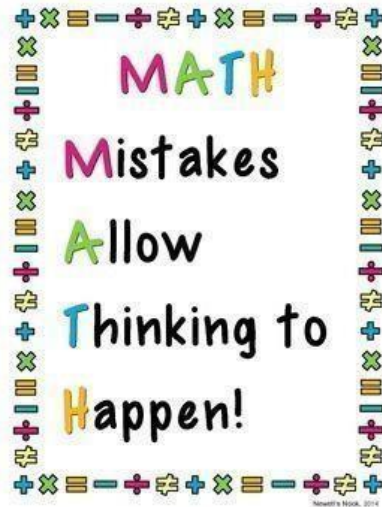


Maths



Context

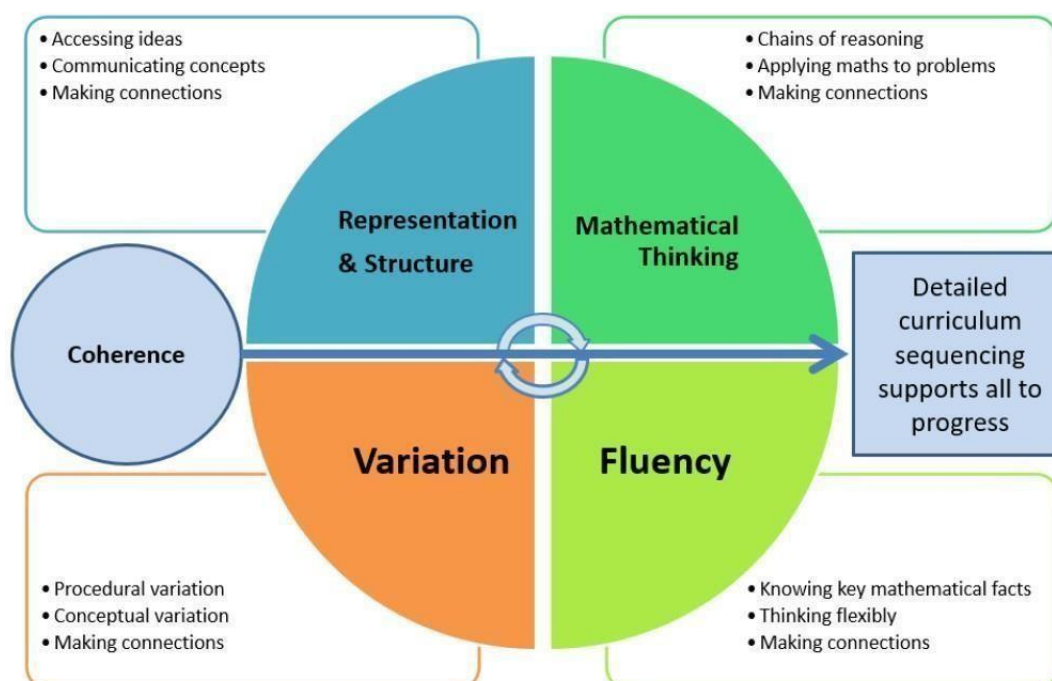
Springwell Park Primary is a two-form entry community primary school located in Bootle, Liverpool. We have 454 children on roll, with 46% pupil premium. Bootle, where our school is located, is amongst the top 10% most deprived in the country.

- We ensure that we deliver a high-quality maths curriculum that is both challenging and enjoyable.
- We want children to make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.
- We intend for our pupils to be able to apply their mathematical knowledge to science and other subjects.
- We want them to know that maths is essential to everyday life and that our children are confident mathematicians who are not afraid to take risks.
- We want to develop independent learners with inquisitive minds who have secure mathematical foundations and an interest in self-improvement.
- We use an adaptive teaching approach to continually assess the strengths and needs of learners and adapt our teaching accordingly to ensure all learners can meet expectations.

Intent

The intent of our mathematics curriculum is to provide children with a foundation for understanding number, reasoning, thinking logically and problem solving with resilience so that they are fully prepared for the future. It is essential that these keystones of mathematics are embedded throughout all strands of the National Curriculum. By adopting a ‘Mastery approach’, it is also intended that all children, regardless of their starting point, will maximise their academic achievement and leave Springwell Park Primary School with an appreciation and enthusiasm for Maths, resulting in a lifelong positive relationship with number. Behind all NCETM and Maths Hubs work in the field of teaching for mastery are Five Big Ideas, all informed by research evidence and classroom experience. The diagram below helps bind these ideas together.

Teaching for Mastery



Mastering maths means acquiring a deep, long-term, secure and adaptable understanding of the subject. At any one point in a pupil’s journey through school, achieving mastery is taken to mean acquiring a solid enough understanding of the maths that’s been taught to enable him/her move on to more advanced material.’

NCETM 2016

Since September 2014, all of our staff have attended training in teaching mathematics using a mastery approach. We now use this approach in our mathematics teaching.

Throughout the curriculum great emphasis is placed upon basic skills, the 4 operations, problem solving, practical activities and mental and oral work. We aim to integrate fluency, reasoning and problem solving throughout every lesson, using a range of activities to challenge children at every level. Concrete resources are used from EYFS to year 6 to help develop an understanding, which are used alongside pictorial representations to help the children make connections with their mathematical learning. Alongside our daily maths lessons, children are involved in targeted maths sessions that are tailored to their specific needs or gaps in their understanding.

The National Curriculum for mathematics aims to ensure that all children:



1. Become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that children have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately.
2. **Reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
3. 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.

Key features in lessons:


1. **Fluency** – This allows children to use hands on approaches such as using number beads, multilink or counters to physically show a concept.
2. **Reasoning** – This allows children to start explaining their understanding of a mathematical concept. By ensuring all children can verbalise their understanding, it helps them to build a secure understanding.
3. **Problem Solving** – Is placing mathematical concepts in different contexts allowing children to apply their knowledge and understanding, showing a greater depth of learning.

We explore five types of problem solving in different strands of mathematics:

- Two and three step word problems including bar model
- Finding all possibilities
- Finding rules and describing patterns
- Diagram problems and visual patterns
- Logic problems

Work in children's maths books will be labelled **yellow for fluency**, **green for reasoning** and **blue for problem solving**.

For example:

Fluency	Reasoning	Problem Solving			
$17 + 5 = \underline{\quad}$	 <p>I am thinking of a two-digit number, if I add ones to it, I will only need to change the ones digit.</p> <p>Explain your answer.</p>	<p>Here are three digit cards.</p> <table border="1" data-bbox="1085 1624 1292 1691"><tr><td>6</td><td>7</td><td>8</td></tr></table> <p>Place the digit cards in the number sentence.</p> <p>How many different totals can you find?</p> $\square \square + \square =$ <p>What is the smallest total?</p> <p>What is the largest total?</p>	6	7	8
6	7	8			

Purpose of Study

(Taken from pg. 3 of The National Curriculum and the EYFS framework)



The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.



How Do We Prioritise Maths at Springwell Park?



Funding

Each academic year, a proportion of the school budget is allocated to maths. We use this money to maintain and enhance our curriculum. We ensure each classroom is adequately resourced with rich mathematical equipment to support and enhance the children's learning. We also use part of our mathematical budget each year to enrich the curriculum with a 'Maths Day'.

World Maths Day

We really enjoy World Maths Day at Springwell Park. We ensure that the day is full of exciting, interactive maths activities, which the children can get involved with.

World Maths Day activities we have enjoyed over the previous years:

- The Captain's Conundrum: A pirate-themed whole school maths challenge.
Children had to use their problem solving, and using and applying skills.
- The Pirate's Challenge: piratical problem solving with Captain Morgan.
The children were using their understanding of number, shape and direction.
- The Benefactor: Money-based maths fun.
The children were using their understanding and skills with money in an engaging and entertaining context.
- The Extraordinary World of Football.



On Maths Day, our Year 6 children enjoy celebrating all things 'maths' with their Reception buddies. This is a great opportunity for the oldest pupils in school to share their love of maths with some of the youngest pupils.



Planning

We have ensured that mathematics is a priority at Springwell Park by completing research-based planning – both weekly planning and long term. Our Medium-Term Plans (based on White Rose Maths), allow for small steps of progression throughout the year and are designed to ensure that the children have a deep sense of mathematical understanding. The maths action plan is created with school improvement in mind and this is monitored regularly. Our Medium-Term plans have been updated for the incoming academic year 2024-2025, giving appropriate time to key concepts or those we have learned can be more difficult for children to grasp. The pace in Year 1 has been reduced and there are clearer links with the work done in Reception. These plans align even more closer to the DfE Ready-to-progress criteria. This scheme of learning is designed to support a mastery approach to teaching and learning, as well as to support the aims and objectives of the National Curriculum. Alongside this, we refer to the NCETM, Nrich, Testbase and Classroom Secrets to ensure the children have a broad and balanced curriculum, that offers challenge.



Springwell Park		Year 4 – Mathematics Planning Overview Based on White Rose Maths version 3.0 <i>(Key changes from version 2.0 noted in red)</i>	Springwell Park	
Autumn Term				
WEEK				
1		Number - Multiplication and Division (A)		
2				
3		<p>Teachers are to ensure that the children recap multiplication facts that they should be secure on from the previous year group (3) – as advised by our consultant Sarah Martin.</p> <p><i>Many steps have been swapped with the other multiplication and division block in Year 4 in the previous version of the schemes. For example, multiplication by 10 and 100 has been moved to the later block where understanding of this is needed to support the formal method of short multiplication.</i></p> <p><i>Multiples of 3 are revisited before exploring the related 6 and 9 times tables, and a step is included to look at the connections between these.</i></p> <p><i>The 11 and 12 times-tables and division facts have been given a step each.</i></p>	<ul style="list-style-type: none"> • Multiples of 3 • Multiply and divide by 6 • 6 times-table and division facts • Multiply and divide by 9 • 9 times-table and division facts • The 3, 6 and 9 times-tables • Multiply and divide by 7 • 7 times-table and division facts • 11 times-table and division facts • 12 times-table and division facts • Multiply by 1 and 0 • Divide by 1 and itself • Multiply three numbers 	

Assessment

Assessment is very important to us at Springwell Park to ensure that our children are being appropriately challenged. Our marking is of high quality and is used to determine future planning and learning outcomes. Our children are assessed using the White Rose arithmetic and reasoning papers each term, which helps to further inform our interventions and future lessons. We also conduct pupil interviews regularly.

Monitoring

Our maths provision is monitored through book-looks and learning walks, conducted by SLT, Math Leads and/or our external Maths Consultant.

Accountability

Everyone at Springwell Park is responsible for the maths outcomes for our children. The Class Teachers oversee the attainment and progress of their children, monitored by SLT during Pupil Progress. Class Teachers are aware of who their bottom 20% children are, as well as pupil premium and SEND children. The attainment and progress within maths is overseen by the Maths Lead, who works closely with class teachers to accelerate progress and outcomes.

Timetabling

Year Group	Main Maths Lesson	Additional Maths Sessions		Other notes
Nursery	15-20 minutes daily	Daily counting songs		EYFS also ensure that they provide opportunities for mathematical learning in the continuous provision areas both inside and outside the classroom.
Reception	45 minutes daily	Mastering number Rekenrek	15 minutes daily	
Year 1	60 minutes daily	Mastering number Rekenrek	15 minutes daily	
		NumBots	20 minutes daily	
		<i>Access to 'Mop Up Maths'</i>		
Year 2	60 minutes daily	Mastering number Rekenrek	15 minutes daily	Year 2 children, whom class teachers deem as secure in their maths number sense, will then progress to 'Arithmetic' during this additional time to help prepare them from the SATS and their transition to Year 3. This is where the pupils will revisit previously learned knowledge – we believe that with regular practice of their 'Arithmetic', that the children will become fluent and confident mathematicians.
		NumBots/TT Rockstars	20 minutes daily	
		<i>Access to 'Mop Up Maths'</i>		
Year 3	60 minutes daily	Arithmetic	15 minutes daily	
		TT Rockstars	20 minutes daily	
		<i>Access to 'Mop Up Maths'</i>		
Year 4	60 minutes daily	Mastering Number	15 minutes x2 per week	Year 4 and 5 teachers will work with their whole class two days per week using the Mastering Number Programme, to develop children's deep understanding and confidence of multiplicative relationships and automaticity of facts.
		Arithmetic	15 minutes x2 per week	
		TT Rockstars	20 minutes daily	
		<i>Access to 'Mop Up Maths'</i>		
Year 5	60 minutes daily	Mastering Number	15 minutes x2 per week	
		Arithmetic	15 minutes x2 per week	
		TT Rockstars	20 minutes daily	
		<i>Access to 'Mop Up Maths'</i>		
Year 6	60 minutes daily	Arithmetic	15 minutes daily	
		TT Rockstars	20 minutes daily	
		<i>Access to 'Mop Up Maths'</i>		

Additional Maths Sessions Explained:



Session	Aim	
Mastering Number at Reception and KS1 Rekenrek (NCETM)	This project aims to secure firm foundations in the development of good number sense for all children from Reception through to Year 1 and Year 2. The aim over time is that children will leave KS1 with fluency in calculation and a confidence and flexibility with number. Attention will be given to key knowledge and understanding needed in Reception classes, and progression through KS1 to support success in the future.	
Mastering Number at Key Stage 2 (NCETM)	This project enables pupils in Years 4 and 5 to develop fluency in multiplication and division facts, and a confidence and flexibility with number that exemplifies good number sense.	
Arithmetic <i>Note:</i> Years 4 and 5 have two sessions of '6 and a twist' then two sessions of 'mastering number' Year 6 have four sessions of '6 and a twist'	Monday	Counting Stick Session <i>Based on the current times tables the class are learning</i>
	Tuesday	6 and a twist (Class teacher design specific questions tailored to their pupils' needs – keeping key facts 'bubbling' throughout the year) <ul style="list-style-type: none"> • '6' - arithmetic style questions • 'twist' - For example: a reasoning question/list all possibilities/ find the odd one out/convince me
	Wednesday	6 and a twist (Class teacher design specific questions tailored to their pupils' needs – keeping key facts 'bubbling' throughout the year) <ul style="list-style-type: none"> • '6' - arithmetic style questions • 'twist' - For example: a reasoning question/list all possibilities/ find the odd one out/convince me
	Thursday	6 and a twist (Class teacher design specific questions tailored to their pupils' needs – keeping key facts 'bubbling' throughout the year) <ul style="list-style-type: none"> • '6' - arithmetic style questions • 'twist' - For example: a reasoning question/list all possibilities/ find the odd one out/convince me
	Friday	Counting Stick Session <i>Based on the current times tables the class are learning</i>
Mop Up Maths	'Mop up maths' is timetabled in Springwell Park for four afternoon sessions a week for Years 2-6. These twenty-minute sessions give the class teachers the time to work with a small group of children/whole class (depending on the children's needs), to provide same-day intervention or in some cases, pre-teach. This is marked in the children's book as 'Mop-Up Maths'. Year 1 have two mop up maths sessions per week – each twenty minutes.	

CPD

We pride ourselves on the training and CPD that our staff, both teachers and TAs, receive. Training is identified for staff in our maths action plan. We have termly visits from our Maths Consultant, and during these visits, the Maths Lead receives CPD as well as the teaching staff – this can be through the staff watching our consultant teach lessons, or the staff being observed to improve practice. The Math Lead at Springwell Park works hard to ensure that the teaching staff have an abundance of resources to complement their teaching and improve learning outcomes.



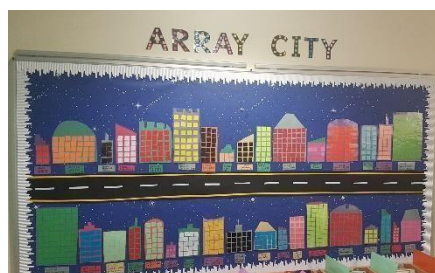
We have demonstrated our commitment to further enhancing our maths provision in Springwell Park by engaging with many Maths Hubs opportunities and ensuring our Maths Lead has the professional development training and knowledge to share with our staff. All teachers and teaching assistants have received CPD through staff meeting slots and from our Maths Consultant. Teachers also receive STRAND training from Sarah Martin – an opportunity to hear about updates linked to the curriculum developments, subject knowledge sessions and networking opportunities and sharing of good practice.



Excellent Maths Teacher Programme (MM)	Commenced September 2016
Teaching for Mastery (TRG group) (MM)	Commenced September 2017
Sustaining Mastery (TRG group) (MM)	Commenced September 2018
Mastering Number EYFS/KS1 programme (MM)	Commenced September 2021
Mastering Number at KS2 (Years 4 and 5) (MM)	Commenced September 2023

Environment

Our school environment shows how we prioritise maths. Each classroom has a maths working wall, where the children are able to access their current learning and refer to key mathematical vocabulary that they need to talk about their learning and enhance their mathematical reasoning skills. Number lines and times tables are visible within the classrooms and the children have access to a wide range of resources that they can use within their lessons. The Key Stage 2 stairwell beside Year 3 and 4 has the times tables displayed on the steps as the children are walking back up to their classroom after break and lunchtimes.



How Do We Teach Maths at Springwell Park?



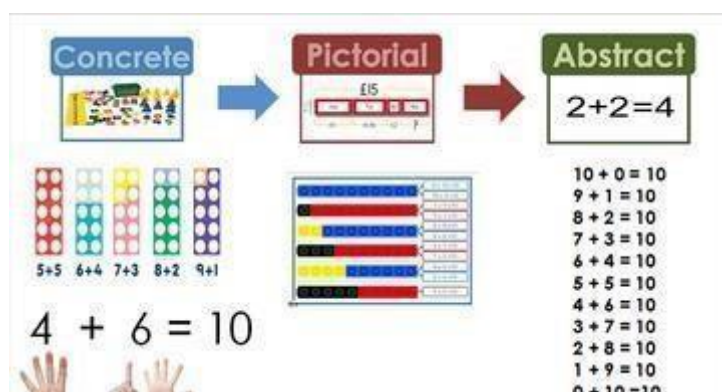
Our curriculum is designed so that children develop fluency and automaticity in all aspects of number and calculation. The security of their understanding of number and calculation allows them to make rich connections across mathematical concepts, to develop their mathematical reasoning and competence in solving increasingly sophisticated problems. They can then apply their mathematical knowledge to science and other subjects.

Our curriculum is designed to develop confident mathematicians who are not afraid to take risks and who are mathematically curious and continually seek to improve both proficiency and understanding.

Our aim in Maths is for the children to acquire knowledge and skills and to become confident and effective in using mathematical language and numbers. We aim for all the children to develop an interest, enjoyment and confidence in Mathematics as a practical tool for use throughout adult life.

At Springwell Park we support our pupils by introducing concepts using Bruner's Theory of Learning and Haylock's Cognitive Connections

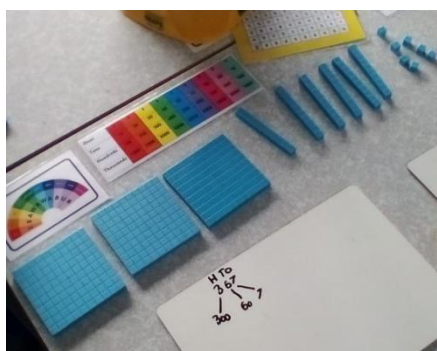
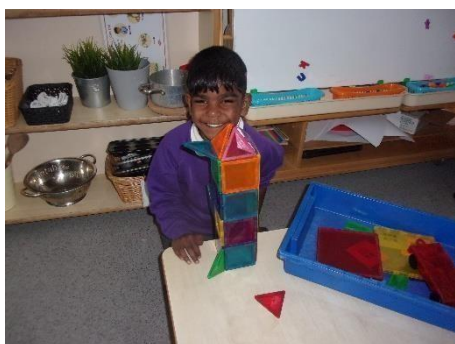
- Concrete – children have the opportunity to use physical objects to help them understand what they are doing.
- Pictorial – children use pictorial representations. These representations can then be used to help reason and solve problems.
- Abstract – both concrete and pictorial representations should support understanding of abstract methods.



How a typical Springwell Park maths lesson is structured and what it may include:



	<u>Structure</u>	<u>What the lesson may include</u>
1	Review of previous learning	<ul style="list-style-type: none"> • <i>Review of previous lessons/feedback</i> • <i>Consolidation of basic skills/previous learning</i> • <i>Sharing the learning objective</i> • <i>Teacher modelling and demonstrating – following a ‘concrete, pictorial, abstract’ approach (stages may be presented alongside each other to help the children make connections in their learning)</i> • <i>Children choosing to use core representations if needed</i> • <i>Precise questioning to encourage reasoning – open-ended/probing</i> • <i>Mathematical Vocabulary modelled and encouraged to be used throughout</i> • <i>Group work/ paired work/ independent work</i> • <i>Culture where children learn from their mistakes and fix them</i> • <i>Practice and consolidation or enquiry/problem solving tasks, dependent on stage in teaching sequence</i> • <i>Application of skills in a variety of contexts to deepen understanding</i> • <i>Teaching assistant working with targeted children/group</i> • <i>Self-assessment of learning</i>
2	Teacher modelling and demonstrating	
3	Guided Practice	
4	Independent Practice	
5	Self-assessment of learning	



Calculation Policy

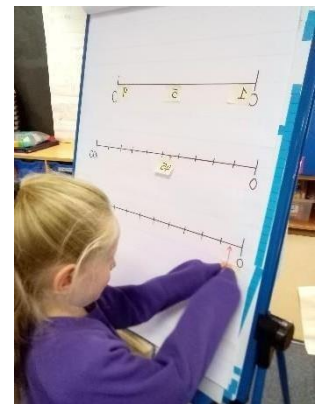
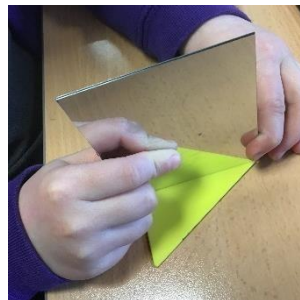
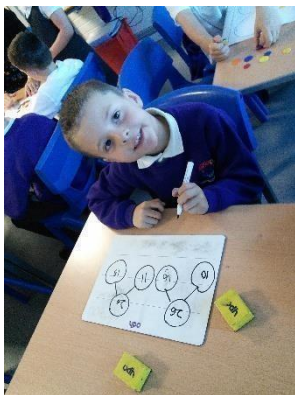
The calculation policy is to support the teaching and planning of mathematics. This policy sets out the progression of strategies and written methods children will be taught to develop their understanding of the four operations.

Strategies set out in a Concrete, Pictorial and Abstract (CPA) approach to develop children's deep understanding and mastery of mathematical concepts. These are called **core representations**.



Children can use concrete objects to help them make sense of the concept or problem; this could be anything from real or plastic fruit, to straws, counters or cubes. This is then developed through the use of images, models and children's own pictorial representations before moving on to the abstract mathematics. It is also worth noting that if a child has moved on from concrete to pictorial, it does not mean that the concrete cannot be used alongside the pictorial. Or if a child is working in the abstract, 'proving' something or 'working out' could involve use of the concrete or pictorial therefore building on prior learning. Then as children become more independent, they will be able to, and encouraged to select strategies which are most efficient for the activity.

The strategies are separated into the 4 operations for easy reference. Children should be moved through the strategies at a pace appropriate to their age-related expectations as defined in the EYFS and National Curriculum. Teaching of the strategies rely on good levels of number sense, fluency and ability to reason mathematically. Children need to be supported to gain depth of understanding within the strategy through the CPA approach.



Marking and Feedback at Springwell

Consistently high-quality marking and constructive feedback from teachers ensures pupils make progress in their learning.

Marking is in line with our school Marking and Feedback Policy. Pupil response and reflection time is in line with the school Marking and Feedback Policy, and where afternoon intervention has taken place, it is noted by the class teacher, as 'Mop Up'.

Maths Books at Springwell

Pupils should be reminded to always take pride in their work

Presentation

- Date and learning objectives are clearly presented at the start of each lesson
- All maths work is to be done using a sharp pencil
- Pupils will use a ruler when appropriate
- 1 square, 1 digit is used throughout the school

Number Layout of work – use DUMTUM

(Draw margins 2 squares wide on left and middle of page)

Date at the top right-hand page

Underline

Miss a line

Title of Fluency (highlighted yellow) or Reasoning (highlighted green) or Problem-Solving (highlighted blue) and learning objective to the left-hand side of page

Underline

Miss a line

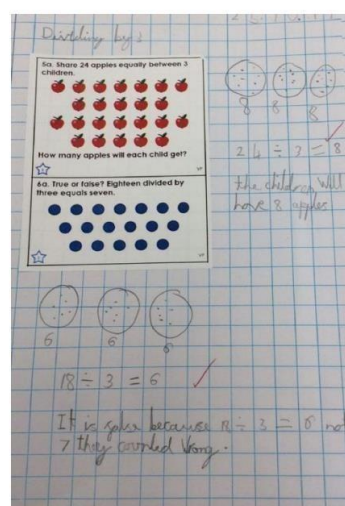
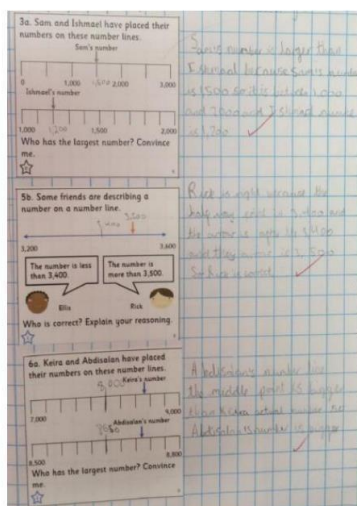
Begin work

Work across the page

Rule off

Start new work underneath

1 digit per square



Weekly number bonds/Times Tables facts

Children from Years 1 – 6 are set weekly number bonds/times tables facts. Teachers follow the times tables and division progression map which is broken down into half terms.



*Times Tables & Division
Progression Map 2023*

Teachers will also follow this progression for their counting stick sessions (2 days of arithmetic).

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Bonds within 10 Bonds to 10 Bonds to 20 Count in 2s Count in 5s Count in 10s Tens to 100 (Continue Number)	Bonds to 10 Bonds to 100 Bonds to 20 • recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	• recall multiplication and division facts for multiplication tables up to 12×12 • use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • recognise and use factor pairs and commutativity in mental calculations	identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers • know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers • establish whether a number up to 100 is prime and recall prime numbers up to 19 • recognise and use square numbers and cube numbers, and the notation for squared (2^2) and cubed (2^3)	identify common factors, common multiples and prime numbers • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

(Number bonds for KS1)

Year 1	
Autumn 1 & 2	Children will be learning their number bonds within 10 and to 10.
Spring 1 & 2	Children will be learning their number bonds within 20 and to 20.
Summer 1	<ul style="list-style-type: none"> • Count in 2s • Count in 5s • Count in 10s <i>(Continue number bonds)</i>
Summer 2	<ul style="list-style-type: none"> • Tens to 100 <i>(Continue number bonds)</i>

Year 2	
Autumn 1	<ul style="list-style-type: none"> • Bonds of 10 • Bonds of 100
Autumn 2	<ul style="list-style-type: none"> • Bonds of 20 <i>(Revisit 10 and 100)</i>
Spring 1	<ul style="list-style-type: none"> • Count in 2s • Count in 5s • Count in 10s
Spring 2	<ul style="list-style-type: none"> • Multiplication and Division of 2, 5 and 10
Summer 1	<ul style="list-style-type: none"> • Multiplication and Division of 2, 5 and 10
Summer 2	<ul style="list-style-type: none"> • Multiplication and Division of 2, 5 and 10

Half Termly Times Tables Assessments Year 3 – Year 6

Since September 2023, teachers have used ‘Multiplication Check’ on Maths Frame each half term to assess their pupils’ fluency.

The questions set are based on what the pupils have been taught and the children are given 6 seconds per question (in line with the Year 4 MTC).

Our adaptive teaching will allow provision for all pupils to access this resource and extra time will be allowed, where needed.



Aims:

- Teachers are able to gather data for each child over time.
- Teachers can see child specific responses and can create targeted interventions.
- Teachers can use the information to further inform their future lessons.

Year 3							
Friday Facts			Half Termly Assessment				
Autumn 1	<ul style="list-style-type: none"> • Multiplication and Division of 2 • Multiplication and Division of 5 • Multiplication and Division of 10 • Multiplication and Division of 4 	2	3	4	5	6	7
		8	9	10	11	12	
Autumn 2	<ul style="list-style-type: none"> • Multiplication and Division of 4 • Multiplication and Division of 8 • Multiplication and Division of 3 	2	3	4	5	6	7
		8	9	10	11	12	
Spring 1	<ul style="list-style-type: none"> • Multiplication and Division of 2, 5, 10, 3, 4 and 8 						
Spring 2	<ul style="list-style-type: none"> • Multiplication and Division of 2, 5, 10, 3, 4 and 8 	2	3	4	5	6	7
		8	9	10	11	12	
Summer 1	<ul style="list-style-type: none"> • Multiplication and Division of 2, 5, 10, 3, 4 and 8 						
Summer 2	<ul style="list-style-type: none"> • Multiplication and Division of 2, 5, 10, 3, 4 and 8 						

Year 4

Year 4		<u>Friday Facts</u>	<u>Half Termly Assessment</u>												
Autumn 1	<ul style="list-style-type: none"> Multiplication and Division of 3 Multiplication and Division of 6 Multiplication and Division of 9 <p style="background-color: yellow;"><i>Children will also be tested on previous (2,4,5,8,10) from Yr3</i></p>		<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="background-color: yellow;">2</td> <td style="background-color: yellow;">3</td> <td style="background-color: yellow;">4</td> <td style="background-color: yellow;">5</td> <td style="background-color: green;">6</td> <td>7</td> </tr> <tr> <td style="background-color: yellow;">8</td> <td style="background-color: green;">9</td> <td style="background-color: yellow;">10</td> <td>11</td> <td>12</td> <td></td> </tr> </table>	2	3	4	5	6	7	8	9	10	11	12	
2	3	4	5	6	7										
8	9	10	11	12											
Autumn 2	<ul style="list-style-type: none"> Multiplication and Division of 7 Multiplication and Division of 11 Multiplication and Division of 12 <p style="background-color: yellow;"><i>Children will also be tested on previous (2,4,5,8,10) Yr3</i></p>		<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="background-color: yellow;">2</td> <td style="background-color: yellow;">3</td> <td style="background-color: yellow;">4</td> <td style="background-color: yellow;">5</td> <td style="background-color: green;">6</td> <td style="background-color: green;">7</td> </tr> <tr> <td style="background-color: yellow;">8</td> <td style="background-color: green;">9</td> <td style="background-color: yellow;">10</td> <td style="background-color: green;">11</td> <td style="background-color: green;">12</td> <td></td> </tr> </table>	2	3	4	5	6	7	8	9	10	11	12	
2	3	4	5	6	7										
8	9	10	11	12											
Spring 1	<i>All multiplication and division facts</i>		<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>8</td> <td>9</td> <td>10</td> <td>11</td> <td>12</td> <td></td> </tr> </table> <p><i>All multiplication and division facts</i></p>	2	3	4	5	6	7	8	9	10	11	12	
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Spring 2	<i>All multiplication and division facts</i>														
Summer 1	<i>All multiplication and division facts</i>														
Summer 2	<i>All multiplication and division facts</i>														

Year 5

Year 5		<u>Friday Facts</u>	<u>Half Termly Assessment</u>												
Autumn Term	<i>All multiplication and division facts</i> Prime, Square and Cube Numbers		<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>8</td> <td>9</td> <td>10</td> <td>11</td> <td>12</td> <td></td> </tr> </table> <p><i>All multiplication and division facts</i></p>	2	3	4	5	6	7	8	9	10	11	12	
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8	9	10		11	12										
Spring Term	<i>All multiplication and division facts</i> Multiply and Divide by 10,100 and 1000														
Summer Term	<i>All multiplication and division facts</i> Prime, Square and Cube Numbers Multiply and Divide by 10,100 and 1000														

Year 6

Year 6		<u>Friday Facts</u>	<u>Half Termly Assessment</u>												
Autumn Term	<i>All multiplication and division facts</i> Prime, Square and Cube Numbers		<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>8</td> <td>9</td> <td>10</td> <td>11</td> <td>12</td> <td></td> </tr> </table> <p><i>All multiplication and division facts</i></p>	2	3	4	5	6	7	8	9	10	11	12	
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NumBots and TT Rockstars

At Springwell Park, the children from Reception – Year 6 have access to Numbots (Reception, Year 1 and Year 2) and Times Tables Rockstars (Years 2 – 6). Pupils with gaps in mathematical fluency are to have timetabled sessions on TT Rockstars or Numbots each morning.



Numbots is an online maths resource which helps younger children with their number bonds.



Times Table Rockstars is an online maths resource which helps children with their instant recall and speed of their times tables. The online questions adapt after every 60 secs of gameplay to tailor the learning to each child's unique needs. Teachers are also able to monitor each child's progress in their class and can set them specific targeted questions.

Children are also encouraged to use these programmes at home.

Teachers set 'battles' between year groups on TT Rockstars to encourage the children to participate at home.

Teachers choose 1 child from each class to be rewarded with a 'Numbots'/'TT Rockstars' certificate for each celebration assembly.

Number Bonds and Times Tables Badges



At Springwell Park, the children proudly display their 'number bonds' and 'times tables' badges that they earn for displaying fluency in the following areas:

Yellow	Addition facts for numbers to 10
Red	Addition facts for numbers to 20
Bronze	Multiplication and related division facts for the 2x 5x and 10x tables
Silver	Multiplication and related division facts for the 2x 3x 4x 5x 8x and 10x tables
Gold	Multiplication and related division facts for the 2x 3x 4x 5x 6x 7x 8x 9x 10x 11x and 12x tables
Purple	Pupils must be able to answer 60 questions correctly in 2 mins (Purple Mash)

Debt Awareness



Our Year 5 and 6 children take part in the ‘DebtAware’ sessions each year. A team from ‘Debt Aware’ come into our school to deliver the key lessons for each module, before children from each of the Year 5 classes are selected to become Money Mentors. These Money Mentors are trained to lead the class on three further DebtAware tasks which are completed over the following two weeks. These peer-to-peer sessions engage the children and ensure that the key messages from the core lesson are completely embedded.

Links to other subjects

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.

They should also apply their mathematical knowledge to science and other subjects.

For example:

Science: In Year 2, the children will be: using their mathematical knowledge to take appropriate measurements of variables which change; checking for accuracy with their measurements; and presenting information in the form of simple diagrams, tables and graphs.

Design Technology: In Year 6, the children design and make a cam toy as part of their ‘mechanisms’ topic in Design Technology. The children will use their mathematical knowledge to measure, mark and cut parts accurately using scissors and a ruler.





Maths Homework at Springwell

Opportunities for pupils to practise and consolidate their skills and knowledge are extended through the regular setting of homework. Teachers set homework that matches a pupil's needs accurately:

- Weekly maths facts test (dependent on year group, it could be number bonds/times tables)
- Key Instant Recall Facts half termly. These are some maths facts that children just need to know, i.e., the times tables. It is a government requirement that children learn these facts by heart and can instantly recall them. Mastering them will also really help with their work in school.
- Regular number bonds practice on Numbots and times table practice on TT Rockstars.
- As part of 'catch-up' teachers may send home work to consolidate class lessons.

Interventions and use of additional adults

Interventions are used to support pupils who have been identified through teacher assessment as having gaps in mathematical understanding:

- 1:1 or small group intervention following the lesson on the same day (or day after dependent on teacher release time) for children who have not grasped concepts (Class teachers in Springwell Park are released three afternoons a week for half hour sessions to support pupils – this is marked in the pupil's books as 'Mop Up'). This time can also be used for 'pre-teaching'.
- Pupils with gaps in mathematical fluency are to have timetabled sessions on TT Rockstars or Numbots.

Interventions are reviewed regularly to assess impact.

Mathematical provision for SEND children

At Springwell Park we are passionate about inclusive education for all and we are driven by the desire to ensure that all of the children at Springwell Park have the best chance to succeed in life. We believe that pupils with Special Educational Needs and Disability (SEND) have the greatest need for excellent teaching and are entitled to provision that supports achievement at, and enjoyment of, school. We follow a comprehensive and structured approach to assessing, identifying and responding to individual needs throughout the school year to ensure pupils identified with SEND can reach their full potential.

How are rapid graspers stretched?

- Enquiry tasks: List all possibilities, True/False questions, 'Is it true that...' questions
- Broader enrichment tasks in a range of contexts
- Opportunities to reason/write explanations
- Opportunities to explain to others
- Opportunities to generate their own questions and problems – innovate
- Opportunities to problem solve

Parental Engagement

We pride ourselves on our parental engagement.

- Our Nursery and Reception parents are invited throughout the year into school for maths stay and plays. During these sessions, parents and carers are able to see how their children are learning, the methods used and the resources that are in the classroom to aid them in their learning. We encourage home learning and parents like to send us photographs of their children using their maths skills at home/out in the wider world.
- Our Year 1 – 6 parents are invited into school for ‘Come Calculate With Me’ sessions so they can work alongside their child and their class teacher. This allows the parents and carers to experience how their child learns maths, the methods they use and helps to further support home learning.
- Year 6 teachers hold meetings regarding the SATS.
- Year 6 teachers hold ‘booster sessions’ for the pupils in the lead up to the SATS.
- Year 4 teachers hold a meeting about the Times Tables Check.



Reporting to Parents

Reporting to parents is undertaken on a termly basis through parents' evenings and annually through a written report.

Inclusion and Equal Opportunities

All pupils have equal access to the curriculum regardless of their race, sex, religious belief or ability. This is monitored by analysing pupil performance throughout the school to ensure that there is no disparity between groups.

Role of the Subject Leader

The subject leader is responsible for leading mathematics throughout the school.



This will include:

- Monitoring and evaluation
- Leading CPD
- Write an action plan
- Interventions
- Resources audit
- Overview of data

This document was reviewed by Megan Martin (Maths Subject Lead) in July 2024.