



ST MARY'S RC PRIMARY SCHOOL
MATHEMATICS POLICY 2020-21

Subject Coordinator: Mrs. Catherine Wilkinson

Governing Committee: Curriculum/Standards & Effectiveness Committee

Date approved: October 2020

Date to be reviewed: September 2021

This policy should be read in conjunction with the following school policies:

- Calculation Policy (link to this provided within this document)
- Marking Policy
- SEND Policy

COVID ADDENDUM TO THIS POLICY:

This policy identifies the vision of mathematics at St Mary's and reflects what would have been seen prior to Covid-19 lockdown and, as a school, we aim to continue to implement this policy to its fullest as the children return to school, particularly continuing with our drive to immerse our pupils in a deep and rich mastery curriculum, with the majority of pupils accessing age-related curriculum materials.

However, with the current uncertainty, likelihood of sporadic attendance from pupils or staff, and the unknown longer term impact of lockdown on pupils emotional and academic health, we may have to adapt our teaching and learning practices accordingly to meet the needs of the pupils.

To help support teachers and pupils in these unprecedented times, we have subscribed to White Rose Premium resources, which have been adapted to carefully take into consideration missed or forgotten learning, adding in recap lessons for each 'block' of learning (see appendix 1). There is therefore one or two lessons to begin each block, that will cover what is said to be 'essential prior learning' before accessing the new content for each year group.

To pre-empt continued disruption to learning and to minimise the impact of this, we considered how we can implement a 'blended learning' approach to the mathematics curriculum and thus, now have access to online teaching videos for each day's content for the White Rose scheme which can be sent home with the corresponding worksheets. We also have unvoiced versions of these videos to support any staff who may have to step in and deliver the content due to staff absence or isolation.

These adaptations to the curriculum will be reviewed each half-term and amended based on future changes as the impact of the pandemic unfolds.

Introduction

Mathematics is an essential and inter-connected subject that has provided the solutions to some of history's most complex problems. Therefore, a strong foundation in mathematical concepts is essential to all areas of our lives including science, technology and engineering. Furthermore, mathematical knowledge is necessary for children's development of financial literacy as well as being required in most forms of future employment. This view is supported by the 2014 National Curriculum, stating that,

"A high-quality mathematics education is therefore essential, as it provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject".

The aims of the 2014 National Curriculum are for our pupils to:

- Become fluent in the fundamentals of mathematics through varied and frequent practice with complexity increasing over time
- Develop conceptual understanding and ability to recall and apply knowledge rapidly and accurately
- Reason mathematically; follow a line of enquiry, conjecture relationships and generalisations
- Develop an argument, justification and proof by using mathematical language. problem solve by applying knowledge to a variety of routine and non-routine problems, breaking down problems into simpler steps and persevering in answering

The National Curriculum sets out year-by-year programmes of study for Key Stages 1 and 2. This ensures continuity and progression in the teaching of mathematics.

The EYFS Statutory Framework 2014 sets standards for the learning, development and care of pupils from birth to five years old and supports an integrated approach to early learning. This is supported by the 'Development Matters' non statutory guidance as well as the White Rose Medium Term plans for EYFS Mathematics.

INTENT

At St Mary's, we intend for ALL children to access a mastery led curriculum with its aim of:

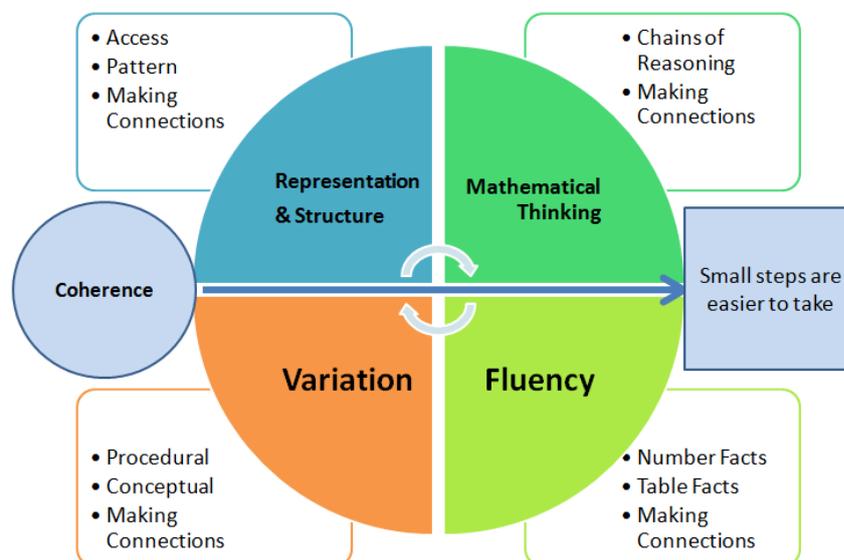
- ✓ Promoting children's curiosity and enable them to safely risk take and learn from first-hand experience wherever necessary.
- ✓ Supporting the children to become fluent in mathematical understanding from the most basic level so that they can build upon their own understanding.
- ✓ Enabling our children to develop conceptual understanding, recall of number facts and patterns and apply their knowledge rapidly and accurately.
- ✓ Encouraging children's ability to reason through opportunities to discuss their thinking and understanding. This emphasis may result in less written work but much deeper understanding.
- ✓ Stimulating problem solving and solution finding. This is not only true in mathematical learning but in almost all aspects of school life.

- ✓ Supporting children to learn at an age appropriate level wherever possible
- ✓ Teaching and addressing misconceptions as these cause greater difficulties at a later stage of learning.
- ✓ Promoting smaller group, 'keep up' and 'catch up' learning opportunities whenever possible and appropriate, and encourage children to revisit their thinking to ensure they feel secure in their understanding and able to move confidently on to next steps and challenges.

What is Teaching for Mastery?

Teaching for mastery is a coherent, small steps curriculum vision, based around 4 key areas:

- Fluency
- Representation and Structure
- Variation
- Mathematical Thinking.



FLUENCY

This involves:

- Quick recall of facts and procedures
- The flexibility and fluidity to move between different contexts and representations of mathematics
- The ability to recognise relationships and make connections in mathematics

REPRESENTATION & STRUCTURE

Mathematical structures are the key patterns and generalisations that underpin sets of numbers – they are the laws and relationships that we want children to spot.

Using different representations can help children to 'see' these laws and relationships.

VARIATION

Procedural variation – This is a deliberate change in the type of examples used and questions set, to draw attention to certain features.

Conceptual variation – When a concept is presented in different ways, to show what a concept is, in all of its different forms.

MATHEMATICAL THINKING

Mathematical thinking involves:

- Looking for pattern and relationships
- Logical Reasoning
- Making Connections

COHERENCE

Teachers intend to develop a detailed knowledge of the curriculum in order to break the mathematics down into small steps to develop mastery and address all aspects in a logical progression. This will ensure deep and sustainable learning for all pupils.

As a result of teaching and learning being developed around a Teaching for Mastery approach in mathematics, our intent is that pupils will be able to meet the key aims of the National Curriculum for maths.

IMPLEMENTATION

EYFS Mathematics

The EYFS Framework in relation to mathematics aims for our pupils to:

- Develop and improve their skills in counting
- Understand and use numbers
- Calculate simple addition and subtraction problems
- Describe shapes, spaces, and measures

Within the EYFS is developed through purposeful, play based experiences and will be represented throughout the indoor and outdoor provision. The learning will be roughly based upon the new, small-steps, mastery scheme of work from White Rose (available at <https://whiterosemaths.com/reception-sol/>) but is delivered through pupil's interests and current themes and will focus on the expectations from Development Matters / Early Years Outcomes. Mathematical understanding will be developed through a range of methods including stories, songs, games, imaginative play, child initiated learning and structured teaching. As pupils progress, they will be encouraged to record their mathematical thinking in a more formal way.

Key Stage 1 Maths

The principal focus of mathematics teaching in key stage 1 is to ensure pupils develop confidence and mental fluency. The essential idea behind the Teaching for Mastery approach is that all children have a deep understanding so that future learning continues to build on solid foundations.

If the subject is represented using concrete materials, pictorial representations and abstract symbols, it will allow children to visualise maths in varied ways, see connections and to independently explore and investigate a topic.

Practical activities and resources offer the children a deeper mathematical understanding of more complex concepts. Providing children with visual representations also offers a scaffold when developing a more robust understanding of maths.

Throughout Key Stage 1, it is important that children gain a secure knowledge of number and place value and become confident when using the four operations in both formal methods as well as problem solving where often the approach is not immediately evident. Alongside number work, pupils begin to identify fractions using shapes, objects and quantities and make connections to equal sharing and grouping. Pupils are taught to count to ten in fractions, recognise equivalent fractions and develop their understanding of fractions on a number line.

At this stage, pupils will also develop their ability to recognise, describe, draw, compare and sort different shapes. Pupils have the opportunity to use a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money and are expected to use related vocabulary for all topics

Key Stage 2 Maths

Lower Key Stage 2

The principal focus of mathematics teaching in lower Key Stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.

At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them.

It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. By the end of Year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work.

Upper Key Stage 2

The principal focus of mathematics teaching in upper Key Stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers.

This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.

At this stage, pupils will develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation.

With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems.

Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching will also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them.

By the end of Year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages.

Parental Involvement

We encourage parents to be involved by:

- Inviting them into school twice a year to discuss the progress of their child.
- Providing parents with a yearly report outlining their child's achievements.
- Sending homework activities weekly to be completed by or with their child.

SEND and Inclusion

Teaching maths for mastery is different because it offers ALL pupils access to the full maths curriculum. This inclusive approach, and its emphasis on promoting multiple methods of solving a problem, builds self-confidence and resilience in pupils. Though the whole class goes through the same content at the same pace, there is still plenty of opportunity for differentiation. Taking a mastery approach, differentiation occurs in the support and intervention provided to different pupils, not in the topics taught, particularly at earlier stages.

In mixed age classes, the lessons will be taught in a way so that each year group receives the curriculum content relevant to their year group (apart from in exceptional circumstances).

There is no differentiation in content taught, but the questioning and scaffolding individual pupils receive in class as they work through problems will differ, with higher attaining children, or those pupils who grasp concepts quickly, challenged through more demanding problems which deepen their knowledge of the same content.

Those children who are not sufficiently fluent are provided additional support to consolidate their understanding before moving on.

Pupils' difficulties and misconceptions are identified through immediate, formative assessment and addressed with intervention – commonly through individual or small group support later the same day. Children who are significantly behind their peers will attend 'closing the gap'

interventions such as 1stclass@number or IDL numeracy but wherever possible, will still access new content at as close to their own year group expectations as possible.

Timetabling mathematics

All children will in KS1 and KS2 will receive a daily, fluency lesson (15-20 minutes long) and a separate Mastery based maths lesson (of between 45 minutes and an hour depending on age of pupils) although mathematical skills run through many other areas of the curriculum.

Fluency Lessons

From September 2020, each week, a number of lessons will focus upon one objective per year group taught, based on the St Mary's Key Instant Recall Facts (KIRFS) document.

Here is an example from Year 4:

St Mary's RC Primary School
Key Instant Recall Facts – Yearly Overview

SUMMARY OF KIRFs (Key Instant Recall Facts): YEAR 4

COUNTING & PLACE VALUE	NUMBER BONDS	ADDITION & SUBTRACTION
<ul style="list-style-type: none"> Count from 0 in multiples of 25 and 1000 Count from 0 in multiples of 6, 9, 7, 11 and 12 Understand the value of Th, H, T & Ones Find 1000 more / less than a given number Count backwards through 0 to include negative numbers 	<ul style="list-style-type: none"> Understand the = sign in balancing equations Use and understand < and > signs Understand missing number calculations Recognise and use factor pairs and commutativity in mental calculations Know all pairs of multiples of 50 with a total of 1000 	<ul style="list-style-type: none"> Add and subtract pairs of two digit numbers Add and subtract 9/19/29 etc. to two digit numbers Add and subtract 11/21/31 etc. to two digit numbers
DOUBLING & HALVING	MULTIPLICATION & DIVISION FACTS	MEASURES
<ul style="list-style-type: none"> Know doubles and halves of all whole numbers to 50 Know doubles and halves of all multiples of 5 to 1000 Know doubles and halves of all multiples of 50 to 5000 	<ul style="list-style-type: none"> x6 x7 x9 x11 x12 ÷ facts for x6 ÷ facts for x7 ÷ facts for x9 ÷ facts for x11 ÷ facts for x12 All multiplication tables up to 12 x12 should be known by the end of Y4 x25 x100 	<ul style="list-style-type: none"> Read Roman Numerals to 100 Know the number of weeks in a year Know: <ul style="list-style-type: none"> m in km cm in m 90° in a right angle

This document lists the key recall areas needing to be explicitly taught and practised in each year group. These are numerous and must be covered across the year, however each year have one important strand to focus on per half term and the children will be assessed on these 3 times per half term to ensure they have secured these essential fluency facts. The results of these assessments will be sent to the maths coordinator each half term and pupils who are not meeting these will be identified and supported further to develop them.

These are the areas for each year as an assessment schedule for the school:

	RECEPTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
AUTUMN TERM 1	Say the number names in order to 5.	Know all the number bonds for 5.	Know all number bonds for 10 and 20.	Know all number bonds for each number to 20.	Know all number bonds for 100.	Know all decimals that total 1 or 10 (1 decimal place)	Know all previous number bonds including decimals.
AUTUMN TERM 2	Say the numbers in order to 10	Know all number bonds for 10	Know multiplication and division facts for 2x table.	Know multiplication and division facts for 2x, 4x and 8x table.	Know multiplication and division facts for the 7x table.	Consolidate multiplication and division facts for all times tables.	Derive multiplication and division facts using decimal numbers (e.g. $8 \times 0.7 = 5.6$)
SPRING TERM 1	Be able to partition numbers to 5 into two groups	Know all number bonds for 20.	Know multiplication and division facts for 10x table.	Know doubles and halves of all whole numbers to 20	Know the decimal and percentage equivalents of the fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, tenths and fifths	Know the doubles and halves of all two-digit numbers	Know doubles and halves of 2-digit decimals.
SPRING TERM 2	Count in 10s	Know all doubles and halves of even numbers to 20	Know the halves of 1,3,5,7 and 9 as a fraction	Know all number bonds for 100 using multiples of 5	Know all pairs of multiples of 50 with a total of 1000.	Know the prime numbers within 100	Know square numbers to 12×12 .
SUMMER TERM 1	Count in 2s	Know all addition and subtraction facts for all numbers between 0 and 10.	Know all addition and subtraction facts for multiples of 10 to 100.	Know all multiplication and division facts for 3x, 6x and 9x table.	Know multiplication and division facts for the 11 and 12x table.	Know all pairs of factors of numbers up to 100.	Know the tests for divisibility for numbers up to 10
SUMMER TERM 2	Count in 5s	Count forward and backward in steps of 2, 5 and 10.	Know multiplication and division facts for 5x table.	Know multiplication and division facts for 2, 5 and 10x table	Know all number bonds for £1 using decimal notation	Know the decimal and percentage equivalents of the fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, tenths and fifths	Know the square roots of square numbers to 15×15

By ensuring these 6, essential areas of fluency are secured each year, it will allow for greater access to the deeper, richer mastery lessons that they participate in each day.

Mastery Lessons

Each lesson includes elements of:

- Fluency, to practise skills
- Reasoning, to deepen understanding
- Problem solving, to apply skills

Planning Mastery lessons:

Teachers use the White Rose Mastery planning for their medium term plans (see appendix 1) as they are designed to meet the Teaching for Mastery demand for a small steps approach (nudging on pupil's learning daily so concepts can be developed systematically and the content never appears overwhelming). These plans are set out in 'blocks' such as 'place value', and a number of 'blocks' will be covered each term.

*NB - In years 2 and 6, due to the children sitting SATs in these year groups, teachers may occasionally rearrange these blocks to meet the needs of their pupils, however all the blocks will be taught by the end of the academic year.

From these medium term plans, teachers use additional resources that have been carefully mapped to the White Rose Scheme (including Third Space Learning Maths hub resources and training materials from NECTM) to develop daily lesson plans. These resources help to ensure that each lesson is produced to incorporate the above elements.

Classroom Organisation for Mastery Lessons

Wherever possible, whole year group teaching is adopted and children work in mixed ability groups OR children are placed into ability sets within their year groups so that targeted support can be given. Depending on the context of the lesson, or the needs of pupils, teachers may opt to deliver one whole class input or when necessary, a carousel type delivery where each year group is delivered to separately whilst the other is completing relevant work (usually supported by a TA).

All classrooms have maths displays with key vocabulary clearly displayed and a maths working wall that reinforces key concepts, strategies and processes.

Every classroom has a range of practical apparatus/manipulatives to support children's learning, with additional resources stored centrally. Teachers are encouraged to use these regularly, especially when beginning a new area of learning, to support the children's understanding of more abstract concepts.

MARKING

Maths books should be marked in blue biro, in as much detail as appropriate to the task.

The codes used in marking:

- VF (verbal feedback)
- G (guided)
- I (independent)

Marking should:

- Be completed in a timely manner to identify and address misconceptions quickly, therefore on the spot marking, self or peer marking (if age-appropriate) is encouraged
- Show children what they have done well and have a face to indicate the level of success
- If necessary for corrections, a useful and constructive comment
- Make clear what children need to do to improve by highlighting in green the specific point at which mistakes have been made within a calculation.
- Enable children to make visible signs of improvement as a consequence of the marking

Next steps marking or comments should only be used on occasion and when the teacher feels it is necessary for their own assessments or when a child is working considerably above the expected standard as within Teaching for Mastery, the next step is often the next lesson and the level of challenge is aimed to stretch all learners. When next steps are used, they will only be used if it is of benefit to the individual child and should take the form of the following:

- A challenge (an extension of successful previous learning - ideally using a variety of skills such as reasoning, explaining or problem solving)
- "Can you do $*34 + 8*2 = 976$ "
- Reminder (Identifying small computation errors required to correct a mistake)
- "Do you think there is anything missing in this calculation?"
- Steps / Instructions (An error using steps to success needs to be reinforced before the whole task can be completed)
- "You got stuck on step 1"

- "Can you put these numbers in order? 23 34 12 83 9"
- "Here is how I did a calculation like yours"
- "Where would you put the decimal point in your calculation?"

Pupils need to be given regular response time to address any corrections or next steps and children in KS2 are to show any corrections so they can be clearly seen and checked by the teacher and coordinator.

PRESENTATION IN BOOKS

Due to the nature of the resources we are subscribed to as a school, most of the work may be evidenced upon carefully considered and mastery centred worksheets, however, wherever possible, pupils are encouraged to write their work into their books.

In all activities, they are encouraged to take pride in the appearance of their work in maths.

Recording of learning may include written, oral (then scribed by adult) or photographic evidence.

A record of use of ICT or playing mathematical games/practical work should be kept on a sheet attached to the back of all pupils' books.

Pupils and teachers should refer to a WAGOLL when possible so that presentation of methods are demonstrated clearly.

HOMEWORK

All children will receive weekly homework that is linked to developing fluency or rehearsal of mastery work undertaken. This will be set on a class by class basis and decided by the class teacher based on need, but may include:

- Weekly allocation of games set on Times Tables Rockstars or Numbots (Apps that track and progress children through instant recall facts)
- Fluent in five practice (from Third Space Learning – a daily revisit of prior arithmetic skills)
- Flash back 4 (Recap of prior and current topics, 4 questions per day)
- Any relevant rehearsal of skills previously covered in class

LINKS BETWEEN MATHEMATICS AND OTHER SUBJECTS

Mathematics contributes to many other subject areas in the primary curriculum and opportunities are given to draw mathematical experience out of a wide range of activities. This allows the children to use and apply mathematics in real context. Teachers are encouraged to make links where possible in mathematics lessons to the context of the current class topic.

ICT

All teachers are encouraged to use ICT to enhance teaching and learning in mathematics where appropriate. Every classroom is equipped with an Interactive Smartboard and all pupils have access

to iPads and laptops. Opportunities will be provided for the children to apply and develop their ICT capabilities in mathematics through mathematical software installed on our network and web-based games and software such as floor turtles, databases and spreadsheets.

IMPACT

Assessment

Through careful, small-step planning and teaching of mathematical areas, with a heavy emphasis on instant recall, alongside deep and meaningful mastery based learning, children at St Mary's are expected to make one judgement level progress each term at their expected year group standard. These levels are annotated as the year group they are working at, then E (entering – ideally by the end of term 1), D (developing – ideally by the end of term 2) and S (secure – ideally by the end of term 3) *E.g. a child making expected progress after the first term in Y2 will be judged as 2E.*

To monitor and track pupil progress, there is a cycle of assessments in place. Children will be given a pre-block assessment to identify any gaps in understanding from previous year groups that need addressing before, or alongside, new learning. Children will then also complete an end of block assessment to help support teacher assessments.

At the end of each full term, children will complete the White Rose end of term assessments that will recap all of the learning covered, and this will aide teachers when assessing children. They will then use this, alongside other evidence, to highlight progress through marking off curriculum statements on the KLIPS documents from Lancashire Professional Development Service.

Based on the KLIPS document, children will be given judgement of entering, developing or secure within their year group at the end of each term. Each term, the teachers will meet with the lead of the Key Stage and discuss pupil progress, putting into place intervention as needed to accelerate the progress of pupils who are may be falling behind.

It is the expectation that the majority of pupils, through this careful monitoring and assessment process, will receive a secure judgement by the end of each year group. To confirm this, children will complete an end of year assessment from White Rose or Third Space Learning to reinforce judgements made.

EYFS assessment

Children in EYFS will be monitored closely across the year and observations and assessments will be made in an informal way each day, which will be linked to the Development Matters documentation to monitor progress. Children who are not making the expected progress will be identified and appropriate support / intervention will be put in place with the aim of accelerating progress. At the end of the year, these will be collated and judgements will be made through a range of assessment strategies and will be tracked against EYFS Early Learning Goals.

Monitoring and Review

The monitoring of maths teaching and pupil progress is the shared responsibility of teachers, subject leader and the senior leadership team. The work of the subject leader includes supporting colleagues in the teaching of maths, keeping up to date with current developments as well as

providing a strategic lead and direction for the subject. The school's governing body receive regular updates to inform them of the vision for continually driving forward teaching for mastery.

Policy review and update

Last reviewed -September 2020

Date of next review - September 2021

Appendix 1 – Termly overviews from White Rose

Reception

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Getting to know you (Take this time to play and get to know the children!)		Just like me!			It's me 1, 2, 3!			Light and Dark			
Spring	Alive in 5!		Growing 6, 7, 8			Building 9 and 10			Consolidation			
Summer	On the move		Superhero to 20 and beyond			First, then, now			Find my pattern			

Year 1

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
Autumn	Number: Place Value (within 10)		Number: Addition and Subtraction (within 10)			Geometry: Shape	Number: Place Value (within 20)
Spring	Consolidation	Number: Addition and Subtraction (within 20)	Number: Place Value (within 50)		Measurement: Length and Height	Measurement: Weight and Volume	Consolidation
Summer	Consolidation	Number: Multiplication and Division	Number: Fractions	Geometry: Position and Direction	Number: Place Value (within 100)	Measurement: Money	Measurement: Time

Year 2

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6						
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition and Subtraction				Measurement: Money		Number: Multiplication and Division		Consolidation	
Spring	Number: Multiplication and Division			Statistics		Geometry: Properties of Shape		Number: Fractions				
Summer	Measurement: Length and Height		Geometry: Position and Direction		Consolidation and problem solving		Measurement: Time		Measurement: Mass, Capacity and Temperature		Consolidation	

Year 3

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6						
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition and Subtraction				Number: Multiplication and Division					
Spring	Number: Multiplication and Division		Measurement: Money	Statistics		Measurement: Length and Perimeter			Number: Fractions		Consolidation	
Summer	Number: Fractions		Measurement: Time			Geometry: Properties of Shape		Measurement: Mass and Capacity			Consolidation	

Year 4

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6						
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction			Measurement: Length and Perimeter		Number: Multiplication and Division			
Spring	Number: Multiplication and Division		Measurement: Area	Number: Fractions				Number: Decimals			Consolidation	
Summer	Number: Decimals	Measurement: Money		Measurement: Time		Statistics	Geometry: Properties of Shape		Geometry: Position and Direction		Consolidation	

Year 5

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6							
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	
Autumn	Number: Place Value			Number: Addition and Subtraction		Statistics		Number: Multiplication and Division			Measurement: Perimeter and Area		
Spring	Number: Multiplication and Division			Number: Fractions						Number: Decimals and Percentages		Consolidation	
Summer	Consolidation	Number: Decimals			Geometry: Properties of Shape			Geometry: Position and Direction		Measurement: Converting Units		Measurement: Volume	

Year 6

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6						
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition, Subtraction, Multiplication and Division					Number: Fractions				Geometry: Position and Direction
Spring	Number: Decimals		Number: Percentages	Number: Algebra		Measurement: Converting Units	Measurement: Perimeter, Area and Volume		Number: Ratio		Statistics	
Summer	Geometry: Properties of Shape			Consolidation or SATs preparation		Consolidation, investigations and preparations for KS3						

Appendix 2- Calculation policy

The calculation policy follows the guidance from the White Rose Scheme and can be accessed as ZIP folder here:

<https://wrm-13b48.kxcdn.com/wp-content/uploads/2020/09/Calculation-Policies.zip>