



## 'Learning together. Growing together'

### Maths subject leadership

#### 1) What is the intent?

In maths: What is the intent behind the sequence of learning / curriculum?

(Following the national curriculum)

- Children will be taught key **knowledge, skills and vocabulary** through a mastery approach to maths. Children will be taught the same age-appropriate content as their peers through sequences of coherent and connected lessons
- Children will use manipulatives and representations that will take them through a concrete-pictorial-abstract approach to understanding key mathematical concepts
- Children will be given opportunities to practise and apply the knowledge and skills they have been taught through a range of carefully crafted problems that include mathematical reasoning.
- Children will be taught specific, technical, mathematical **vocabulary**
- **British values** – all learners will be valued and have the right to access the maths curriculum within the school
- In KS1 children will be taught to develop fluency with whole numbers, counting and place value. They will be taught to use the four operations using a practical approach such as concrete objects and manipulatives. Children will develop their ability to recognise, describe, compare and draw shapes and will experience a range of measures. By the end of KS1, children will confidently recall number bonds to 20 and will show a precise understanding of place value.
- In KS2 children will be taught efficient formal written methods to perform calculations accurately with increasingly larger numbers (including decimals). Children will be taught to solve a range of problems involving fractions, decimals, percentages and ratio. Children will be taught to develop their mathematical reasoning in order for them to analyse and confidently describe relationships between numbers, fractions and shapes. They will be able to classify shapes and will be taught the vocabulary they need to describe them. By the end of KS2, children will use algebra as a means for solving a variety of problems and will be fluent in written methods for all four operations (including long multiplication and division).

#### 2) Implementation – maths subject leaders will use:

- Lesson observations / check ins - do lessons show use of manipulatives and representations to support understanding?

- Long term planning – is there a clear progression throughout the year showing what mathematical concepts will be taught and for how long?
- Weekly planning – does it show evidence of LEARN? Does it follow our non-negotiables (Share it, Model it, Teach it, Do it, Do it again, Check it)? Do plans show evidence of NCETM professional materials and a range of other 'mastery' resources (such as White Rose, N Rich, You Cubed)? Do teachers plan for identifying children's misconceptions?
- Maths working walls, loops, children's books to show what has been taught
- Pupil conferencing
- Talk to teachers – are they teaching the intended curriculum?

### 3) What is the impact?

- Book looks – is there evidence of children's explanations of reasoning? Is there evidence of clear and concise use of formal methods?
- Pupil conferencing – are children using correct mathematical vocabulary (such as 'multiply' rather than 'times')?
- Are children explaining their understanding verbally in the maths lesson?
- Do children remember specific knowledge (such as the formula for area) and are they able to apply it to unfamiliar situations?
- Can children draw upon the skills they possess in order to solve problems?

### 4) What will excellence look like in maths?

- There is a shared understanding that excellence in maths is for ALL children
- Teachers know the intent of maths – why we are teaching what we are teaching
- There is a shared vision (among all staff and children) of the mastery maths approach we follow
- Children are taught the same content, together as a mixed group class to allow for children to learn from each other in maths
- Children not achieving age related expectations will have the opportunity to further develop their understanding through precision teaching intervention sessions
- There is a very clear set of calculation progressions so that children move towards learning formal methods which build upon previous strategies taught
- The use of physical manipulatives as well as teaching resources is consistent and as children journey through the school, they will continue to use familiar equipment and approaches
- Children will use technically accurate mathematical **vocabulary**
- Children can use mathematical oracy to describe, explain, reason and problem solve through the application of their **knowledge** and **skills**
- Children at the end of LKS2 will be confident in the recall of multiplication and division facts up to 12x12
- Children and adults promote a love of maths