Vision

With the teachings of Jesus as our guide, we embrace a creative and ambitious curriculum to ignite a passion for learning. We prepare our children for a rapidly changing world by equipping them with critical and creative thinking skills, independence, resilience and respect for our core school values.

Believe to Achieve

'Living life to the full' (John 10:10)

Our School Values:

Koinonia, Trust, Forgiveness, Friendship, Love, Thankfulness, Respect

All Saints' C.E. (C) Primary School

Policy Statement for Mathematics

Maths Mission Statement

We are proud to encourage and support our children to help them develop and grow into mathematicians, are able to demonstrate resilience when approaching any mathematical challenges. Our Maths Scheme (White Rose) allows us to integrate a range of problem- solving, reasoning and fluency challenges into each lesson. Recent investment in our Numicon and Rising Stars 'challenges for the more able' provides the necessary challenges for those requiring stretching. Children are encouraged to become reflective learners and complete a weekly memorization quadrant to reflect on prior learning, helping them to retain knowledge and understanding.

We encourage a concrete, visual and abstract approach to lesson design. Children first make links by using concrete resources. This kind of kinesthetic learning experience enables them to see the problem first hand and visualize how to approach the problem. Subsequently, they are able to translate their learning into a picture (visual approach). From here, children begin to explore their visualizations as formal methods, developing an abstract approach.

Alongside our daily lessons we have 'Times Table Tuesdays' where children focus on a times table activity or quiz to consolidate and encourage the quick recall of number facts. We believe and are passionate about providing opportunities for children to make connections, recognize patterns and develop a love for number.

General Principles and Philosophy

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason and problem solve mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects and develop resilience when completing mathematical challenges.

The National Curriculum

At All Saints' C E (C) Primary School, we aim to fulfil the National Curriculum requirements for Mathematics at Key Stages 1 and 2 by following a progressive and balanced framework of learning objectives. These objectives are provided in the programmes of study found in 'The Mathematics National Curriculum'. 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.

At **key stage 1** (years 1 and 2) the principal focus of mathematics teaching is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This involves working with numerals, words and the four operations, including with practical resources [for example, concrete objects and measuring tools]. At this stage, pupils will develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching will involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money. By the end of year 2, pupils should know the number bonds to 20, recall x2, x5 and x10 number facts, and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency. Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1. The aim is t develop independence and equip children so they can explain their approach.

At **lower key stage 2** (years 3 and 4) the principal focus of mathematics teaching is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching will ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. By the end of year 3, pupils should have memorised their multiplication tables up to and including the 12 multiplication table (to prepare for national testing in year 4) and show precision and fluency in their work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

At **upper key stage 2** (years 5 and 6) the principal focus of mathematics teaching is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This will develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio. At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should

also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them. By the end of year 6, pupils should be confident and to be provided with opportunities to select calculation methods of their choice, for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages. Pupils should read, spell and pronounce mathematical vocabulary correctly. Develop a positive attitude in pupils towards Mathematics and to promote Mathematics as an interesting and enjoyable subject.

Aims

The aims of Mathematics at All Saints' C of E (C) Primary School are to:

- help pupils to acquire language, knowledge, skills and understanding in Mathematics, with reference to the National Curriculum Programmes of Study;
- challenge children to reason mathematically through following the White Rose Scheme of work;
- enable pupils to be confident in the use of a range of Mathematical tools and equipment, and to be prepared to tackle unfamiliar tasks;
- encourage pupils to work in a systematic way but also to be flexible and creative when solving problems,
- provide a wide range of opportunities for pupils to apply Mathematics in all areas of the curriculum and discuss views towards mathematics during termly Pupil Voice meetings;
- encourage pupils to communicate their Mathematics and to produce work of quality and depth;
- help pupils to see the relevance of Mathematics and encourage them to use it to solve problems in both school and home environment;
- encourage pupils when appropriate, to work effectively as individuals or to work cooperatively to develop their ability to think, discuss and mutually refine ideas;
- promote self-motivation, so that pupils will have the perseverance and flexibility to carry out and complete a task;
- provide an enjoyable, supportive and challenging Mathematical environment to enable each pupil to develop and grow to his or her maximum potential.

Expectations

- The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should

always be based on the security of pupils' understanding and their readiness to progress to the next stage.

- Pupils who ***grasp concepts rapidly*** should be challenged through being offered rich and sophisticated problems before any acceleration through new content.
- Pupils who are ***not sufficiently fluent*** with earlier material should consolidate their understanding, including through teacher led intervention or focus group sessions, before moving on.
- Pupils should also apply their mathematical knowledge to science and other subjects.

Monitoring and Review

In line with the whole school monitoring schedule, the subject leader undertakes book audits; the results of which are recorded, passed onto Senior Management and individual staff members. Discussions and audits also take place regarding coverage of the curriculum and resourcing issues. Teachers also complete the All Saints' Primary School Tracking System and participate in termly Pupil Progress Meetings. There is a named governor for Maths.

Equal Opportunities (Refer to All Saints' C.E. (C) Primary School's Equality Statement)
All children (irrespective of gender, disability, religious belief/faith tradition, sexual orientation, age or any other of the characteristics protected in the Single Equalities Act 2010) are entitled to participate in and benefit from a broad range of appropriate scientific activities.

Special Educational Needs (Refer to All Saints' C.E. (C) Primary School's SEND Policy
All children at All Saints' Primary School will be provided with high quality teaching that is differentiated to meet the diverse needs of all learners.

Curriculum content for Mathematics reflects the National Curriculum. The long and medium term schemes of work have been planned with awareness of our school context to develop skills in fluency, problem solving and reasoning whilst visiting all mathematical strands. Reinforcing previous learning is achieved through consolidation periods whilst intervention sessions pre-teach many Mathematical concepts preparing targeted children.

Planning shows progression in skills and knowledge – termly and year by year – so that learning builds on what has been taught previously. Teaching staff make regular formative assessments to identify gaps in knowledge and adjust planning accordingly. This is shared and used effectively so that teachers have a clear idea of starting points for learners. There are meaningful links and connections between Science, Discovery topics and other areas of the curriculum.

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