Maths at Minsterley

INTENT STATEMENT

- **<u>Aims</u>**

- At Minsterley Primary School we believe that learning is a change to long term memory. We intend to create knowledge through spaced repetition and backwards and forwards learning. Our curriculum is built around repeated opportunities to strengthen key concepts. Opportunities are provided to revisit these skills within different mathematical contexts and other curriculum subjects.

The Maths coordinator at Minsterley Primary is Jo Holloway BSc & MSc

The Mathematics Curriculum

Our school scheme of work is a working document and as such is composed of on-going plans produced on a week by week basis. This is developed from the statutory framework for early years foundation mathematics programme (2021) and the National Curriculum (KS1 and KS2) and takes into consideration the needs of our children.

Early Years Foundation Stage (EYFS)

Children follow the statutory framework for the early years foundation (2021) programme for mathematics which is taught as both a discrete subject and within the whole Early Years Curriculum to give children opportunities to use their mathematical skills through play and in real life situations. *Direct teaching may be necessary, but effective early mathematics teaching strategies are playful, not formal, so that all children become cheerful, not fearful mathematicians.'*

Gifford, S. (2018) Children have the opportunity to explore, enjoy, learn about and use mathematics in a range of situations. Teachers plan daily maths activities which are frequently guided by an adult (increasing towards the end of the Summer term). Towards the end of Reception, teachers aim to draw the elements of a more formal daily mathematics lesson together, so that by the time children move into Year 1 they are familiar with a more formal maths lesson.

Teachers use the Reception White Rose Hub scheme of learning as their medium-term planning document which will ensure clear progression in small steps. These schemes provide teachers with exemplification for maths to ensure that maths concepts are revisited and developed across the year. Children are supported to explore counting, money, shape, patterns, objects, position, sequence and other core foundations of numeracy development. NCETM mastering number is also delivered on a regular basis. Alongside this at Minsterley, we dedicate time to develop reasoning and problem solving skills.

The Mathematics Curriculum (continued…)

Key Stage 1 and 2

The National Curriculum for Mathematics 2014, provides the **long term planning** for mathematics taught in the school.

Teachers use the White Rose Maths Hub schemes of learning as their **medium-term planning** documents. These schemes provide teachers with exemplification for maths objectives and are broken down into fluency, reasoning and problem solving, linked to the key aims of the National Curriculum. They support a mastery approach to teaching and learning and have number at their heart. They support pupils working together as a whole group and provide plenty of time to build reasoning and problem solving elements into the curriculum.

A main maths lessons of between 45 and 60 minutes will be taught daily, depending on the age of the children. The above schemes of learning support **daily** lesson/flipchart **planning** of the small steps set out in the White Rose Maths Hub MTP. Teachers can use a range of resources when planning for further support. These may include: NCETM teaching spines (https://www.ncetm.org.uk/resources/50640), NCETM mastery assessment material, White Rose, Classroom Secrets, Third Space Learning, Nrich, Maths Shed, and Busy Ant Scheme or the teachers own ideas. The teaching of maths facts may be further supported through the online access (at school and home) of Times Tables Rock Stars, Maths Shed, Whiterose minute maths and NumBots.

Fluency

In addition to the main maths session there will be regular daily fluency sessions linked to children becoming fluent in essential maths facts (number bonds within 20 and rapid recall of times tables up to 12 which is needed by the end of Year 4), related facts, prime numbers, square numbers and cube numbers below 100.

EYFS and KS1 we use the NCETM Mastering Number programme with the aim to strengthen the understanding of number, and fluency with number facts, among children in the first three years of school. This involves daily teacher led sessions on 'number sense'.

Online resources such as Times Tables Rock Stars, Maths Shed, Whiterose minute maths and NumBots are used both within school and at home to provide practise and develop fluency.

Cross-curricular Links

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas, so through our creative approach to teaching and learning we also seek to explore and utilise further opportunities to use and apply mathematics across the whole curriculum in particular Science.

Long Term Plans

At Minsterley we use 'The White Rose' long term plans as a basis. Teachers will extend/revisit particular areas in line with the needs of their particular class/year group.

This ensures:
- coverage of the Maths National Curriculum
- consistency across the whole school
- Mathematical skills are taught in coherent steps across our school

Long Term Plans (link to medium term plans)

Clee
(Reception only)

	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		Match, sort and compare		Talk about measure and patterns		It's me 1, 2, 3		Circles and triangles	1, 2, 3, 4, 5		Shapes with 4 sides
Spring	Alive in 5		Mass and capacity	Growing 6, 7, 8		Length, height and time			Building 9 and 10		Explore 3-D shapes	
Summer	To 20 and beyond		How many now?	Manipulate, compose and decompose		Sharing and grouping		Visualise, build and map			Make connections	Consolidation

Long Term Plans (link to medium term plans)

Year 1 only
(Clee & Wrekin)

	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 (within 10)**					Number **Addition and subtraction (within 10)**					Geometry Shape	Consolidation
Spring	Number **Place value (within 20)**			Number **Addition and subtraction (within 20)**			Number **Place value (within 50)**		Measurement **Length and height**		Measurement **Mass and volume**	
Summer	Number **Multiplication and division**			Number **Fractions**		Geometry Position and direction	Number **Place value (within 100)**		Measurement Money	Measurement **Time**		Consolidation

Long Term Plans (link to medium term plans)

Year 2 only
(Wrekin & Lawley)

	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**					Geometry **Shape**		
Spring	Measurement **Money**		Number **Multiplication and division**					Measurement **Length and height**		Measurement **Mass, capacity and temperature**		
Summer	Number **Fractions**			Measurement **Time**			**Statistics**		Geometry **Position and direction**		Consolidation	

https://whiteroseeducation.com/resources?year=year-2-new&subject=maths

Long Term Plans (link to medium term plans)

Year 3 only
(Lawley)

	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 A**			
Spring	Number **Multiplication and division B**			Measurement **Length and perimeter**			Number **Fractions A**			Measurement **Mass and capacity**		
Summer	Number **Fractions B**		Measurement **Money**		Measurement **Time**			Geometry **Shape**		**Statistics**		Consolidation

Long Term Plans (link to medium term plans)

Stiperstones
(Year 4 & Year 5)

Long Term Plans (link to medium term plans)

Long Mynd

The order of coverage will vary according to the needs of the particular cohort.

Problem Solving & Reasoning Long Term Plans

Autumn 1	Find all possibilities
Autumn 2	Logic problems
Spring 1	Word problems
Spring 2	Word problems
Summer 1	Patterns and rule
Summer 2	Visuals and diagrams

Progression
How do we all know what went on in previous years?

It also worth noting that, 'The White Rose Maths curriculum is a cumulative curriculum, so that once a topic is covered it is met many times again in other contexts.' *White Rose Maths 2019*

This is in line with our school's ethos regarding learning and with the educational thinking behind the EIF which identifies progress as knowing more and remembering more.

https://assets.whiteroseeducation.com/new-schemes/NEW%20NC%20RTP%202022.3%20FINAL%20March%202023%20version.pdf

Example Page

Counting
White Rose MATHS

Development matters		Birth to 5 matters	
3 and 4 year olds	Reception	Range 5	Range 6
• Recite numbers past 5. • Say one number for each item in order: 1, 2, 3, 4, 5.	• Count beyond ten.	• May enjoy counting verbally as far as they can go • Points or touches (tags) each item, saying one number for each item, using the stable order of 1,2,3,4,5. • Uses some number names and number language within play, and may show fascination with large numbers • Begin to recognise numerals 0 to 10	• Enjoys reciting numbers from 0 to 10 (and beyond) and back from 10 to 0 • Increasingly confident at putting numerals in order 0 to 10 (ordinality)
Autumn 3, Autumn 5 Spring 3, Spring 5 Summer 1	Summer 1, Summer 6	Autumn 3, Autumn 5 Spring 1, Spring 5 Summer 1	Spring 5 Summer 1

Cardinality
White Rose MATH

Development matters		Birth to 5 matters	
3 and 4 year olds	Reception	Range 5	Range 6
• Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). • Show 'finger numbers' up to 5.	• Subitise • Link the number symbol (numeral) with its cardinal number value.	• Subitises one, two and three objects (without counting) • Counts up to five items, recognising that the last number said represents the total counted so far (cardinal principle) • Links numerals with amounts up to 5 and maybe beyond • Explores using a range of their own marks and signs to which they ascribe mathematical meanings	• Engages in subitising numbers to four and maybe five • Counts out up to 10 objects from a larger group • Matches the numeral with a group of items to show how many there are (up to 10)
Autumn 3, Autumn 5 Spring 1	Autumn 3, Autumn 5 Spring 1, Spring 3, Spring 5 Summer 6	Autumn 3, Autumn 5 Spring 1 Summer 2	Autumn 5 Spring 1, Spring 3, Spring 5 Summer 4

Place value: Count

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• 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	
	Autumn 1 Spring 1 Spring 3 Summer 4	Autumn 1	Autumn 1 Autumn 3	Autumn 1 Autumn 4	Autumn 1 Summer 4	

Place value: Represent

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	• 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
	Autumn 1 Spring 1 Spring 3 Summer 4	Autumn 1	Autumn 1	Autumn 1	Autumn 1	Autumn 1

Comparison

	Development matters		Birth to 5 matters	
	3 and 4 year olds	Reception	Range 5	Range 6
	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.	Count objects, actions and sounds. Compare numbers.	Compares two small groups of up to five objects, saying when there are the same number of objects in each group, e.g. You've got two, I've got two. Same!	Uses number names and symbols when comparing numbers, showing interest in large numbers. Estimates of numbers of things, showing understanding of relative size.
	Autumn 3, Autumn 5 Spring 1 Summer 2	Autumn 1, Autumn 5 Spring 1, Spring 3, Spring 4, Spring 5 Summer 1, Summer 6	Autumn 2, Autumn 5	Spring 1, Spring 3, Spring 5 Summer 1, Summer 4

Place value: Use and compare

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
given a number, identify one more and one less	recognise the place value of each digit in a two-digit number (tens, ones) compare and order numbers from 0 up to 100; use <, > and = signs	recognise the place value of each digit in a three-digit number (hundreds, tens, ones) compare and order numbers up to 1000	find 1000 more or less than a given number recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) order and compare numbers beyond 1000	(read, write) order and compare numbers to at least 1 000 000 and determine the value of each digit	(read, write), order and compare numbers up to 10 000 000 and determine the value of each digit
Autumn 1 Spring 1 Spring 3 Summer 4	Autumn 1	Autumn 1	Autumn 1	Autumn 1	Autumn 1

Place value: Problems/Rounding

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	use place value and number facts to solve problems	solve number problems and practical problems involving these ideas	round any number to the nearest 10, 100 or 1000 solve number and practical problems that involve all of the above and with increasingly large positive numbers	interpret negative numbers in context round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 solve number problems and practical problems that involve all of the above	round any whole number to a required degree of accuracy use negative numbers in context, and calculate intervals across zero solve number and practical problems that involve all of the above
	Autumn 1	Autumn 1	Autumn 1	Autumn 1	Autumn 1

Example Page

Composition

Development matters		Birth to 5 matters	
3 and 4 year olds	**Reception**	**Range 5**	**Range 6**
• Solve real world mathematical problems with numbers up to 5.	• Understand the 'one more than/one less than' relationship between consecutive numbers. • Explore the composition of numbers to 10. • Automatically recall number bonds for numbers 0-5 and some to 10.	• Through play and exploration, beginning to learn that numbers are made up (composed) of smaller numbers. • Beginning to use understanding of number to solve practical problems in play and meaningful activities. • Beginning to recognise that each counting number is one more than the one before. • Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same.	• Shows awareness that numbers are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects. • Begins to conceptually subitise larger numbers by subitising smaller groups within the number, e.g. sees six raisins on a plate as three and three. • In practical activities, adds one and subtracts one with numbers to 10. • Begins to explore and work out mathematical problems, using signs and strategies of their own choice, including (when appropriate) standard numerals, tallies and '+' or '-'.
Autumn 1 Spring 1	Autumn 3, Autumn 5 Spring 1, Spring 3, Spring 5 Summer 2, Summer 4, Summer 6	Autumn 3, Autumn 5 Spring 1	Autumn 5 Spring 1, Spring 3, Spring 5 Summer 2, Summer 4, Summer 6

Addition & subtraction: Calculations

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• add and subtract one-digit and two-digit numbers to 20, including zero	• add and subtract numbers using concrete objects, pictorial representations, and mentally, including: ➤ a two-digit number and ones ➤ a two-digit number and tens ➤ two two-digit numbers ➤ adding three one-digit numbers	• add and subtract numbers mentally, including: ➤ a three-digit number and ones ➤ a three-digit number and tens ➤ a three-digit number and hundreds • add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	• add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	• add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • add and subtract numbers mentally with increasingly large numbers	• perform mental calculations, including with mixed operations and large numbers • use their knowledge of the order of operations to carry out calculations involving the four operations
Autumn 2 Spring 2	Autumn 2	Autumn 2	Autumn 2	Autumn 2	Autumn 2

Addition & subtraction: Problems

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ☐ – 9	• solve problems with addition and subtraction: ➤ using concrete objects and pictorial representations, including those involving numbers, quantities and measures ➤ applying their increasing knowledge of mental and written methods	• solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	• solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	• solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	• solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
Autumn 2 Spring 2	Autumn 2	Autumn 2	Autumn 2	Autumn 2	Autumn 2

Example Page

Teaching resources

White Rose mixed age	Classroom Secrets	Maths Shed Powerpoints	Third Space Learning	Test Base
Nrich	Deepening Understanding	Iseemaths	NCETM	Maths Bot

Maths Equipment to Support 'Number'

- Tens Frames
- Numicon
- Base Ten
- Place Value Counters
- Bar models
- Part Whole models
- Cuisenaire
- Bead strings
- Rekenrek

What would you expect to see in a maths lesson at Minsterley?

- Independent and responsible learners

- Teaching in line with NC

- High expectations with good pace 'Teach to the top'

- Pitched in line with age expectations

- Opportunities to recap/revisit previous learning through 'RT' (retrieval task) , mini activities and even whole lessons if required.

- Following White Rose long term plan

- Whole class teaching using concrete, pictorial and abstract methods

- Well chosen use of manipulatives to scaffold learning as appropriate

- Small steps, ensuring pupils are secure before moving on

- Mixed ability pairing the majority of the time

- Access to varied fluency, problem solving and reasoning across the week

- Live marking/self and peer marking

- Same day intervention

- Focused support & interventions

- Further challenge through resources such as 'Thinking Tom'; WR challenges and other resources to encourage children to think deeper about the concept they are learning about.

Anticipating misconceptions

Examples:

1. $6^2 = 12$
2. $7 \times 0 = 7$
3. Four hundred and eight is written as 4008
4. 0.10 = point ten
5. $0.5 \times 10 = 0.50$
6. $6 \div \frac{1}{2} = 3$
7. $-5 + 3 = -8$
8. 4% is 0.4 as a decimal
9. $1/3 + 1/2 = 2/5$
10. $\frac{1}{4} \div 1/8 = 1/2$
11. There are no numbers between 2.2 and 2.3
12. $0.2 \times 0.4 = 0.8$
13. $0.625 > 0.9$
14. 0.4 is smaller than 0.400
15. $5 \div 20 = 4$
16. 5/16 is smaller than $\frac{1}{4}$
17. 2.1 hours = 2 hours 10 minutes
18. A rectangle has two lines of symmetry
19. Shapes with bigger areas have bigger perimeters
20. The largest acute angle is 89^0

In line with EEF recommendations here at Minsterley we strive to identify possible misconceptions at the planning stage, where teachers can pre-empt the stumbling blocks that the children might face and address it from the beginning of the lesson rather than reacting during, or often after, a task to the misconception.

For example, if we take the same question and present it in two ways:

6.13 or 7.8   6.13 or 7.80
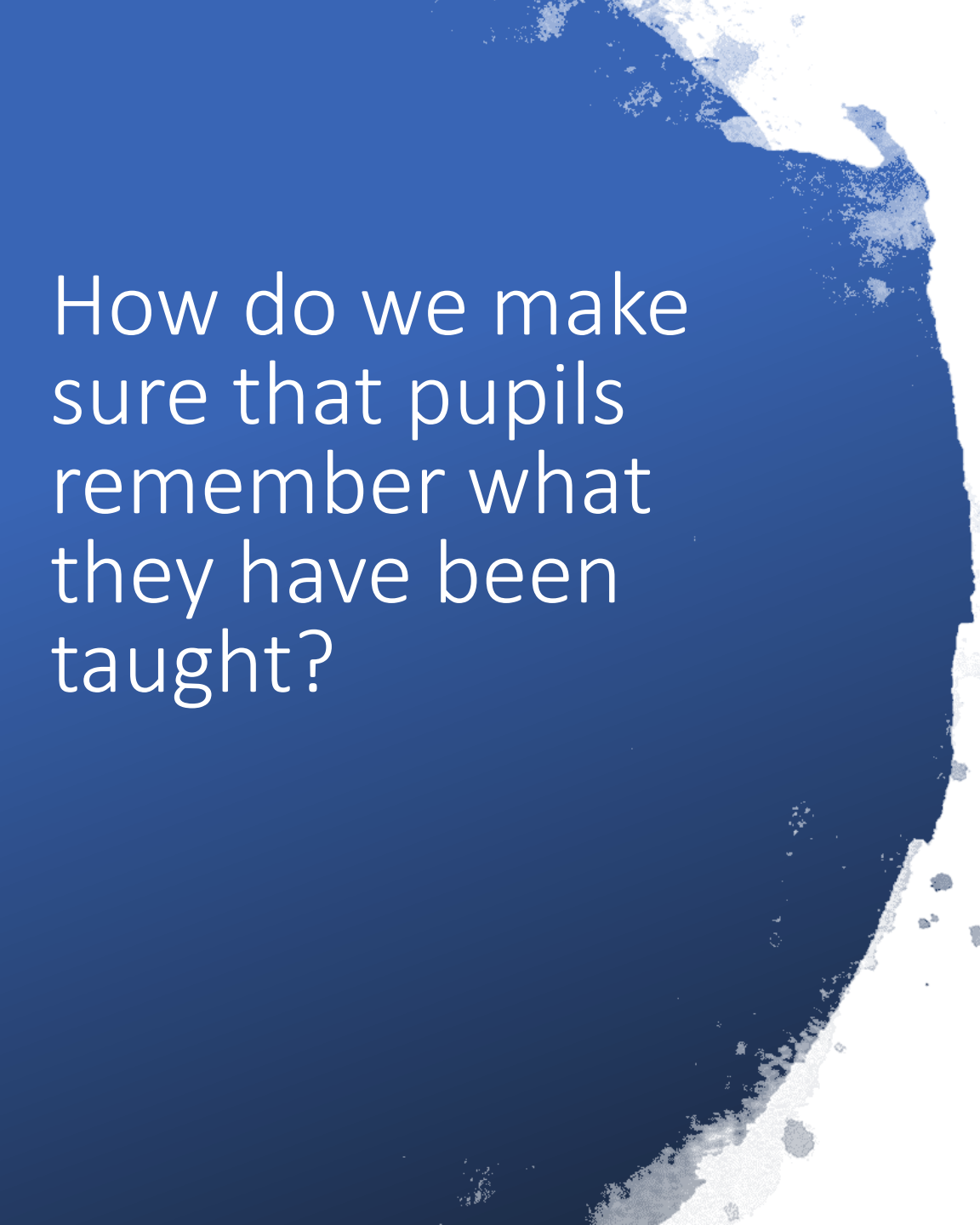Which number is greater?   Which number is greater?

This allows the children to explore what is the same and what is different about the two questions as well as allowing them to come to a more accurate conclusion. Showing the redundant zeros, and bringing previous place value learning in, can help children make the connections between previous and new learning.

Misconceptions are address is several ways: discussion, what is the same/different questions, multiple choice questions, prove it questions. Misconceptions are often highlighted to the children within the lesson through Tiny's mistakes on the PPT.

On the staff server in the subject leader file is a collection of resources which will help teachers to identify/pre-empt misconceptions. Plus the Whiterose resources also strive to solve misconceptions at the point of teaching.

How do we make sure that pupils remember what they have been taught?

- The sequence of maths lessons within our maths curriculum build logically on what has been learned before and enables pupils to build and strengthen their knowledge.

- Time is used well, moving on when pupils are ready, but allowing enough repetition and practise.

- The use of 'RT' (retrieval tasks) and regular timetabled arithmetic lessons enables revisiting away from the point of teaching and provides opportunities to apply learning to different contexts.

Skill: Subtract 1-digit numbers within 10	Year: 1

$7 - 3 = 4$
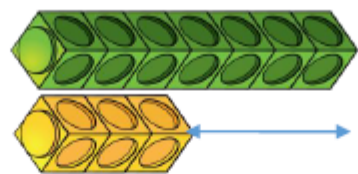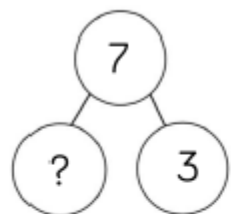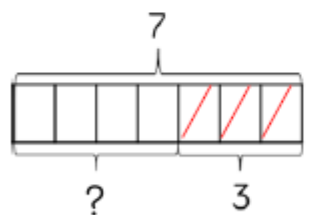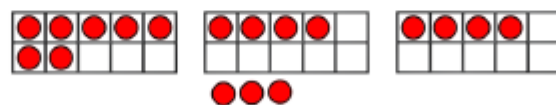
Part-whole models, bar models, ten frames and number shapes support partitioning.

Ten frames, number tracks, single bar models and bead strings support reduction.

Cubes and bar models with two bars can support finding the difference.

Calculation Policy

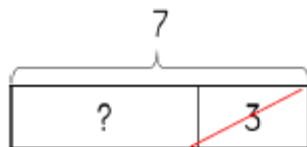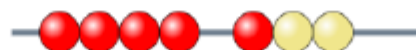(In-line with the White Rose LTP which

we follow)

Example page

Skill	Year	Representations and models	
Subtract two 1-digit numbers to 10	1	Part-whole model Bar model Number shapes	Ten frames (within 10) Bead strings (10) Number tracks
Subtract 1 and 2-digit numbers to 20	1	Part-whole model Bar model Number shapes Ten frames (within 20)	Bead string (20) Number tracks Number lines (labelled) Straws
Subtract 1 and 2-digit numbers to 100	2	Part-whole model Bar model Number lines (labelled)	Number lines (blank) Straws Hundred square
Subtract two 2-digit numbers	2	Part-whole model Bar model Number lines (blank) Straws	Base 10 Place value counters Column addition

Example Page

Calculation Policy

(In-line with the White Rose LTP which

we follow)

Calculation Policy

(In-line with the White Rose LTP which we follow)

Skill: Multiply 3-digit numbers by 2-digit numbers — Year: 5
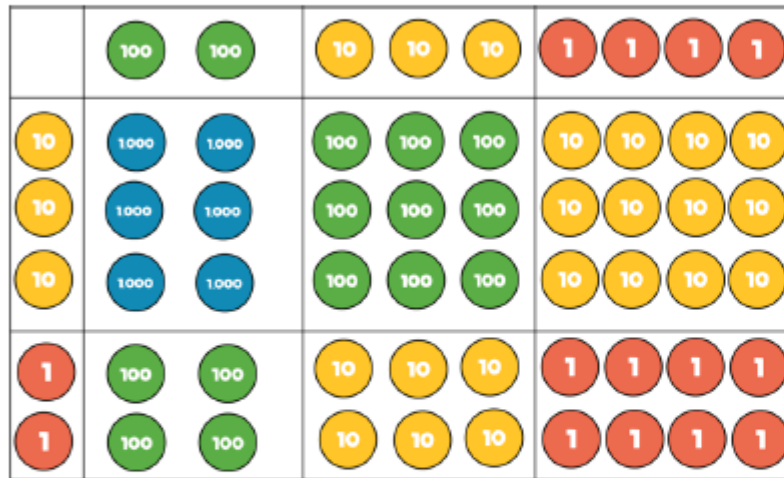
Th	H	T	O
	2	3	4
×		3	2
	4	6	8
₁7	₁0	2	0
7	4	8	8

×	200	30	4
30	6,000	900	120
2	400	60	8

$234 \times 32 = 7,488$

Children can continue to use the area model when multiplying 3-digits by 2-digits. Place value counters become more efficient to use but Base 10 can be used to highlight the size of numbers.

Encourage children to move towards the formal written method, seeing the links with the grid method.

Example page

Glossary

Array – An ordered collection of counters, cubes or other item in rows and columns.

Commutative – Numbers can be multiplied in any order.

Dividend – In division, the number that is divided.

Divisor – In division, the number by which another is divided.

Exchange – Change a number or expression for another of an equal value.

Factor – A number that multiplies with another to make a product.

Multiplicand – In multiplication, a number to be multiplied by another.

Partitioning – Splitting a number into its component parts.

Product – The result of multiplying one number by another.

Quotient – The result of a division

Remainder – The amount left over after a division when the divisor is not a factor of the dividend.

Scaling – Enlarging or reducing a number by a given amount, called the scale factor

Example page

Calculation Policy

(In-line with the White Rose LTP which

we follow)

Staff CPD 2021-2022

Teaching staff half day problem solving and reasoning led by Kate Burton Sept 2021

Year ¾ teacher and Y1/2 teacher attended and 'Up to Speed Maths course' Oct 2021 led by K Burton

EYFS,Y1,Y2 completed a year long NCETM Mastering number CPD 2021-2022

Teaching staff online CPD Practical ideas to support SEND Clare Christie Feb 2021

Maths update 17.05.22

Staff CPD 2022 -2023

Maths update 05.10.22

Teaching staff in-house CPD led by JH Mental addition and subtraction Y1 part 1

13.10.22 NCETM mastering maths conference 13.10.22
19.0123 & March 2023 Leadership of Early Maths (NCETM)

09.03.23 Mastering number mixed age groups NCETM Mel, Esther & Karen

Maths update March 2023

18.05.23 NCETM maths conference JH & KW
24.05.23 Maths update

23.05.23 3 sessions TA upskilling EJ & AB

Staff CPD 2023-2024

20.09.23 In-house EL & MT observed KW teach Y1 maths

25.09.23 JH & KW attended KS2 Mastering number NCETM

Assessment at Minsterley

Summative Assessment

- 3 assessment points currently use Rising Stars NTS (standardised) Maths Year 1 to Year 6.

Why do Summative assessments?

- To inform future planning

- Highlight common misconceptions

- Pin point weaknesses especially with focus children

- Inform Pupil Progress meetings

- Provides children with opportunity to practise previous learning

Assessment at Minsterley

Formative Assessment

- Questioning/paired discussion during whole class teaching

- White board work/practical work

- Live marking

- Arithmetic tests, TTRS, Maths Shed games, Whiterose minute maths

- Challenges, quizzes, Kahoot, Quiz Shed

- End of unit Whiterose tests

- Ready to Progress assessments (prior to each relevant unit)

Why do formative assessments?

- Highlight the need for same day intervention/other intervention/preteach

- Highlight the need to have focused 'live marking'

- Inform future planning

- Highlight common misconceptions

- Provide opportunities for pupils to practise previous learning

Supporting SEN pupils in maths at Minsterley

In line with our school SEND policy our overarching aim within maths lessons is to create an atmosphere of encouragement, acceptance, respect for achievements and sensitivity to individual needs, in which all pupil can thrive. The key aim is to be inclusive to all where everyone is being supported and challenged where needed. Support may be in the form of concrete and pictorial representations e.g.
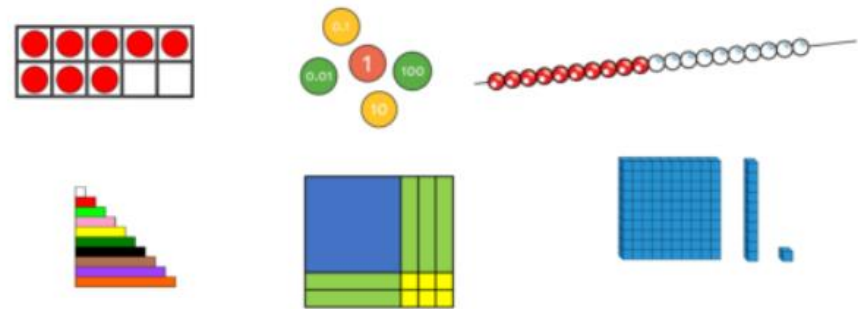
Support may also involve, pre-teaching, same day interventions, use of technology or differentiation. This will vary depending on the needs of the individual learner.

How will you see us supporting children with SEND in maths?

- Specific focus children during both whole class teaching and independent work

- Additional adult support (preteach, support within the lesson, same day intervention, targeted intervention)

- Easy access to manipulatives, equipment to further understand the concept being taught.

- Working straight onto a worksheet to aid with structure and layout.

- Use of technology e.g. Whiterose digital tools, maths videos linked to concept, maths hint sheets.

- Differentiation when need but this runs alongside high expectations for all.
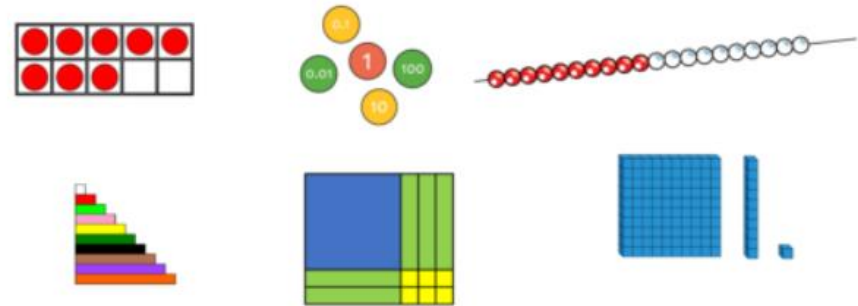
Maths Facts at Minsterley

Number bonds

- Good quality first teaching (small steps, concrete, pictorial, abstract)

- Additional daily 'NCETM Mastering number' lessons in straight year groups with a recap for the current year 3.

- Online Whiterose Minute Maths or Maths Shed (in school & set as homework in KS1

Times Tables

- Good quality first teaching, (concrete, pictorial, abstract) through the use of WR small steps.

- Dedicated daily access to multiplication fact activities (see multiplication LTP)

- Following Times Tables Rock Stars (TTRS) a minimum of 3 sessions per week recall sheets (60 questions in 3 minutes multiplication, division and missing number) Y2 to Y5

- Set TTRS homework online weekly Y2 to Y6

- TTRS online accessed daily Y2 to Y5

- Access to Maths Shed maths facts & MTC

- TTRS Battle of the Bands

- Y4 & Y5 KS2 Mastering number programme (2023)

Y4 Multiplication Tables Check

- Good quality teaching (concrete, pictorial, abstract)

- TTRS paper test (60 questions in 3 minutes) at least three times a week (session 1 = x, session 2 = divide, session 3 = x and divide)

- TTRS online at least once a day for 5 minutes in Y2, Y3, Y4 & Y5 for every child

- TTRS homework 15 games per week (facts to match paper copies)

- Intervention for focus children (5 min)

- Maths Shed MTC app used as assessment every half term

- Ensure correct orientation of keypad on TTRS

- Encourage children to not press enter when using the MTC to prevent silly typing errors

Maths Action Plan

Intended outcomes:

- 1.1 To ensure pupils develop a secure understanding of maths facts and can apply that knowledge across the maths curriculum.

- 1.2 To ensure KS1 EXS maths data is inline or above national EXS data.

- 1.3 To embed the new Whiterose maths scheme in EY to ensure all children make good or better progress in maths.

Intended Impact

Raise standards in maths attainment so that it is above/ in line with national data in KS1 and KS2 and above/ in line in greater depth.

Maths Monitoring at Minsterley

Maths books are monitored at least half termly by maths co-Ordinator & Headteacher

Maths books monitored by external maths advisor July 2021

Pupil voice carried out by Headteacher & maths coordinator at least termly

Staff training needs are monitored by maths co-ordinator. Plus, we are part of the SHAW maths hub.

Maths Policy reviewed Sept '21 (staff server/website)

Resources list (saved on sever/speak to maths coordinator or head for future purchases)

Managing teacher workload is through the purchase of various online resources, use of ipads/Chromebooks and using White Rose as a skeletal plan.

Subject leader attends all updates and part of SHAW maths hub.