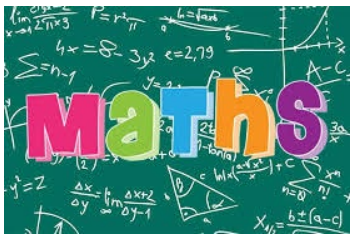


Morden PRIMARY SCHOOL
Learn - Achieve - Enjoy

Subject Story

Maths

At Morden Primary School, we believe mathematics is an important part of children's development throughout school. We believe that all children can succeed in maths and we aim to instil this belief in the children themselves. We want all children to enjoy mathematics and to experience success in the subject, instilling an 'I can' attitude to their learning.

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

- *become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.*

- *reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language*

- *can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.*

We intend on delivering a curriculum which:

Allows children to be a part of creative and engaging lessons that will give them a range of opportunities to **EXPLORE** mathematics following a mastery curriculum approach.

- Gives each pupil a chance to **BELIEVE** in themselves as mathematicians and develop the power of resilience and perseverance when faced with mathematical challenges.
- Recognises that mathematics underpins much of our daily lives and therefore is of paramount importance in order that children **ASPIRE** and become successful in the next stages of their learning.
- Makes rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.
- Provides opportunities for children to apply their mathematical knowledge to other subjects (cross-curricular links).

At Morden Primary School, the principles of 'Teaching for Mastery' are used throughout the school. In EYFS, the Early Learning Goals will be met through the use of the NCETM Mastering Number planning documents, supported with the Power Maths and White Rose Schemes.

From Y1-Y6, statutory requirements of the National Curriculum (2014) are met through the use of the Power Maths Scheme of Learning, supported with the NCETM Curriculum

Prioritisation in Primary Maths framework and White Rose. The Power Maths yearly and termly overviews provide the long-term and Medium-term plans, with adjusted small steps recorded on a word document planning format for each unit. The short-term planning is the 'Small Steps' lessons within each Unit, planned on PowerPoint.

Teachers use professional discretion when deciding on how long to spend on a particular curriculum area whilst ensuring all objectives are covered by the end of the academic year. These schemes of learning support a mastery approach to teaching and learning and have number at their heart. They ensure teachers stay in the required key stage and support the ideal of depth before breadth. They support pupils working together as a whole group and provide plenty of time to build reasoning and problem-solving elements into the curriculum. We see teaching for mastery in maths as allowing the pupils to gain a secure, long-term and deep understanding of maths.

At Morden Primary, we place high importance on mathematical talk. As a result, lessons include regular opportunities for the children to discuss their understanding and explain their thinking, both with the adults and their peers. Accurate use of vocabulary and terminology features prominently in our lessons, with teachers both modelling and expecting it from the children. We encourage children to answer questions in full sentences. Children are supported with this with the use of stem sentences. We believe this will support our children when faced with a range of mathematical problems.

Daily fluency

KS1 and KS2 have additional fluency sessions, which allow the children to retrieve previously taught knowledge in order to rehearse concepts.

Home Learning Expectations in Years 1-6 (*From Home Learning Policy*)

Maths	Children in Years 1-6 will be given a workbook for Maths which must be completed and returned to school as directed by their class teacher. Alongside the workbook, you will receive an overview of the half term's learning and useful support activities and websites that you may choose to use. **A replacement cost will incur for lost books.**
Half term Project (linked to the class topic)	Children should complete a project linked to a wider curriculum topic which will be provided by their class teacher. Provided on Google Classroom. Evidence is due into class by the end of half term.
Practising times tables TIMES TABLES ROCK STARS	School have purchased https://ttrockstars.com/ for children to practise their times tables. **Little and often,** practise of carefully sequenced questions is at the core of TTRS. **Ongoing practising of times tables is expected from Year 2-6. Children are expected to complete 30 minutes of TTRS per week at home. (Parents can choose how these minutes are distributed across the week)** Class teachers will track the performance of each pupil to adjust the tables they are getting and see the improvements made. Expectations from the National Curriculum are as follows: by the end of Year 2, children should know their **2x, 5x and 10x tables;** by the end of Year 3, children should also their **3x, 4x and 8x tables;** by the end of Year 4, children should know **ALL times tables up to 12 x 12.**
NUMBOTS To develop understanding, recall and fluency in mental addition and subtraction.	**Pupils in Y1** will be expected to use Numbots for **at least 20 mins a week.** For most effective practise we suggest playing for at least 4 minutes a day, 5 times a week. Teachers will set the target time for each class and will monitor weekly.

Home Learning Expectations in Early Years

NURSERY:

Learning Opportunities grid	
Termly	A grid will be will provided suggesting fun learning activities that children can do with their parents at home. This will include some maths, phonics, fine motor and gross motor activities.

RECEPTION:

Learning Opportunities grid	
Half termly	A grid will be will provided suggesting fun learning activities that children can do with their parents at home.
Maths	
NUMBOTS To develop understanding, recall and fluency in mental addition and subtraction,	Pupils will be expected to use Numbots for at least 20 minutes a week. For most effective practise we suggest playing for at least 4 minutes a day, 5 times a week. Teachers will set the target time for each class and will monitor weekly.
Maths for the half term.	All children will receive an overview sheet showing the small steps maths learning for the half term. This will include practical activities which should be completed each week.

EYFS, KS1 SATS, KS2 SATS Maths data

ATTAINMENT			PROGRESS	
EYFS	2024 MPS %	2024 Nat %	EYFS	2024 MPS %
ELG – Expected: Number	76		ELG – Expected: Number	100
ELG – Expected: Numerical patterns	76		ELG – Expected: Numerical patterns	100
KS1 Results Attainment	2024 MPS %	2024 Nat %	KS1 Results Progress	2024 MPS %
Expected in Maths	70			89
Working in greater depth - Maths	15			15
KS2 Results Attainment	2024 MPS %	2024 Nat %	KS2 Results Progress	2024 MPS %
Expected in Maths	77	72	Expected in Maths	80
Working in greater depth - Maths	17	25	Working in greater depth - Maths	17

Summary of Previous Years' Attainment and Progress (July 2024)

KS2 Results Attainment	2023 MPS	2023 Nat	2024 MPS	2024 Nat
Expected in R,W,& M Combined	53%	60%	47%	61%
Working Deeper R,W, M combined	13%	8%	3%	
Expected in Reading	67%	73%	67%	74%
Working in greater depth - Reading	33%	29%	23%	29%
Expected in Writing	67%	71%	57%	72%
Working in greater depth - Writing	17%	13%	7%	
Expected in Maths	63%	73%	77%	73%
Working in greater depth - Maths	33%	24%	17%	25%
Expected in GPS	77%	72%	70%	72%
Working in greater depth - GPS	27%	49%	13%	36%

KS2 Results Progress	2023 MPS	2023 Nat	2024 MPS	2024 Nat
Reading	-0.63	0		
Writing	-1.45	0		
Maths	0.13	0		

KS1 Results Attainment	2023 MPS	2023 Nat	2024 MPS	2024 Nat
Expected in R,W,& M Combined	63%	56%	52%	
Working Deeper R,W, M combined	10%	6%	0%	
KS1 Reading EXS	63%	67%	70%	
KS1 Reading GDS	23%	19%	19%	
KS1 Writing EXS	73%	60%	52%	
KS1 Writing GDS	10%	8%	7%	
KS1 Maths EXS	77%	68%	70%	
KS1 Maths GDS	23%	16%	15%	

Y4 MTC	2023 MPS	2024 MPS
Full marks (25)	43%	26%
19+	82%	74%
<19	18%	26%
<10	4%	7%

Y2 PHONICS (chn doing re-check)	2023 MPS	2023 Nat	2024 MPS	2024 Nat
Children taking re-check who achieved WA	60%	55%	40%	
% of Y2 WA (Cumulative)	93%	89%	89%	

YEAR 1	2023	2023	2024	2024
PHONICS	MPS	Nat	MPS	Nat
Whole class	90%	78%	86%	
PP	100%	n/a	82%	n/a
Non PP	90%	n/a	89%	n/a

Parent Survey Ofsted April 2024	Agree	Disagree	Don't Know
Child likes school	100%		
Child safe	96%	2%	2%
School makes sure pupil well behaved	96%	2%	2%
Child does well at this school	98%		2%
Bullying dealt with	93%	2%	6%
Recommend MPS	98%	2%	

EYFS	2023 MPS	2023 Nat	2024 MPS	2024 Nat
% at GLD	60%	67%	72%	
Reading Expected	93%	76%	76%	
Writing Expected	77%	71%	76%	
Maths Expected Number	87%	79%	76%	
Maths Expected NP	90%	78%	76%	

Area	MPS 2023	Merton 2023	National 2023	MPS 2024	Merton 2024	National 2024
GLD Communication & Language	70%	79%	80%	72%		
GLD Physical	90%	85%	85%	76%		
GLD PSE	90%	85%	85%	76%		
GLD Literacy	73%	71%	70%	76%		
GLD Maths	87%	78%	77%	76%		
% at GLD		68.7		72%		

If you were to walk into Maths lessons at Morden, you would typically see:

- The majority of our pupils progress through the curriculum content at the same pace. Differentiation is achieved by emphasising deep knowledge and through individual support with pre-teaching/ post-teaching and intervention.
- Practice and consolidation play a central role. Carefully designed conceptual and procedural variation in the Power Maths and supporting schemes resources builds fluency and understanding of underlying mathematical concepts in tandem.
- Teachers use precise questioning in class to test conceptual and procedural knowledge, and assess pupils regularly to identify those requiring intervention so that pupils keep up.
- Teachers will use the concrete, pictorial and abstract approach (CPA) to ensure that procedural and conceptual understanding are developed simultaneously.
- Emphasis placed on 'learning' through reasoning, developing multiple strategies and concepts towards understanding.
- Challenge for pupils grasping concepts quickly is provided through depth and breadth of experience.
- Daily opportunities to reason and problem solve.

Pupil Voice

What have you been learning this term?

Y1 – counting and adding numbers up to 50. We use plus and minus.
Y2 – Times tables x2, x5 x10
Y4 – multiplying a 2-digit number by a 1-digit number. We have to estimate the answer first and explain our methods.
Y5 – Fractions – improper and mixed number fractions.
Y6 – multiplying decimals and long division

What do you enjoy about Maths?

Y1 – Number bingo
Y2 – I enjoy doing challenges. You need to think hard with your brain to work them out.
Y2 – Times tables – I want to get all my times table badges.
Y3 – Maths is like playtime because it is so much fun.
Y4 – I enjoy learning alternative methods and then I choose the one I like best. I enjoy the maths fluency every day.
Y5 – I enjoy multiplying.
Y6 – I like work on angles when you have to find the missing angle. I enjoy fractions. I like using DMSBR to help me with long division.

What/who helps you in your Maths lesson?

Y1 – The teacher explains it to us. We have a maths resource bag with counters, tens frames, part-whole, dienes tens and ones.
Y2 – We use place value counters for adding and subtracting. Dienes, double-sided counters, part-wholes, pictures.
Y3 – Working with my maths buddy.
Y4 – Bar models help me solve the problems.
Y4 – 100 square, PV slider to x10 and x100, teacher and partners, maths working wall.
Y5 – Maths working wall examples. The teacher, but now I can do it by myself or with my partner.
Y5 – Using times table flash cards.
Y6 – Partners. I find the 'maths working wall' helpful to remind me what I need to do.

How do you know how well you are doing?

Y1 – I get the answers right. We get a sticker. Teachers says 'good job'.
Y2 – Teacher marks my work and if it is pink, I know I have done good.
Y4 – We get team points. We mark in class and the teachers goes through questions if we get them wrong. We get on to the challenge.
Y5 – I get lots of ticks. We get feedback 'I like how you used this method – well done'. You get to the dive deep and challenge.
Y6 – Teachers marks and comments. Purple pen marking at the end of the lesson. We are able to complete the challenge.

What do you do to improve your work/learning?

Y2 – push my hardest. Think some more.
Y4 – Complete my home learning and do extra maths.
Y5 – I concentrate and listen. I listen when marking.
Y6 – concentrate in class. Work more at home and show the teacher.

Example of skills and knowledge progression within our Maths curriculum

<u>Understanding the Number System</u>

Place value							
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place value: Count	Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Count objects, actions and sounds. Count beyond ten. Verbally count beyond 20, recognising the pattern of the counting system.	• *count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number* • *Count numbers to 100 in numerals; count in multiples of twos, fives and tens*	• *count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward*	• *count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number*	• *count in multiples of 6, 7, 9, 25 and 1000* • *count backwards through zero to include negative numbers*	• *count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000* • *count forwards and backwards with positive and negative whole numbers, including through zero*	
Place value: Represent	Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). Show "finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals. Subitise Link the number symbol (numeral) with its cardinal number value. Subitise (recognise quantities without counting) up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.	• identify and represent numbers using objects and pictorial representations • read and write numbers to 100 in numerals • read and write numbers from 1 to 20 in numerals and words	• read and write numbers to at least 100 in numerals and in words • identify, represent and estimate numbers using different representations, including the number line	• identify, represent and estimate numbers using different representations • read and write numbers up to 1000 in numerals and in words	• identify, represent and estimate numbers using different representations • read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value	• read, write, (order and compare) numbers to at least 1 000 000 and determine the value of each digit • read Roman numerals to 1000 (M) and recognise years written in Roman numerals	• read, write, (order and compare) numbers up to 10 000 000 and determine the value of each digit

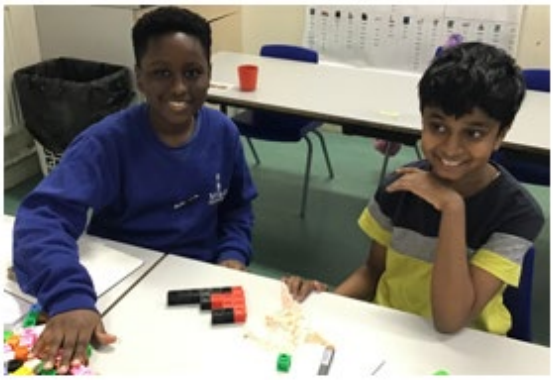
Examples of learning

Division

Mental calculations – Sum Sort

Measuring angles

Multiplication word problems



Ratio

Successes in 2023-2024

- Year 4 multiplication check continues to show children achieving well in their times tables
- KS2 SATs results above national for 'expected'.

Priorities in 2024 – 2025

- To raise the progress/attainment of low attainers in maths, especially PP children.
- To raise the attainment of pupils across the school.
- To develop an effective approach to interventions across the school based on 'End of Unit Check'.
- Continued subject knowledge development for all teachers and TLA's.
- Introduction of new home learning expectations and work books
- Complete termly home learning overviews

Ambitions for Maths at Morden Primary School

- Children will have developed a growth mindset, which is nurtured to instil an 'I can' attitude to their learning, enabling them to enjoy and succeed in maths.
- Children will be able to recall with automaticity key facts such as multiplication tables and addition facts within 10, to avoid cognitive overload in the working memory and enable pupils to focus on new concepts.
- Children will be able to make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.

Morden subscription websites
https://play.ttrockstars.com/ **https://play.numbots.com/#/account** **ActiveLearn: Login (activelearnprimary.co.uk)**
Some other websites you might find particularly interesting
https://www.mathsisfun.com/ https://www.theschoolrun.com/maths https://www.bbc.co.uk/bitesize/subjects/z826n39 https://www.bbc.co.uk/bitesize/subjects/zjxhfg8

I Love Maths Games - Games

https://www.topmarks.co.uk/maths-games/hit-the-button

https://mathszone.co.uk/