



“At the federation of Beckwithshaw, Kettlesing Felliscliffe an Ripley Primary schools we aim to provide an environment of mutual respect and love where all children flourish and who grow together, guided by love.”

Maths Non-Negotiables

The purpose of this document is to provide staff and pupils with clear and consistent expectations regarding maths teaching and learning. This is to ensure that children make progress and that consistency is achieved across the federation.

Curriculum

- All maths books will be blue with squares inside.
- Each new unit needs to start with a unit title page stuck in the book.
- A4 Knowledge Organiser stuck next to the unit title page

Lessons

Lesson Structure

Date and LO in books	Class 1 – Mastering Number	Teaching input	Knowledge Practise	Marking and Corrections	Additional Knowledge Practise/ Challenge Questions
Complete next steps	Class 2/3 – Quick Quiz				
<i>Maximum 5 minutes</i>	<i>10 minutes</i>	<i>10-15 minutes</i>	<i>15 minutes</i>	<i>5 minutes</i>	<i>10 minutes</i>

Date and LO

- Short date written in the top left corner and underline – e.g., 09.09.24. Each **digit** will be in one box.
- Years Reception, 1 and 2 – Learning objective printed on sticker/typed and printed.
- Years 3, 4, 5 and 6 – Learning objective written underneath and underlined.

Quick Quiz

The ‘Quick Quiz’ is designed to recap previous learning as well as extend current learning. It should be used as the starter to the lesson and completed in maths books. The same template is to be used across the federation.

- Questions 1-4 Should be knowledge that the children are working on in this week’s learning.
- Questions 5-9 should be knowledge from the progression document.
- Question 10 should be an open-ended question.
- Children need to write the title ‘Quick Quiz’ in their books.
- Children to answer the questions in their maths books.
- Mark the Quick Quiz together and use as recap/teaching time.
- Printable low colour version for children with SEN

Teaching Input

The teaching input should provide pupils with the tools they need to complete the learning objective. Teaching inputs should be as practical and engaging as possible.

Input strategies:

- ➔ Practical resources to model and practise
- ➔ Whiteboard work
- ➔ White Rose PowerPoint
- ➔ Songs
- ➔ Games
- ➔ Rhymes
- ➔ Paired work
- ➔ 'I do, you do'
- ➔ Making a poster with steps to follow (e.g. calculation methods etc)

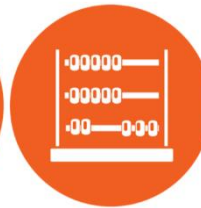
The teaching input should include examples of fluency, reasoning and problem solving.

Knowledge Practise

The knowledge practise should ensure that pupils have chance to practise fluency, reasoning and problem solving within each lesson. **There should NOT be stand alone lessons with the LO as 'Problem solving'.**



Understanding



Fluency



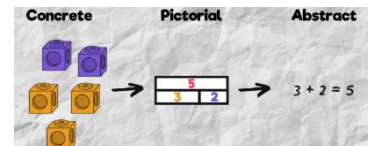
Problem-Solving



Reasoning



Practical work should be photographed and stuck into maths books alongside the children's work. This evidence of practical work and using Concrete, Pictorial and Abstract working is key.



Teacher should use the following places to get materials for Knowledge Practise:

- ➔ White Rose Scheme of Work
- ➔ White Rose Reasoning and Problem Solving Questions
- ➔ CPG+
- ➔ Testbase
- ➔ Primary Maths Hub

Twinkl should NOT be used as a resource at this time. Resources from these places should be carefully chosen and differentiated for each year group. Whole worksheets should NOT be stuck into books. Staff need to cut/snip questions for their cohort of children.

Marking and Feedback

Pupils should be marking their work alongside staff, in **Purple Pens**, and correcting as they mark. Once work has been marked questions from the challenge boxes (more information below) should be completed or additional tasks with an adult to consolidate learning.

Staff should review the work at the end of the lesson and set short challenges and supporting work (next steps) to be completed by the pupils in the following lesson. Staff should also be aware of marking Literacy skills within maths such as correct spellings for key vocabulary as well as SPaG elements when reasoning.

LO should be highlighted following the Marking and feedback policy.

In all ages, digit formation should be a real focus to ensure that digits are formed correctly and as shown below.



Classroom Environment

Displays

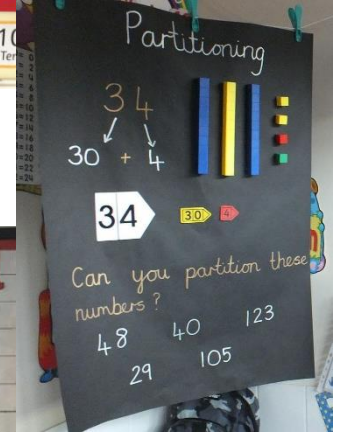
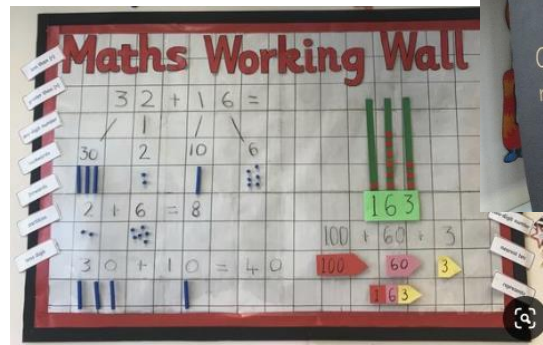
Maths displays should be clear but engaging. The display should show:

- Current Unit Title
- Key Maths symbols and vocabulary
- Calculation methods taught
- TTRS Posters

Resources for learning

In your classroom, there should be an area with manipulatives and resources to support maths learning. This should include the following – in ALL AGE CLASSES:

- Laminated 100 squares
- Laminated Number lines
- Cubes
- Counters
- Place value resources
- Reks and Reks
- Laminated Part Whole Models
- Laminated Number formation cards



Challenge Area

CHALLENGE

As part of the maths area, there should be a clearly labelled challenge area. These areas should be available with challenges for pupils to complete. There should be a clearly labelled area for each year group in your class. These can be completed as part of the lesson.

EYFS Maths

- Maths should be taught to EYFS children at least 2/3 times a week.
- Maths learning should ALWAYS be accessible through continuous provision (see below for details).
- This should be evidenced on Seesaw in a Maths Curriculum Folder.
- Once per week, children should record their learning in their blue squared maths book. This is to gain an insight into their learning and see progress over time. This should be a short independent written activity. This is to practise number formation as well as the marking and feedback process.
- Number Blocks should be used as a tool to enhance and support maths concepts and learning. This should be evident in the classroom through displays and provision.



Children in reception will have access to the Mastering Number Scheme as part of maths lessons as well as the White Rose Scheme for Provision enhancements and activities.

Seesaw Evidence

When uploading pictures and videos to Seesaw please ensure that you are detailing the following:

- Was the learning independent?
- How did the learning come about?
- Have you extended the learning?
- Can you record the child telling you what they have done?

Adults can probe with good questioning during this.

- See question prompts based on blooms taxonomy.



Continuous Provision

In each EYFS classroom, there should be a dedicated maths continuous provision area both inside and outside.

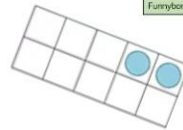
As a base, the provision area should always have:

- Materials for counting, sorting and pattern making.
- Number cards
- Five frames
- Ten frames
- Whiteboards and pens
- Picture books with a number theme (White Rose for ideas)
- Boxes with shapes
- Dry-wipe game boards
- Number lines
- Number formation dry wipe sheets

Phase 3 – Book List

Pete the Cat and his 4 Groovy Buttons- Eric Litwin
Witches Four – Marc Brown
Kipper's Birthday – Mick Inkpen
5 Little Ferals – Sarah Dyer
The Very Hungry Caterpillar- Eric Carle
Shella to Earth! – Simon Pultock
Square – Mac Barnett and Jon Klassen
Bear in a Square – Della Blackstone
Fox in the Dark – Alison Green
Peace at last- Jill Murphy
Kipper's Monster – Mick Inkpen
Day Monkey, Night Monkey – Julia Donaldson
The Dark, Dark Tale – Ruth Brown
Funnybones – Janet & Allen Alberg

Reading to children is an essential part of their development. Any of these books would be useful during Phase 3 alongside traditional tales such as The Enormous Turnip and The Gingerbread Man.



Provision Enhancements

White Rose planning provides activities to enhance your provision areas. These should be used weekly and will consolidate current learning based on the white rose curriculum.

Reception - Autumn Phase 3 - Numbers to 5

Four

Washing Line

Hanging clothes - linking to the book suggested, provide children with items to hang on the washing line. Can they count as they hang the items? How many items do they have altogether? Can we count them back into the basket?

Enhancements to areas of learning

Small World

In the small world area, create two areas (barns, fields) with signs that say 'two legs' and 'four legs'. Can children sort the animals into the correct areas by counting their legs?

Outdoor

In the parking bays, place signs for 2 wheels, 3 wheels and 4 wheels. When children park their bikes or toy cars, can they match the vehicle to the correct bay?



Outdoor 1234

Set up a number hunt. Hide numerals or objects with numerals on them around the outside area. Ask the children to find the numerals and to sort them into 1, 2, 3, and 4. Encourage them to count out quantities to match each numeral.

Reception - Spring Phase 5 - Growing 6, 7 & 8

6, 7 and 8

Maths Area

Encourage the children to think about where we see 6, 7, and 8 in everyday life and to make collections of 6, 7 and 8 objects in the classroom. Sort these items into 6, 7 and 8. How else could you show 6, 7, and 8?

Enhancements to areas of learning

Outdoors

Go on a mini-beast hunt. Use magnifying pots to observe the creatures carefully. How many legs can they see? Provide pictures to help them identify what they find. Ask the children to make careful drawings of the creatures they find.

Loose Parts

Provide a range of loose parts such as buttons, beads, pebbles, shells and some ten frames. Ask the children to count 6, 7, and 8 items onto the 10 frames. How many do they have? Can they see without counting? The children may also enjoy filling large 10 frames outside.



Kipper's Toybox

Provide a basket of toys for the children to use to re-enact the story. Take turns to 'hide' one of the toys. Can the children spot which toy is missing? How many toys are there now? What if an extra toy arrives? How many will there be now?

Enhancements can take many forms. These could be in:

- Tuff trays
- Within outdoor area
- Table-top activities
- Small maths trays
- Washing lines



Assessment

Summative assessment will be completed each term using the Rising Stars PUMA assessments. These will be completed by the children independently.

Reception – Baseline assessment to take place in Autumn Term

1. Summer Term 2 will be the assessment of ELG's.

Year 1 and 2 – Questions are read by the teacher and completed in small groups of 6 or less.

Year 3-6 – Booklets are completed by the children independently. Children may need access to a reader or a scribe to access the paper. Please speak to SENDCo and Maths lead to make them aware of this.

Year and term		New PUMA
Year	Term	Recommended time
Reception	Summer	40 mins
Year 1	Autumn	40 mins
	Spring	
	Summer	
Year 2	Autumn	40 mins
	Spring	
Year 2	Summer	45 mins
Year 3-4	Autumn	55 mins
	Spring	
	Summer	
Year 5-6	Autumn	60 mins
	Spring	
	Summer	

At the end of each unit, assessments from White Rose are used and stuck in maths books. These are completed to assess the children's understanding. Scores are recorded and input into a tracking sheet.

Numbots and TTRS

All pupils should have access to a TTRS and Numbots account.



Reception, Year 1 and Year 2 pupils should be accessing Numbots between 2-3 times per week – in and out of school.

Year 3, Year 4, Year 5 and Year 6 should be accessing TTRS between 2-3 times per week – in and out of school.

This works on number and place value facts as well as addition and subtraction.

This works on Multiplication and Division facts.

Numbots

Numbots has two elements – Story and challenge.

Story mode scaffolds the children working through mathematical skills such as number bonds, doubles and addition and subtraction skills.

No.	Key Skill	Example
1	Adding and subtracting 1 or 2 within 10	$1 + 3, 8 - 2$
2	Number bonds to 5	$3 + ? = 5$
3	Doubles within 10 (i.e. up to 5+5)	$4 + 4$
4	Adding and subtracting 1 and 2 within 20	$17 + 2, 11 - 1$
5	Number bonds to 10	$3 + ? = 10$
6	Adding and subtracting 10 within 20	$3 + 10, 16 - 10$
7	Doubles within 20 (i.e. up to 10+10)	$8 + 8$
8	Adding two 1-digit numbers	$5 + 7$
9	Number Bonds to 20	$8 + ? = 20$
10	Subtracting 1-digit numbers within 20	$14 - 6$
11	Adding and subtracting 1, 2 and 10 within 100	$1 + 74, 51 - 2, 38 + 10$
12	Adding and subtracting 2-digit numbers to/from multiples of 10	$20 + 64, 83 - 20$
13	Addition by bridging a multiple of 10	$25 + 6, 47 + 5$
14	Subtraction by bridging a multiple of 10	$25 - 6, 42 - 5$
15	Number bonds to 100	$52 + ? = 100$
16	Using compensation to add and subtract within 100	$35 + 19, 35 - 19$
17	Adding by partitioning two 2-digit numbers	$64 + 25, 10 + 64$
18	Subtracting by partitioning two 2-digit numbers	$64 - 23, 47 - 31$
19	Adding any two 2-digit numbers	$63 + 56, 63 + 58$
20	Subtracting any two 2-digit numbers	$76 - 43, 76 - 47$

STORY BY THE TIME A PLAYER REACHES		CHALLENGE THEY SHOULD BE READY FOR THIS CHALLENGE	
SUBTISING	Iron 6 Iron 7 Iron 26 Brass 29 Brass 37	> Subitising 0 to 5 (five frame) > Subitising 1 to 5 (group) > Subitising 6 to 9 (ten frame) > Subitising 6 to 9 (group) > Subitising 1 to 9 (ten boards)	
NUMBER BONDS	Brass 20 Copper 72 Tungsten 81 Bronze 22 Gold 38	> Number Bonds to 5 > Number Bonds to 10 > Number Bonds to 20 > Number Bonds to 100 (tens) > Number Bonds to 100 (all)	
+ ADDING	Copper 29 Chrome 46 Steel 48 Steel 74 Glass 80 Copper 10 Tungsten 32 Tungsten 60 Silver 49 Titanium 18 Bronze 68 Diamond 64	> Adding 0, 1 and 2 > Adding within 10 > Adding doubles > Adding near doubles > Adding across 10 > Adding 10 > Adding 8 and 9 > Adding within 20 > Adding ones within 100 > Adding tens to tens > Adding tens within 100 > Adding within 100	
- SUBTRACTING	Copper 43 Aluminium 60 Kevlar 73 Carbon Fibre 9 Silver 55 Bronze 46 Bronze 80 Diamond 75	> Subtracting 0, 1 and 2 > Subtracting within 10 > Subtracting ones within 20 (not across 10) > Subtracting ones within 20 (across 10) > Subtracting ones within 100 > Subtracting tens from tens > Subtracting tens within 100 > Subtracting within 100	

TTRS

	Autumn Term	Spring Term	Summer term
Year 2	-	10 x tables Garage	2x, 5x, 3x tables Garage
Year 3	Garage mode focus – following Quick Quiz Progression. Learning specific times tables and increasing speed/fluency.	Garage mode focus – following Quick Quiz Progression. Learning specific times tables and increasing speed/fluency.	Garage mode focus – following Quick Quiz Progression. Learning specific times tables and increasing speed/fluency.
Year 4	Garage mode focus. Learning specific times tables and increasing speed/fluency.	Add sound checks into use to practise MTC check.	BIG focus on soundchecks and increase TTRS time to daily.
Year 5/6	Focus on completing monthly gigs and keeping up soundcheck scores.	Studio focus to improve speed within tables. GD children can be set times tables above 12x.	Studio focus to improve speed within tables. GD children can be set times tables above 12x.

Supporting children within maths

The maths curriculum is designed to support mixed age teaching and provide children with a scaffolded and practical maths curriculum. This maths curriculum both supports and extends children by providing them with tailored knowledge practise.

If children are scoring below 75% regularly on White Rose Unit assessments or less than 90 Standardised Score in PUMA assessments, follow the flow chart below to support.

