

How we organise and sequence our maths learning: Our maths curriculum has breadth and will often exceed what is expected in the national curriculum.



Long-term planning

We use unit planning.

The White Rose schemes of learning are adapted to meet the needs of our children.

Unit planning

For each unit, year groups use small steps set out on White Rose. Using their professional judgement and knowledge, teachers adapt and annotate the schemes of work for each block to meet the needs of their class. During the teaching of these units, teachers are encouraged to use formative assessment to adapt the sequencing of these lessons if required.



Skill Add 1-digit numbers within 10 Year: 1 When edding numbers to 10, children can explore to 10, and a supportation of the continuous bar model, number a support shapes and ten frame and support shapes and ten frame to 10, and 10 and 10

Teaching and Modeling

The Concrete, Pictorial, Abstract approach (CPA)is at the core of our teaching to develop a deep and sustainable understanding of maths in pupils. The value of discussion is recognised and encouraged with teachers carefully planning this into their sessions.

When modelling processes and thinking, teachers use paired worked examples effectively.

See our Calculation Policy

Represent it! Calculate it! Check it! - Our approach to problem solving. Children learn how to represent problems using concrete resources and pictorials such as bar models. These representations help them to understand the problem and decide on the calculation/s they need to carry out. They then put their answer back into their representation and use strategies such as inverse operations to check.

EYFS

The EYFS LTP is based on the current research and guidance from a number of sources including: the NCETM's 6 key areas of EYFS Maths (*Counting and cardinality (the 5ness of 5), composition (What is inside 5?), comparison (vital before calculating) and change, pattern, shape and spaces and measures*), White Rose (*including the 5 key areas for counting*), Gareth Metcalfe (*I see Maths*) and Number Sense.



Number Sense Maths

We deliver daily number sense sessions in Early Years and daily number facts sessions in Key Stage 1 and beyond through the Number Sense Maths.

Number Sense Maths enables children to develop both a deep understanding of number and number relationships, and fluency in addition and subtraction facts.



Year 6 THIRD SMACE LEARNING Week 3 - Day 1	1
A. 8,874 x ? = 8,874	B. 1,518 ÷ 6 =
C. 87.3 ÷ 10 =	D. 41 + 30 =
E. 83,328 – 76,397 =	

Daily Arithmetic

This time gives pupils the chance to overlearn key skills which should become part of their long-term knowledge in the style of a low stakes quiz.

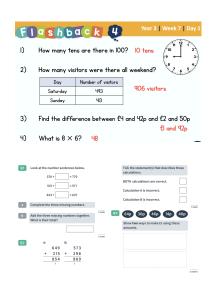
Retrieval

Recall is an important aspect of our maths curriculum and we use Flashback 4 as a resource to do this.

Flashback 4 is a series of quick questions covering something from the previous lesson, last week and then topics from earlier in the year – maybe even last year!

Reasoning & Problem Solving

Reasoning and Problem Solving opportunities are woven into all maths lessons. This takes the form of whole class discussions and is evident in practice tasks. We use resources such as 'I see reasoning', 'Convince me' cards and 'Rapid Reasoning'.





<u>Lesson Structures</u>									
KS1									
		Retrieval Flashback WR			Learning	Hinge question		Practice Group and individual work	
15 minutes	minutes 10 minut		es	Appr	prox - 40 minutes				
Year 3 - Follow KS1 structure until the end of Term 3 - Review.									
KS2									
Daily Arithmetic	1		New Learning		Hinge question		Practice Group and individual work		
10 minutes	10 minutes Approx - 40 minutes								

Learning Journeys - See Guidance

The ideas for our independent practice activities (learning journeys) are based upon the work of Emma McCrea from the book Making Every Maths Lesson Count, and Make It Stick: The Science of Successful Learning by Peter C Brown, Henry L Roediger and Mark A Mcdaniel.

Our goal with practice is for students to achieve fluency by maximising depth and longevity, so they are able to calculate **accurately** (find correct solutions), **efficiently** (using the correct strategies) and **flexibly** (adapting strategy and transferring across contexts).

By depth, we mean that students move beyond procedures, building conceptual understanding and making links between mathematical concepts. If we can enable them to do this, they will be better able to reason and solve problems.

Teachers plan one main 'Learning Journey' for the majority of the class. There is then an activity planned for those who can't yet access the main journey due to a gap in understanding and an extension for those that are ready to go to a greater depth. Within this practice, we also use deliberate interruptions to boost longevity of learning by causing the children to retrieve within the practice session itself.

Feedback

Rationale

It is only when children make mistakes that learning becomes possible. The key purpose of feedback and marking is to promote learning. Feedback is an integral part of our assessment procedures. It enables us to: Use (errors) mistakes as a learning opportunity; Challenge and deepen our mathematical thinking and understanding; Celebrate different methods; Inform planning and teaching next steps

Feedback Procedures

- Indicate with support or independent work
- All teachers go through any independent practice with the children during that lesson using purple pen
- LO and SC to be referred to at the beginning and end of every lesson



Consolidating Factual Fluency - Times Tables Plan





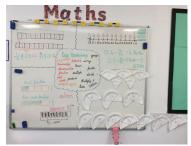
The children can consolidate their understanding and factual fluency through <u>Numbots</u>, both at home and at school. All children in the school have access to this highly engaging platform.

Times <u>Tables Rockstars</u> is a platform all children can use in KS2 to further develop their speedy recall of multiplication and division facts. We also use Times Tables Rockstars to monitor and track factual fluency of multiplication and division facts.

Supporting children working significantly below

Our summative assessments help teachers identify children who are working significantly below ARE. These children then have tailored support and scaffolding within sessions.





Working Walls

Working walls share key vocabulary and are a reference for recent and current concepts taught. They should include clear representations and models as well as key sentence stems.