

## Rationale

Mathematics is essential for everyday life and understanding our world. It enables the development of pupils' natural ability to think logically, solve puzzles and engage with real life problems. Pupils learn to think creatively and make links between mathematical concepts through exploring patterns in the number system, shape, measures and statistics. They make and discuss propositions, explaining their reasoning and justifying their answers using the correct mathematical vocabulary. They develop the skills, knowledge and efficient methods of calculation necessary to support their economic future and problem solving in life.

At Kingfisher, we aim to provide rich and varied learning experiences that are real, relevant and purposeful; allowing pupils to develop their skills and abilities so that they may begin to mathematically understand the world around them. Children are encouraged to explore and enjoy maths practically, using manipulatives from EYFS to Year 6. Children explore using a variety of concrete, abstract and pictorial representations and use these to problem solve. We aim to cultivate enthusiastic mathematicians by enhancing their knowledge and understanding through practical experiences and investigative work; stimulating a curiosity of mathematics. Furthermore, we aim to give all of our pupils the knowledge, experiences and 'cultural capital' necessary to become educated citizens and to succeed in life.

### **We aim to ensure that all pupils:**

- Become **fluent** in the fundamentals of mathematics through varied and frequent practice with increasingly complex problems over time so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **Reason** mathematically by following a line of enquiry, conjecturing relationships and generalisations and developing an argument, justification or proof using mathematical language.
- Can solve **problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

### **In direct reference to National Curriculum and Ofsted expectations, we will ensure that:**

- Pupils acquire 'core mathematical knowledge' which will allow them to start to experience success and therefore begin to associate maths with 'enjoyment and motivation'.
- Pupils have access to a wide range of fluency, reasoning and problem-solving questions, activities and tasks.
- The curriculum will be adapted to the needs of pupils and any gaps will be identified and closed.

- New content will 'draw on and make links with' previously acquired knowledge following a carefully sequenced curriculum that is 'intelligently designed' along with the frequent use of 'Let's Checks' and 'Challenges'.
- Lessons provide the relevant scaffolding and small steps so that all pupils will be confident using the linked facts and methods that form the strategy's 'building blocks'.

## Intent

Mathematics at Kingfisher Primary is challenging, exciting, creative and engaging, and enables children to become confident mathematicians. Fluency, problem solving and reasoning are at the heart of our teaching: ensuring children develop a secure and transferable understanding of mathematical concepts through a mastery approach.

## Implementation

At Kingfisher Primary we use the National Curriculum and NCETM curriculum prioritisation framework which provides coherent sequencing and progression for the primary maths curriculum by drawing on the DfE guidance on curriculum prioritisation. In addition, this is supported by White Rose, Nrich and Sumdog. The teaching of maths at Kingfisher ensures all children can actively participate and make progress. Lessons are planned carefully to allow the whole class to access the same lesson, whilst ensuring learning is personalised by support, the use of manipulatives or problem-solving activities. Small steps in progression ensure that children are always making links to prior learning and building upon previous understanding. Each new concept is embedded through modelling, practice and variation to ensure a deeper understanding. Children are taught oracy skills enabling them to explain their understanding and give clear reasoning using appropriate mathematical vocabulary. By exposing children to maths concepts in a range of representations and contexts, they are able to build on their knowledge and apply what they know to new areas.

## Impact

- Children have a love for maths and approach learning with a 'can do' attitude
- Children have quick recall of mathematical facts and are able to retain and apply
- Children are resilient learners and persevere to establish a deeper understanding
- Children are able to apply learning to reason and solve problems

