Statement of Practice:

Maths

At Wolverham, we strive for all children to develop a thirst and enthusiasm for learning mathematics. Through a mastery approach (applying skills across different contexts) to the teaching of maths, we aim to ensure children are given a deeper and broader understanding of the key mathematical concepts in small progressive steps rather than being accelerated quickly through new content. We believe this approach ensures that all children can achieve. We want to inspire and excite children in their learning and help them to learn and remember more so that they are confident with the skills and knowledge needed to continue their maths journey as they progress through Wolverham and beyond. The teaching of vocabulary is given a high priority at Wolverham due to children's low baselines in Nursery and Reception; we want to provide children with a progressive and coherent pathway through their maths learning to ensure opportunities are given to develop this.

Early Years and KS1

Our aim is to create fun, captivating, and inclusive maths lessons that ensure children are progressing and getting full coverage of The National Curriculum. In Early Years and KS1, we follow the small steps from White Rose Education. White Rose Maths encourages a Concrete-Pictorial-Abstract approach to learning which means our pupils are introduced to new mathematical concepts through the use of concrete resources. We supplement this with NCTEM resources and Primary Stars Educations guidance and resources. This allows us to adapt our lessons to give the necessary support and challenge to all pupils.

Fluid intervention takes place each afternoon for any children that require additional support with their learning in maths.

Key Stage 2

In Key Stage 2, we follow the overview from White Rose Education. Teachers supplement this overview by adding resources from Power Maths, NRICH, I See Reasoning and Problem Solving, the NCETM

Mastery Spine and any other valuable resources that can enhance and enrich the children's knowledge of maths.

At Wolverham, we are mostly proactive with intervention, so plenty of pre-teaching takes place, as well as oral rehearsal of times tables every day from Year 3 upwards. Books are checked every day and fluid intervention takes place in the afternoon so that any children needing extra help are ready for the next day. We also use the intervention Number Stacks to help children solidify their visual and oral concepts in maths.

If you would like to support your child at home in maths, the best things to do are to first practise their number bonds with them to 10, 20 and 100.

Number bonds to 10 are, for example, knowing that you add 7 to 3 to make 10 and vice versa.

Number bonds to 100 are, for example, knowing that you add 64 to 36 to make 100 and vice versa.

If your child knows all of their number bonds fluently then it would be extremely useful for them to know all their times tables to 12.

Children in the whole of Key Stage 2 have a Times Table Rockstars login and children in Upper Key Stage 2 have a login for Doodle Maths. Both of these are useful home learning tools.

Skills Check - KS2

When the children enter in the morning, they should complete a ‘skills check’ in Years 3 - 5.

This should be 6 questions that follow the following format:

2 questions the children should find relatively easy to answer.
2 questions from the current unit of learning.
2 questions from recent previous units of learning (refer to White Rose - some, such as statistics and shape, won’t lend themselves to this, so you may need to go back further).

The questions should be arithmetic questions and these should have one simple answer that is easily checked by the adults in the room. The skills check should be marked as quickly as possible, and usually live by adults in the room.

It may be worth looking at an end of KS2 arithmetic test, to see the kind of questions that the children will meet in this.

Skills checks should feed into fluid, although the majority of feedback and modelling should take place during the early morning time itself.

Some days, if a whole class weakness is identified (that the children should be secure on from prior teaching), such as lining up decimal points in an addition, a worked example could be made available to the children and the skills check could be six of these questions for adults to check during the morning that all the children can do it and offer feedback and extra modelling. This approach should be used sparingly.

In Year 6, the children build arithmetic skills across the year, using MathsBot, based on the end of KS2 arithmetic test. This should also be live marked as much as possible by adults (with some self-marking) and should feed into fluid intervention.

Refresher Session - KS2

In Key Stage Two, once a half term, the children will undertake a refresher session. This will be off timetable to the White Rose maths overview that we follow. Rather than a one hour and ten minute lesson, this lesson will last for one hour and fifty-five minutes.

The purpose of the day is to refresh the children on aspects of the maths curriculum that may not be revisited as often as things like the four operations or fractions work. It is most likely to include:

- Time

- Shape
- Statistics
- Volume
- Temperature
- Length and Height
- Mass
- Capacity
- Money
- Area and Perimeter

Children should spend these sessions revisiting previous learning from the years or objectives that have come before. The sessions should be practical and interactive and should have plenty of opportunities for collaborative and modelled reasoning and problem solving. Concrete resources should be available. There is no onus for these sessions to be recorded in books.

As concrete resources will be necessary, classes sessions will not take place on the same day. Rather, class teachers should choose an appropriate day in the half term to do their refresher session. This might be appropriate when a unit ends, before another begins.

Times Tables At Wolverham

Our aim at Wolverham is that all our children, by the end of Year 4, develop fluency and accuracy in all their times tables as per the National Curriculum. Knowledge, fluency and accuracy of the times tables will mean that our children are more confident and efficient at grasping new learning throughout their time at our school such as area, algebra, long multiplication and ratio.

Order Of Teaching

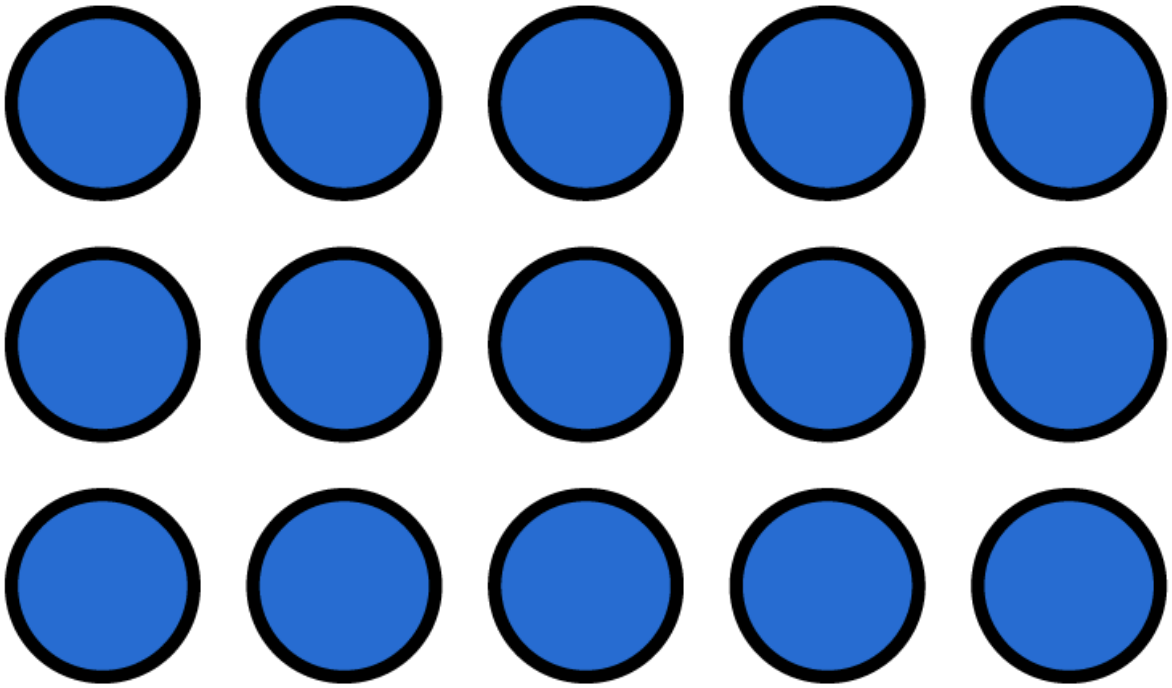
Explicit times table teaching, of approximately 5 minutes per day, will begin in Year 2 (Spring term, when the children have been exposed to multiplication and division) and run throughout the rest of the children's time at Wolverham. The ideal time to do this is either after the skills check, or for the last five minutes of the maths lesson.

The times tables will be taught in the following order, to ensure that each new times table will build upon the prior knowledge.

1 x tables.
2 x tables
5 x tables
10 x tables
3 x tables
4 x tables
8 x tables
6 x tables
9 x tables
7 x tables
11 x tables
12 x tables

What will the teaching look like?

Teachers should provide the children with a visual array of the times table they are working on and get the children to name the facts that the array represents.



5 x 3 = 15
3 x 5 = 15
15 divided by 3 = 5
15 divided by 5 = 3

From this, the majority of the teaching of tables should be rote learning and chanting, with cold calling questions of multiplication and division facts. Some children can also be extended with related fact questions, for example 3 x 40 = 120 in UKS2.

Additionally, teachers can use the counting stick or may want to use songs or rhymes that they already know that may help the children retain the key facts.

Children should answer in full when asked a question, so if asked ‘what is 3 x 5?’ they should be saying ‘three times five is fifteen’ or if asked ‘what are five lots of three?’ they should be saying 'five lots of three is fifteen’ and so on and so forth.

When approximately 90% of the children are fluent at one of the times tables, including the division facts, teachers should move onto the next one and set appropriate intervention for anyone who hasn’t grasped it yet.

Teachers should take advantage of and show children that as they get further through the times tables, there are less to learn - once they reach the 12s for example, the only fresh table to learn is 12 x 12. They should be constantly reminded of inverse operations and division facts. Times Table Rockstars can also be used for practice.