THE WEALD
CofE PRIMARY SCHOOL

BEING A MATHEMATICIAN AT THE WEALD

A space to learn; a space to grow.
At The Weald, we support all members of our school community – our children, our staff and our families—to make and keep this pledge so that our children learn, grow and achieve their very best.

Our curriculum:

- Puts the mental and physical wellbeing of our children at the heart of all that we do;
- Connects our learners as local citizens of today with the ideas, knowledge and skills they will need as the global citizens of the future;
- Applies National Curriculum content through real world contexts;
- Encourages our learners to be curious, ask probing questions and be brave in finding solutions;
- Enacts the core Christian values of our school '*Respect, Responsibility, Love, Trust and Forgiveness'*, which promote respect for others, responsibility for ourselves and mutual trust.
- Promotes diversity and inclusion;
- Is enriched by well-planned, outdoor learning opportunities, off-site experience days and immersive workshops.

At The Weald, our intention is to create a culture of enquiry, curiosity and challenge that runs through our whole curriculum. Our school is developing a local, bespoke version of the Curious-city™ framework which supports our teachers to create contextually relevant, enquiry-led experiences. This enquiry-led approach is enabling The Weald to create a bespoke, locally focused curriculum for our learners that goes beyond the current National Curriculum.

How is the curriculum taught at The Weald?
Our enquiry-led curriculum supports our pupils to explore subjects through a sequence of 'key questions' which build up children's knowledge and skills over time. Through our curriculum, our children see themselves as different states of being, for example, as Authors, Mathematicians and Artists – rather than simply learning about English, Mathematics or Art. Author (English) and Mathematicians (Maths) lessons are explicitly taught daily. Enquiries are planned to ensure a broad and balanced range of learning across each phase. The curriculum is enhanced by locally rich and relevant experiences, which weaves in faith, community, and culture.
We support learners to master both the *know of* and *know-how* of a subject, not just remember it. For instance, we want our learners to be Scientists, not just learn about science. It is also important to make logical links between subjects. We want our learners to discover for themselves that they can be an Author, Scientist, Geographer and Philosopher at the same time and that some adults combine these states to become Archaeologists, for instance. You will see these around our school buildings, on visual timetables, on school displays and our online learning platform. It is important that the children see the connection between the subjects they are learning and how this knowledge can be applied.
At The Weald our excellent outdoor environment and the local community are an opportunity for active learning for all our pupils. The school grounds are evolving to enrich different curriculum areas, and outdoor learning is actively promoted and planned for. We ensure in-school learning is enhanced by relevant educational visits and visitors, overnight residential visits which take place in Year 4 and 6, assemblies, charity days and responding to events in the news. A range of clubs and enrichment activities such as concerts, sports matches, gardening competitions, arts assemblies, music, and dance festivals are a regular occurrence in our school. These are a vital part of the children's development as lifelong learners and ensure individual talents are nurtured and celebrated.

How is the impact of our curriculum measured?
The impact of our enquiry curriculum can be seen and heard as well as represented in outcomes. Real learning can be seen through the children's books, displays and the challenges that the children produce. In classrooms, working walls demonstrate the learning journey; States of Being characters feature in books, classroom displays and visual timetables as well as on our website and newsletters.

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Intent: Our Vision

The 2014 National Curriculum for Maths aims to ensure that all children:

- Become fluent in the fundamentals of Mathematics
- Are able to reason mathematically
- Can solve problems by applying their Mathematics

Maths is an international language that teaches us to make sense of the world around us. At the Weald, our Mathematics Mastery curriculum will ensure that every child can achieve excellence in mathematics. We are currently in the sustaining stage of our four year mastery journey as part of the Surrey hub. Children can experience a sense of awe and wonder as they solve a problem for the first time, discover different solutions and make links between different areas of mathematics. It provides pupils with a deep understanding of the subject through a concrete, pictorial and abstract approach. This ensures pupils fully understand what they are learning. We want all children to enjoy Mathematics and to experience success in the subject, with the ability to reason mathematically. We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and power of Mathematics. We are dedicated to ensuring that children are able to recognise the importance of Maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently, in a range of different contexts across our enquiry curriculum.

Implementation: How we plan and teach for Maths

The content and principles underpinning the 2014 Mathematics curriculum and the curriculum at The Weald, is inspired by those found in high-performing education systems internationally based on up to date research of mathematical teaching and learning.

These principles and features characterise this approach and convey how our curriculum is implemented:

- Teachers reinforce an expectation that all children are capable of achieving high standards in Mathematics.
- The majority of children progress through the curriculum content at the same pace.
- Differentiation is achieved by emphasising deep knowledge and application as well as through individual support and intervention.
- Teaching is underpinned by methodical curriculum design and supported by carefully crafted lessons and resources to foster deep conceptual and procedural knowledge.
- Practice and consolidation play a central role. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts.
- Teachers use precise questioning in class to assess conceptual and procedural knowledge and assess children regularly to identify those requiring intervention (including pre teaching), so that all children achieve.
- Careful questioning is used to develop children's mathematical discussion and reasoning.

Through teacher modelling, collaborative learning and fluency development; the children are enabled to confidently work independently. Independent work provides the means for all children to develop their fluency further, before progressing to more complex related problems. Children use manipulatives to solve problems and to show their understanding of a concept in different ways. The use of scaffolds, manipulatives and visuals develop the fluency of less confident mathematicians allowing them to succeed.

Planning

At The Weald, we use a variety of mastery resources to support us in our planning.

• Long term plans map out the objectives and domains to be covered each term, by each phase.

• Unit plans identify learning objectives and outcomes for each unit, as well as indicating the skills being taught. They highlight the skills and objectives of the lesson, and identify resources and appropriate support and challenge. They also indicate key questions and stem sentences.

Impact: How we evaluate our learning in Maths

The school has a supportive ethos and our approaches support the children in developing their collaborative and independent skills, as well as empathy and the need to recognise the achievement of others. In Maths, children are assessed during every lesson, which enables our teachers to plan the next steps for each child. Teachers assess against the learning objectives and the knowledge and skills requirements for each phase. Children are expected to make good or better progress in Maths and this individual progress is tracked and reported to parents and carers at parents evening and on the end of year report. The impact of the Maths curriculum is reviewed termly through both summative and formative assessments as well as gap analysis.

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Units of learning

Lower Key Stage 2 – Year 3 and Year 4 Long Term Plan 2024/25												
Week	1	2	3	4	5	6	7	8	9	10	11	12
Autumn	Place Value				Addition and Subtraction				Multiplication and Division A			Area
Spring	Multiplication and Division B			Length and Perimeter		Fractions A			Mass and Capacity		Fractions B	
Summer	Time		Decimals			Money		Shape		Position and direction	Statistics	

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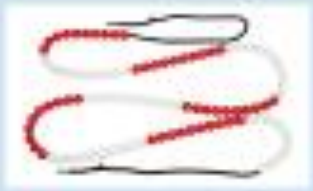
Upper Key Stage 2 – Year 5 and Year 6 Long Term Plan 2024/25

Week	1	2	3	4	5	6	7	8	9	10	11	12
Autumn	Place Value			Addition and Subtraction	Multiplication and Division A		Fractions				Multiplication and Division B	
Spring	Multiplication and Division B	Fractions B		Decimals A		Area, perimeter and volume	Decimals B				Fractions, decimals and percentages	
Summer	Ratio	Algebra		Shape			Position and direction		Statistics		Converting units	



Mathematics Progression of skills and methods

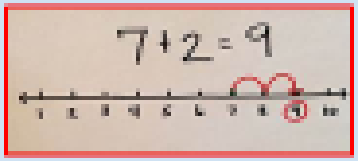
CONCRETE
PICTORIAL
ABSTRACT

Addition

Addition starts by adding objects

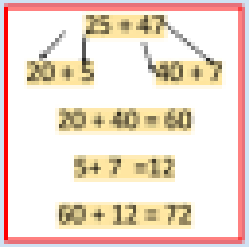
Bead string

Number line (Manipulatives and then onto jottings)



Empty number line (jottings)

For larger numbers we regroup horizontally (Partitioning)



	200	+	60	+ 3
+	100	+	10	+ 9
	300	+	70	+ 12
	300	+	80	+ 2

Then vertically (Expanded Column Method)

	176	
+	147	
	13	(7 + 6)
+	110	(70 + 40)
	200	(100 + 100)
	323	

Before we eventually contract this (Column

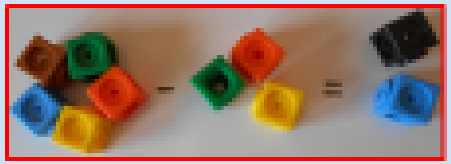
	4	4	7	8
+	3	7	6	2
	8	2	4	0
	1	1	1	

Insert zeros for place holders

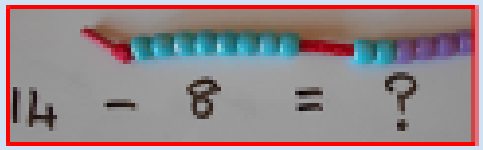
	23	.	36	1
	9	.	08	0
	59	.	7	00
+	1	.	3	00
	93	.	51	1
	2 1		1	

Subtraction

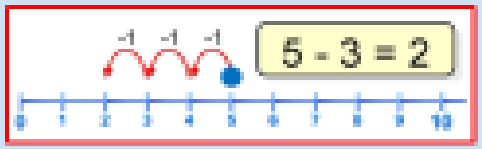
Subtraction starts with taking away objects.



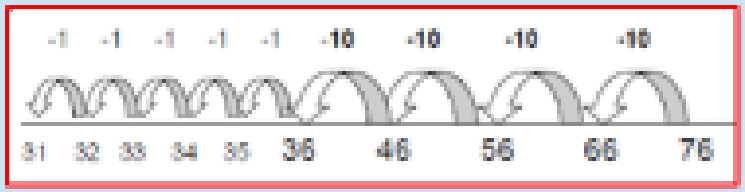
Bead string



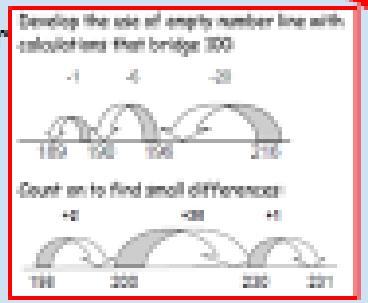
Number line (Manipulatives and then onto jottings)



Empty number line (jottings)

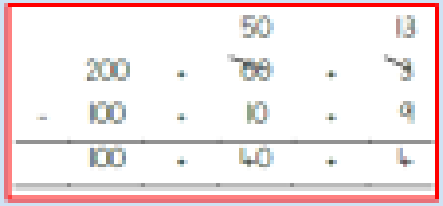


Empty number lines that bridge 100

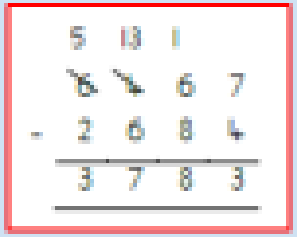


For larger numbers regroup horizontally (Partitioning)

$$\begin{array}{r} 90\ \ 8 \\ -\ 30\ \ 5 \\ \hline 60\ \ 3 \end{array}$$

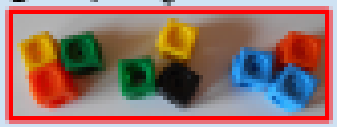


Then vertically until we eventually progress to the contracted version (Column method for exchanging)



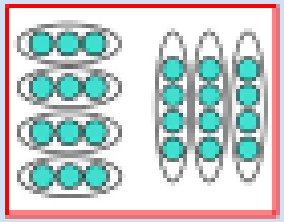
Multiplication

First, we group objects as a representation



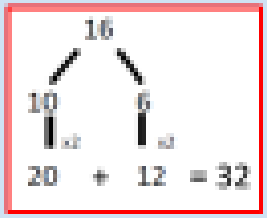
Bead string

Arrays



Number line and onto an empty number line to show as repeated addition (manipulatives and jottings)

Partitioning method



27 x 5 =
20 x 5 = 100
7 x 5 = 35
135

Grid method

Grid method

X	30	6
4	120	24

36
x 4
24 (6 x 4)
120 (30 x 4)
144

Short multiplication

Leading to expanded method

36
x 4
24 (6 x 4)
120 (30 x 4)
144

36
x 4
144
2

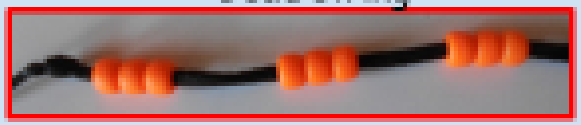
Long multiplication

23
X 13
+ 69 (3 x 23)
230 (10 x 23)
299

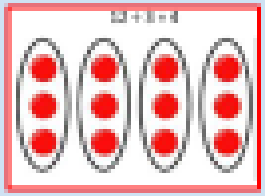
Division

Division begins with sharing

Bead string



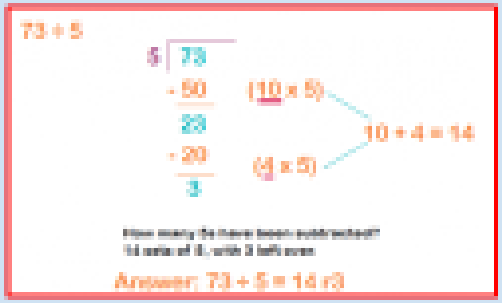
Sharing using arrays



Number line and onto an empty number line to show as repeated addition and subtraction (manipulatives and jottings)

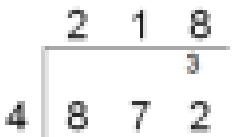
Example without remainder:
40 ÷ 5
Ask 'How many 5s in 40?'

Chunking

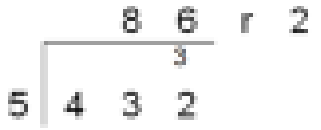


Short bus stop method for division.

Begin with divisions that divide equally with no remainder.



Move onto divisions with a remainder.



Finally, onto long division.