (SEND), 100% (E) 32.9% (SEND) 14% (E) National 12.5% GDS (SEND) 0% (E), 4.5% (SEND) 2.2% (E) National 35.3% Exp+ (PP/ FSM), 51.8% National 0% GDS, 6.7% National 	

Strengths	Development Points
<p><u>EYFS</u></p> <p>Above in all areas (see above)</p> <p><u>KS1</u></p> <p>Combined Boys and Girls above National and LA in Expected + (75%) National (68%) and LA (69%)</p> <p>Above National and LA in Expected + and GDS for both boys and girls. (see above data)</p> <p>Maths GDS (24%) is above National (15%) and LA (17%).</p> <p>SEND Above National and LA in Expected + and GDS (See above data)</p>	<p><u>EYFS</u></p> <p>Introduce WRM for Reception Number maybe ?</p> <p><u>KS1</u></p> <p>Gender gap is mirrored in National and LA but ours is slightly higher - Boys 72% Girls 78%</p> <p>We do have a slight gender gap in GDS (Boys 26% Girls 22%)</p> <p>PP/FSM 35.3% Exp+ 51.8% National 0% GDS, 6.7% National</p>

Monitoring – *Book Look (Feb '23)*

Reception

- Floor book sheets seen for all 3 classes. They show pupil voice, photographs of learning, vocabulary taught/used and model and images used.
- Seesaw maths skills seen on Seesaw. Maths skills assigned to chosen children (5,10,22 - see register). Reception age steps including, subitising and exploring the composition of numbers to ten seen.

Reception

- Keep up to date with recording whole class and group learning in floor books and assigning maths skills on Seesaw.
- Update new 'I can' unit assessments for WRM units. (will help with showing gaps in learning and highlighting those that need maths interventions).

Things to discuss further:

- 'I can' challenges in classroom maths areas and outside/den areas. Think about ways of recording this.
- Monitoring of maths skills and gaps for individual children. (individual teachers)

Monitoring – *Book Look* (Feb '23)

Year 1

- Good use of visuals in books (part whole model, ten frames etc.
- Practical stickers being used to highlight practical activities indoors and outdoors.
- Photographs in books to demonstrate practical lessons.
- More writing in books as the year progresses.
- Evidence of manipulatives being used in all classes. Are there lots of opportunities to use them?
- Retrieval practice taking place and highlighted by brain symbol at the beginning of lesson.

Resource implication - ordered more tens and ones base 10 resources for all classes.

Year 1

- If there are gaps in work or unanswered question, why is that? Need an explanation.
- Make sure reversals of numerals are addressed.
- Where there are problem solving and verbal reasoning questions e.g. Can you do it a different way?, What do you notice? They need answering. It might be that an adult scribing for them.
- Make sure independence indicators are circled on all pieces of work.
- New TAFs to be implemented.
- Start using unit assessments in books like Year 2 (red, amber, green) to highlight the children's level of understanding of smaller steps in units. (highlights gaps for interventions)
- Value stickers to be used in books to highlight excellence, effort, collaboration, respect.

We agreed as a staff that Maths teaching should be taking place every day and recording should be 4 times a week (practical lessons included in this).

Monitoring – Book Look (Feb '23)

Year 2

- Good use of visuals in books (part whole model, ten frames etc.
- Practical stickers being used to highlight practical activities indoors and outdoors.
- Photographs also in books to demonstrate practical lessons.
- More writing in books as the year progresses.
- Unit assessments in books (red, amber, green) to highlight the children's level of understanding of smaller steps in units. (highlights gaps for interventions)
- Evidence of manipulatives being used in all classes. Are there lots of opportunities to use them?
- Retrieval practice taking place and highlighted by brain symbol at the beginning of lesson.
- New TAFs look great and more manageable.
- **Resource implications - ordered more tens and ones (dienes) for Year 1 and 2**

Year 2

- If there are gaps in work or unanswered question, why is that? Need an explanation.
- Where there are problem solving and verbal reasoning questions e.g. Can you do it a different way?, What do you notice? They need answering. It might be that an adult scribing for them.
- Problem solving and reasoning is taking place but this needs to be clearly seen in books. Some indicator is required to highlight these questions.
- Make sure independence indicators are circled on all pieces of work.
- Practical stickers to be used to highlight any practical activities taking place in the week so there is evidence that the lessons took place in the books. **(see me for printing labels)**
- Money to be taught through Multiplication and Division to make up the time spent on previous units and securing children's understanding of key concepts.
- Value stickers to be used in books to highlight excellence, effort, collaboration, respect.

We agreed as a staff that Maths teaching should be taking place every day and recording should be 4 times a week (practical lessons included in this).

**Things for discussion on Monday in our meeting after school:
Problem solving questions and how to highlight them.**

Practical lessons and labels

Recording in books (How often)

Contextual Day (Kirsty to describe)

4 a day (retrieval)

Fluency resource and other resources to show

Assessment—how to show whole class progression

Inclusion – Challenge and adaptation

Maths SEND/Inclusion offer



- Our Maths curriculum is a spiral planned curriculum that allows for a flexible approach to time spent on units. The curriculum is designed so that content is revisited and built upon. It may be appropriate to revisit Mathematical topics and concepts more often with children with SEND/ADHD to support 'over learning' and retention.
- Our Maths curriculum promotes inclusion with **Multisensory approaches** and appropriate **differentiation**. Concrete and pictorial resources are available in well-resourced classrooms to support children with their mathematical learning and discussions. Our CPA approach (concrete, pictorial, abstract) supports inclusive high quality teaching with a deep understanding of mathematical concepts.
- Standard SEN Standards are used for assessment, tracking and target setting in Maths.
- Children with SEND are able to articulate their learning and the support they receive.
- Our Mastering Number sessions focus on strengthening children's deep understanding of number and fluency with number facts through daily repetition of key concepts, which links to our metacognitive approaches to teaching and learning - 'Can you still?' and plenary triangle.
- Dyslexia friendly teaching and learning strategies.
- 'Brain breaks' are provided for all children if required.
- Non-verbal and spatial are introduced, explored and displayed on the Maths working walls along with working examples of Maths concepts. Stem sentences are used in the Mastering Number sessions. They provide scaffolding to help children become more confident in speaking mathematically and move children to a more abstract way of thinking.
- Language in lessons is clear, unambiguous and accessible. Wording of questions is carefully thought out, avoiding complex vocabulary and sentence structures. Time is given for children to respond to open ended questions.
- Chunking and verbal summaries allow for swift intervention, identifying the formation of additional/intervention groups. Bright Maths is a targeted intervention programme used within school. Intervention work is clearly linked to classroom work and children are encouraged to be a part of appropriate work.
- Support from additional adults is planned to scaffold pupils' learning, allowing them, increasingly to work independently. Mixed ability groupings or pairings along with whole class are used across the school.
- Teach Active is used as a whole school cross-curricular approach to improve attitudes and outcomes in Maths, which also improves children's health and wellbeing through physical activity. Each class engage in Teach Active lessons.
- Daily mindfulness empowers our SEND children with the skills to look after their own mental health by increasing focus, improving academic performance and decreasing levels of stress.

SEND Assessment E/M/X Tracker

SENCo Subject Lead Class teacher

KS1 SEND assessment - EMX Tracker 22-23

Predictions for End of Year

Autumn -

Name and class	Main area of need	Reading	Writing	S&L	Maths / Numeracy	Maths/Shape	Science	Computing	PSHE	History	Geog	RE	Art	DT	Music	P.E.
	EHCP ASD	On track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track
	EHCP ASD	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track
	EHCP ASD	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track	Not on track
	Communication & Interaction (speech)	on track	on track	Not on track	on track	on track	on track	on track	on track	on track	on track	on track	on track	on track	on track	on track
	SEMH	on track	on track	on track	on track	on track	on track	on track	on track	on track	on track	on track	on track	on track	on track	on track
	Communication & Interaction	Not on track	not on track	Not on track	not on track	not on track	not on track	not on track	not on track	not on track	not on track	not on track	not on track	not on track	not on track	not on track

Possible Indicators

- Working towards on TAFs.
- Difficulty retaining maths skills and concepts taught.
- Highlighted children on progression grid who are working towards.

SEND/ Inclusion Offer

Maths Provision Map



The Inclusion offer for maths is written in parallel with our Whole School Provision Maps, which detail the Quality First Teaching Strategies included in our Universal Offer.

EHCP referral

SSP with maths targets included. Stockport SEN Standards Tracker is used for monitoring progress, attainment and assessment in Maths.

Monitoring during Phase Progress Reviews.

Children are able to articulate their learning and the support they receive.

Recording using numeral cards or circling numerals on number lines rather than writing them.

Ongoing and termly assessments allow for swift intervention, informing the formation of intervention groups. Intervention work is clearly linked to classroom work and children can articulate this (at a level appropriate to them.)

Teacher or TA support within the classroom to access QFT.

Monitoring during Phase Progress Reviews.

Identification to SENCo and Subject Lead.


Individualised

Targeted

Universal

Our curriculum is a spiral planned curriculum that allows for a flexible approach to time spent on units. The curriculum is designed so that content is revisited and built upon. It may be appropriate to revisit Mathematical topics and concepts more often with children with SEND/ADHD to support 'over learning' and retention. At the beginning of each lesson prior learning and misconceptions are addressed. Our Maths curriculum promotes inclusion with **Multisensory approaches** and appropriate **differentiation**. Concrete and pictorial resources are available in well-resourced classrooms to support children with their mathematical learning and discussions. Our CPA approach (concrete, pictorial, abstract) supports inclusive high quality teaching and a deep understanding of mathematical concepts. Our Mastering Number sessions focus on strengthening children's deep understanding of number and fluency with number facts through daily repetition of key concepts, which links to our metacognitive approaches to teaching and learning - 'Can you still?' and plenary triangle. Dyslexia friendly teaching and learning strategies. 'Brain breaks' are provided for all children, if required. New vocabulary and symbols are introduced, explored and displayed on the Maths working walls along with working examples of Maths concepts. Stem sentences are used in the Mastering Number sessions and maths sessions. They provide scaffolding to help children become more confident in speaking mathematically and move children to a more abstract way of thinking. Language in lessons is clear, unambiguous and accessible. Wording of questions is carefully thought out, avoiding complex vocabulary and sentence structures. Time is given for children to respond to open ended questions. Support from additional adults is planned to scaffold pupils' learning, allowing them, increasingly to work independently. Mixed ability groupings or pairings along with whole class are used across the school. Daily mindfulness empowers our SEND children with the skills to look after their own mental health by increasing focus, improving academic performance and decreasing levels of stress. Verbal praise recognising the process, progress and effort, not just achievement. Stickers in maths books to reflect our school values of effort, excellence and collaboration. Children not removed from whole class. Explicit teaching of strategies to minimise the impact of limited working memory when completing calculations, e.g. use of a whiteboard for jotting down key information. Opportunities to apply their skills and to build their mathematical language in practical situations. Songs, games, stories, rhymes and mnemonics are used to highlight procedures. Multiple examples of new concepts provided with examples taken from real life rather than talking in abstract.

Subject evaluation - *How do I find out about what's going well and what needs to improve?*

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Actions-What Will You Do? <ul style="list-style-type: none"> Progress reviews (Oct), identification of children, targeted additionality groups (maths) Work with Maths Hub to enhance maths in school—devise an Action Plan (first action to be an Intent statement for maths across school incorporating our school values) Whole school display on maths progression from EYFS to Yr2 needs to be updated in line with recent changes. Monitoring to be completed (pupil voice, learning walks, book looks) – ensure consistency in maths working walls. Look into purchasing an appropriate intervention programme for all year groups. Look at TA training in maths. Looks at links with home/parents in relation to maths. Look at resources in line with Calculation Policy. 	Maths at BLINS-What's in Place? <ul style="list-style-type: none"> Progression grids for Maths Assessment grids in Curriculum Files; end points, TAFs in KS1, Development Matters in EYFS Mastering Number WRM planning used Additionality for targeted children based upon TA, Progress Reviews, SEND status, PP status SEND; see SEND Pyramid for Maths Homework via Seesaw for Reception and weekly in books for KS1 	Subject Leader Monitoring & Support-How do You Know? <ul style="list-style-type: none"> Half-termly Footprint Reviews Termly Learning Walks Staff meetings Pupil voice Curriculum files, including gap analysis End of year data Data Pack analysis Subject Lead focussed twilight meetings (Nov) Being part of the Maths Hub 	
	Strengths <p>EYFS</p> <p>Above in all areas (see above)</p> <p>KS1</p> <p>Combined Boys and Girls above National and LA in Expected + (75%) National (68%) and LA (69%) Above National and LA in Expected + and GDS for both boys and girls. (see above data)</p> <p>Maths GDS (24%) is above National (15%) and LA (17%).</p> <p>SEND Above National and LA in Expected + and GDS (See above data)</p>	Development Points <p>EYFS</p> <p>Introduce WRM for Reception Number maybe ?</p> <p>KS1</p> <p>Gender gap is mirrored in National and LA but ours is slightly higher - Boys 72% Girls 78%</p> <p>We do have a slight gender gap in GDS (Boys 26% Girls 22%)</p> <p>PP/FSM 35.3% Exp+ 51.8% National 0% GDS, 6.7% National</p>	

Maths On a Page 2022/ 23 March 23 update



Data

Data

- EYFS**
- GLD 78.4% (All), 65.2% National
 - Maths 85.2 % (All), 75.9% National
 - Maths 82.9 % (Boys), 73.3% National
 - Maths 87.2 % (Girls), 78.7% National
 - Maths 33.3% (E) , 13.8% National
 - Maths 85.2% (PP/ FSM), 75.9% National

- KS1**
- 75% Exp+ (77% Spring 1) (All), 67.7% National 23.9% (28% Spring 1) GDS, 15.1% National
 - 72.3% Exp+ (80% Spring 1) (Boys), 68.1% National 25.5% (25% Spring 1) GDS, 17.7% National
 - 78% Exp+ (70% Spring 1) (Girls), 67.2% National 22% (18% Spring 1) GDS, 12.4% National
 - 37.5% Exp+ (51% Spring 1) (SEND), 32.9% (SEND) National 12.5% (38% Spring 1) GDS (SEND) , 4.5% (SEND) 35.3% Exp+ (69% Spring 1) (PP/ FSM), 51.8% National 0% (16% Spring 1) GDS, 6.7% National

- Actions-What Will You Do?**
- Progress reviews(Oct), identification of children, targeted additionality groups (maths)
 - Work with Maths Hub to enhance maths in school—devise an Action Plan (first action to be an intent statement for maths across school incorporating our school values)
 - Whole school display on maths progression from EYFS to Y6 needs to be updated in line with recent changes.
 - Monitoring to be completed (pupil voice, learning walks, book looks) – ensure consistency in maths working walls.
 - Look into purchasing an appropriate intervention programme for all year groups.
 - Look at TA training in maths.
 - Looks at links with home/parents in relation to maths.
 - Look at resources in line with Calculation Policy.

- Maths at BLINS - What's In Place?**
- Progression grids for Maths
 - Assessment grids in Curriculum Files; end points, TAPs in KS1, Development Matters in EYFS
 - Mastering Number
 - WRM planning used
 - Additionality for targeted children based upon TA, Progress Reviews, SEND status, PP status
 - SEND; see SEND Pyramid for Maths
 - Homework via Seesaw for Reception and weekly in books for KS1

- Subject Leader Monitoring & Support-How do You Know?**
- Half termly Foot print Reviews
 - Termly Learning Walks
 - Staff meetings
 - Pupil voice
 - Curriculum files, including gap analysis
 - End of year data
 - Data Pack analysis
 - Subject Lead focussed twilight meetings (Nov)
 - Being part of the Maths Hub

Strengths

EYFS

Above in all areas (see above)

KS1

Combined Boys and Girls above National and LA in Expected+ (75%) 77% Spring 1 National (68%) and LA (69%)

Above National and LA in Expected+ and GDS for both boys and girls. (see above data). Only boys now Expected+ and GDS in Spring 1

Maths GDS (24%) is above National (15%) and LA (17%). 25% Spring 1

SEND Above National and LA in Expected+ and GDS (See above data)

Development Points

EYFS

Monitor changing of planning and targets.

KS1

Gender gap is mirrored in National and LA but ours is slightly higher - Boys 72% 80% Girls 78% 70% (switched round 10% gap)

We do have a slight gender gap in GDS (Boys 26% (25% Spring 1) Girls 20% (18% Spring 1)

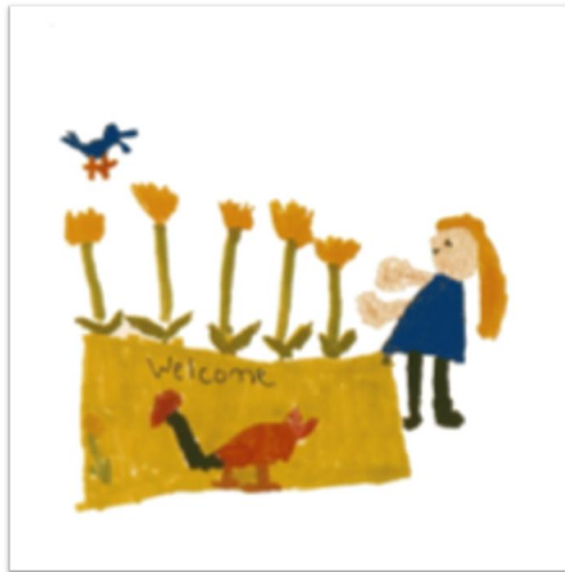
PP/FSM 35.3% (68% Spring 1) Exp+ 51.8% National 0% GDS, 6.7% National

Policy

WRM Calculation Policy

Banks Lane Infant and Nursery School

Working together, nurturing excellence



Maths Policy

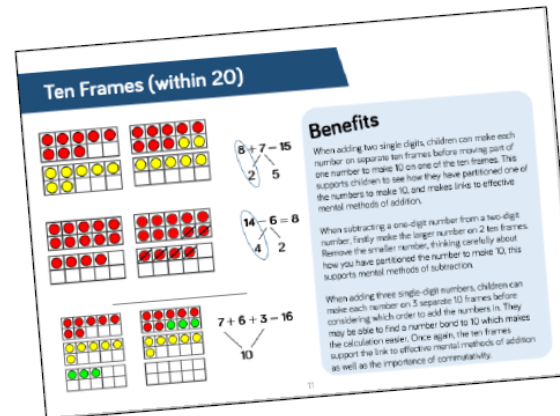
- In the process of being updated

Calculation Policy

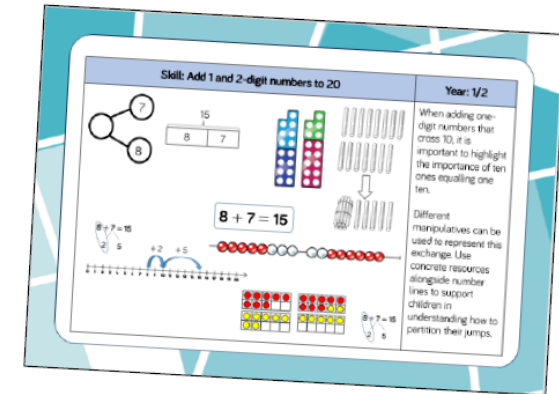
Welcome to the White Rose Maths Calculation Policy.

This document is broken down into addition and subtraction, and multiplication and division.

At the start of each policy, there is an overview of the different models and images that can support the teaching of different concepts. These provide explanations of the benefits of using the models and show the links between different operations.



Each operation is then broken down into skills and each skill has a dedicated page showing the different models and images that could be used to effectively teach that concept.



There is an overview of skills linked to year groups to support consistency through out school. A glossary of terms is provided at the end of the calculation policy to support understanding of the key language used to teach the four operations.