The teaching of Maths;
Maths attainment is high and teaching aims to develop conceptual understanding alongside procedural fluency. Use of practical apparatus to support understanding of number and calculation is embedded across school with regular training sessions to develop shared methodologies. This along with clear calculation guidelines ensures that pupils are moved through concrete, pictorial and abstract representations in a planned sequence and at an appropriate pace.

Oral Mental Maths is a feature of every day to ensure pupils develop the ability to retrieve number facts rapidly; catch-up and differentiated sessions are planned for pupils as required. Times table activities and tests are routine from Year 2.

Reasoning is strong. Children are expected to respond using mathematical vocabulary in full sentences, explaining their thinking. Good use is made of the 'steps in reasoning' from Year 3 upwards; children are confident to convince, justify and prove their thinking.

The teaching of maths is strong across the school. The Foundation Stage leader has received training on developing maths for mastery and pupils develop early number sense through a range of rich child initiated and adult led opportunities in areas of provision. Pupils are taught independence from the beginning through well planned resourcing and use of independent recording opportunities. Sharing methodologies with parents from the early years along with a strong focus on speaking and listening skills ensures that pupils begin to explain their thinking using correct terminology from the outset.

A Mastery curriculum is followed and embedding well from Year 1 upwards. All teachers who are new to the federation work with the school Maths Leader and receive regular training throughout the year. The school is part of a 16 strong Maths Mastery Teacher Research Group drawn from schools across the city and overseen by the Maths Leader. This currently includes the Year 1 teacher from Bramham and Year 6 teacher from Shadwell. Teachers plan in year group pairs across the federation, this along with support from both the Maths Mastery Specialist and The Maths Subject Leader ensure that teaching for Mastery continues to develop well.

In all classes, children receive whole class teaching in mixed ability pairs. Planning for Fluency, Mathematical Thinking, use of Representation and Structure, Procedural and Conceptual Variation and Coherence is supported by the use of Maths No Problem planning tool and text books. Mastery teaching addresses the needs of all pupils on a daily basis; support is provided through same day intervention for those who did not grasp concepts and challenge is provided through depth of both planned activities and higher order questioning for those for whom concepts were well understood.

There is an expectation that the overwhelming majority of children leave KS1 with confidence and mental fluency with whole numbers, counting and place value with the emphasis on use of practical apparatus to carry out the four operations with understanding. In lower key stage 2 the emphasis is on developing efficient written and mental methods with an expectation that pupils show increasing precision and fluency in their work including memorising their multiplication tables up to and including the 12 times multiplication table.

The connected nature of mathematical topics, whilst emphasised throughout is developed further in Upper Key Stage 2 through work on multiplication and division with fractions, decimals, percentages and ratio. Pupils also develop their ability to solve increasingly complex problems, which require efficient written and mental methods of calculation. Algebra whilst taught from the early years is formalised in Upper Key Stage as algebraic language is introduced and its use as a means of solving a range of problems consolidated. Wherever possible geometry and statistics are taught in context.

Whilst planning is based on a spiral curriculum, teachers use their professional judgement to spend an appropriate length of time on individual topics in order to develop mastery (depth of understanding along with fluency) for the majority before moving on. Medium Term planning within a year group is increasingly linear. Intervention is provided as required in order to enable the majority of pupils to move through the curriculum at the same pace. Teaching assistants are used well in order to provide additional support for struggling pupils outside the maths lesson, in addition to working alongside these pupils to ensure they can respond at their individual level of ability whilst accessing the whole class learning.

Teachers are of the belief that all pupils are capable of achieving high standards and challenge is part of everyday maths for all pupils. Topics are introduced and assessed through use of low threshold, high ceiling activities, which ensure that all pupils develop the ability to reason mathematically as well as developing resilience when meeting non-routine problems with increasing sophistication. Precise questioning ensures that pupils thinking is developed using mathematical language. Teachers are quick to intervene in enabling children to identify and correct misconceptions in order to develop a clear understanding of their own.

Whilst learning is whole class, with pupils seated in mixed ability pairs, great use is made of practical resources to support understanding with an expectation to use correct mathematical language in full sentences throughout. Care is taken to ensure practical apparatus does not hinder fluency. There is an expectation that pupils will learn number facts and apply these to calculations from an early age. Variation both procedural and conceptual are planned into every lesson so providing ‘intelligent practice’ Coherence; small connected steps are planned for both within and across series of lessons. Individual lessons may be slower than seen traditionally but with development of greater depth of understanding. Clear progress will be seen over a sequence of lessons.