St Alban's C of E Academy

In Association with: Manor Multi-Academy Trust



Mathematics Policy

2023-2024

<u>Intent</u>

At St Alban's. we empower each child to learn enthusiastically, grow independently and explore inquisitively to fulfil their God given potential. Our Christian distinctiveness is woven throughout our maths curriculum to enable children to contribute fully, to explore their potential as well as have high aspirations through challenge and resilience (**I have come that they may have life, and have it in all its fullness. John 10:9-10**)

The holistic and spiritual element within our curriculum allows children to have a greater fulfilment by becoming fluent and confident mathematicians, by developing self awareness and encouraging them to ask fundamental questions through debates, justification and reasoning. It is through this, we develop resilient mathematicians and children who have the ability to reframe mistakes or difficulties and believe that they can achieve (**I can do all things through him who strengthens me Philippians 4:13**.)

Examples of this within EYFS are evident when exploring early numbers: children are given the opportunity to develop curiosity and develop awe and wonder through the use of practical resources and questioning. Within KS1, this continues to develop, encouraging children to make connections with the wider world around them and understanding how maths permeates everything we do in life. Again, this further develops in KS2 where children are encouraged to develop a sense of vocation – in its broadest sense, encompassing every skill across different curriculum areas, in preparation for life in the wider world when they leave school.

Our Maths curriculum is designed with the intent that each child will become fluent, confident and competent in the basics of mathematics, developing their ability to calculate, to reason and to solve problems through the learning of mental and formal written strategies and applying these skills to increasingly complex problems.

Pupils will develop their understanding, the ability to recall and apply knowledge rapidly and accurately. This will be embedded through their time at school through rehearsal and exploration opportunities. Through this, children will be able to reason mathematically and solve problems by applying their mathematics to a variety of real life problems with increasing sophistication. The outcomes should be numerate pupils, who are confident enough to tackle mathematical problems without immediately going to teachers or friends for help.

Our mathematics curriculum is designed to allow pupils to:

- Be confident learners
- Use all four mathematical operations confidently
- Ask questions and be inquisitive about mathematics
- Use practical resources and manipulatives
- Draw pictoral representations of calculations
- Think logically and inquisitively
- Become a critical thinker

- Make a plan to solve a problem
- Explain their plan and thinking
- Have a good sense of number
- Recall key facts, strategies and methods
- Understand why we solve problems in different ways
- Know when and how to choose appropriate methods



Implementation

- St Alban's has a long term plan that covers which units/strands of maths will be taught when across the year.
- The school's medium term planning and calculations policy will be used by teachers to create short term planning: this will drive the journey of mathematics for every year group, from Concrete to Pictorial, then onto Abstract more formal strategies.
- We promote enjoyment and enthusiasm for learning through concrete/practical lessons, exploration and questioning.
- We also promote confidence and competence with numbers and the number system – encouraging a growth mind set through our Learning Bees across school and the mantra that, "I can't do it YET!"
- We promote the positive attitude where children relish challenges and understand the importance of the struggle to get to the final outcome and that throughout the process, it might be one slight mistake that needs changing within working out, not the whole problem.
- We develop a range of mental calculation skills the children and encourage their use in a range of strategies, through the use of medium term planning and the school's calculations policy that is specific for each year group.
- We develop the ability to solve challenging problems through decision-making, making a plan and reasoning in a range of contexts, including real life problems.

- We allow children to discuss and present their work using mathematical language, diagrams, jottings and charts.
- We explore the features of shape and space and develop measuring in a range of contexts, rehearsing and building on skills each year, following the medium term planning and mathematical vocabulary builder.
- We develop an understanding of the importance of mathematics in everyday life.

Each class in EYFS, Key Stage 1 and Key Stage 2 will be provided children with a daily lesson for mathematics, which will be an hour in duration. The structure of the lessons will have problem solving at the heart of every lesson and use a variety of teaching and learning styles, in order to develop children's knowledge, skills and understanding in mathematics. We will do this through daily lessons that have a high proportion of whole-class and groupdirect teaching.

During these lessons, we will encourage children to ask as well as answer mathematical questions. They will have the opportunity to use a wide range of resources and manipulatives to make the learning opportunities concrete.

Learning opportunities for all children will be matched to ability, this will be achieved through a range of strategies:

- > Through differentiated group learning opportunities throughout all of the lesson.
- Through learning opportunities that are matched to the children's relative starting points.
- Through working interdependently to support each other through peer learning and challenging children with open-ended problems or games.
- Through collaborative work between class teachers and support staff members to support children across all ability groups.

In addition, mathematics will play a part in other subjects, where children will be able to develop and apply their mathematical skills. For example, collecting and presenting data in Computing, Science and Geography.

The Leader of Mathematics will ensure that the curriculum is reviewed and kept up to date, with the latest research and methods. All staff will be informed, trained and have regular CPD (through staff meetings, phase meetings, team teaching and outside agencies) to guarantee there is a common understanding of how to achieve high quality mathematics teaching and learning. All classrooms, and central maths area, will be equipped with resources that will enable children to learn in a concrete manner, which will lead to clear understanding of numbers, the number system and strategies.

<u>Impact</u>

The impact of the curriculum design will lead to outstanding progress over time at all key stages, from the children's starting points on entry.

The curriculum, including the calculations policy and building blocks, will enable teacher's to consistently plan and deliver lessons of the highest standard, matched to children's individual needs.

By following the medium term planning and calculations policy, staff will have a clear journey across year groups and across terms, children will have a clear sense of number and will also confidently be able to apply this to different situations in order to solve problems that have a real life relevance.

Children's outcomes will therefore be of the highest quality.

Children will be confident, resilient and believe that mistakes matter and we only learn by reviewing these mistakes. They will also become self-motivated, independent learners, with a thirst for challenge and the growth mind-set that enables them to believe that they can succeed with EFFORT and make a plan if they are struggling.

<u>Review</u>

This policy will be reviewed annually by staff, SLT and Directors of the Trust/CEO.