



## Subject: Mathematics

### Rationale

We recognise that mathematics is an essential part of everyday life, therefore we endeavour to nurture every pupil to reason, be creative, think abstractly, develop critical thinking and problem solving and to become effective communicators in mathematics. Our children will leave the school in Year 6 with the ability to access mathematical learning throughout their lives. At St. Vincent de Paul we follow the Statutory Framework for the EYFS and National Curriculum to teach mathematics. This is delivered using the White Rose guidance for EYFS, accompanied by the Numberblocks programme and Maths No Problem in key stages 1 and 2.

### Characteristics of Well-rounded Mathematicians (Curriculum Aims)

The national curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including 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

### Curriculum Intent

The mission of our mathematics curriculum is to enable learners of all mathematical abilities to succeed and develop a love for mathematics. We believe that children should spend time exploring mathematics through a carefully structured mastery approach with the aim of becoming confident, autonomous mathematicians. A fundamental aspect of the mathematics curriculum at St. Vincent de Paul is to provide learners with a deep conceptual understanding of mathematical concepts. Mastery in mathematics is based upon the core principles of the concrete, pictorial and abstract mathematical representation and structure, thinking mathematically, mathematical fluency and variation. We strongly believe that every child is a mathematician and that every child can achieve in mathematics. We aspire for our children to be confident mathematical communicators who share their mathematical ideas and knowledge in a safe and nurturing environment. We want learners to be equipped with an understanding of mathematics that will be relevant and useful not only in education but also in the wider world of work and their everyday lives.

### Curriculum Implementation

We use a mastery approach to teaching and learning mathematics from the Early Years to Year Six. Our mathematics curriculum is a spiral based curriculum as each mathematical concept and skill are revisited in intervals at a more sophisticated level each time. This ensures that our pupils are regularly revising and building their mathematical knowledge and understanding and are becoming mathematically fluent. Problem solving is at the heart of our curriculum, as each lesson is based upon a mathematical problem. When teaching maths for mastery, the whole class moves through topics at broadly the same pace. Each topic is studied in depth and the teacher does not move to the next stage until all children demonstrate that they have a secure understanding of mathematical concepts. Our mathematics curriculum gives our children time to think deeply about the maths and really understand concepts at a relational level. Our children are taught in mixed ability groups. This ensures that all children have access to the full maths curriculum. Our inclusive approach, and its emphasis on promoting multiple methods of solving a problem, builds self-confidence and resilience in pupils of all mathematical abilities. In every lesson children work mathematically in a variety of grouping structures. Children work in pairs, small groups and as a whole class when exploring mathematics. This offers pupils of all abilities opportunities to communicate, debate and challenge their own and others' mathematical thinking. Pupils also work independently. A strength of our mastery approach to mathematics is that the whole class goes through the same content at the same pace, yet there is a wealth of differentiation through depth and variation. Pupils who grasp concepts quickly are challenged with rich and sophisticated problems within the topic. Those children who are not sufficiently fluent are provided additional support to consolidate their understanding before moving on. This additional support is met through pre-teaching and additional support at the end of lessons. We also implement Maths Daily Skills lessons. These are short lessons covering core areas of mathematics and fluency such as counting, time, mental maths strategies, arithmetic and more. The purpose of this is to ensure fluency.

### Curriculum Impact

As a result, we have an abundance of enthusiastic mathematicians in our school. Our pupils relish solving mathematical problems within which they challenge themselves to find a multitude of new and inventive ways to solve a problem. Our pupils are confident communicators who will share their mathematical knowledge with their peers and engage in mathematical debates. Our pupils display fluency, the ability to recognise relationships and form connections, and can apply their knowledge and understanding to solve mathematical problems in new and unfamiliar contexts. Our teachers also use a wealth of stimulating and engaging teaching and learning approaches, using concrete resources, the latest technology, revisiting daily maths skills and using Times Tables Rockstars and Numbots programmes. Each member of staff is specifically trained to deliver Maths No Problem. Furthermore, as a staff, we continually keep up to date with current research and engage in lesson studies to ensure teaching and learning is outstanding.