St Paul's CE Primary School, Utkinton & Cotebrook

Maths Curriculum



Here at St Paul's CE Primary School, we are proud to provide excellent care and outstanding education for children from three to eleven years old in our unique, picturesque setting. Our Christian vision is at the heart of all we do, and we endeavour to provide a personalised curriculum to each and every child.

Our small class sizes allow us to give each child a high level of support and guidance. We take care to ensure that we know every child's starting points and we adapt our teaching to meet their needs, meaning every pupil is experiencing challenge and success.

We have worked hard to tailor the curriculum so it is bespoke to our children, supports their journey to becoming 'Mathematicians' and provide opportunities for them to learn a deep understanding of place value, develop fluency and proficiency in all four operations and deep conceptual understanding of all areas of the curriculum.

Our Maths Curriculum

At St. Paul's, we believe that Mathematics teaches children how to make sense of the world around them through developing their ability to use number, calculate, reason, and solve problems. It is a subject that helps children to understand relationships and patterns in both number and space in their everyday lives.

The teaching of Mathematics is a key priority within our curriculum and through this, we aim to raise levels of achievement for all pupils, as well as increase confidence, appreciation and wonder of maths. At St. Paul's, we promote a Mastery approach to learning within Mathematics. Mastering maths means pupils of all ages acquiring a deep, long-term, secure, and adaptable understanding of the subject. We believe that teaching for Mastery is essential to provide our pupils with the necessary skills and knowledge for them flourish, in school and beyond, developing a deep and lasting understanding of mathematical procedures. Everyday life and work are becoming increasingly mathematical, and it is indisputable that a facility with mathematics and the ability to analyse and interpret data improve young people's prospects in higher education and employment. To play a full part in today's society, it is essential to be able to make sense of numbers and critically analyse data. The phrase 'teaching for mastery' describes the elements of our classroom practice and school organisation that combine to give pupils the best chances of mastering maths.

Intent

- To develop a mastery of all Mathematical knowledge prescribed in the National Curriculum.
- To 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.
- To **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- To **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.
- To promote a **confident, positive attitude** towards the learning and use of mathematics making it an enjoyable experience for all children and for children to develop competence with numbers and the number system.

In addition, Mathematics at St. Paul's will:

- Prepare our pupils to be efficient, effective mathematicians in order for them to function in an ever-developing mathematical world.
- Provide equal opportunities and inclusion for all abilities in the use of the mastery approach to teaching maths.
- Allow all children to aim high by being provided with the same quality of teaching and learning throughout the school.
- Provide opportunities for pupils to explore maths in depth, using mathematical vocabulary to reason and explain their workings.

- Enable pupils to engage with and use a wide range of mathematical resources and provide opportunities for them to show their workings in a concrete, pictorial and abstract form wherever suitable.
- Promote a growth mind-set, enabling pupils to become resilient and persistent mathematicians.

Implementation

As a core subject, Mathematics is taught daily at St. Paul's. The content of each lesson is formed using the National Curriculum statements and delivered via the Power Maths planning learning objectives in KS1 and KS2. The Power Maths scheme consists of an exciting class mastery approach – which is recommended by the DfE - that works for every child.

Teaching and learning is constructed upon the concrete, pictorial and abstract approach, with every lesson divided into sections that are rich in providing opportunities of discovery, sharing, collaboration, practice and reflection. These sections are sequenced so that children are initially introduced to a Mathematical topic or concept through scaffolding and collaborative learning, before applying their acquired knowledge and skills independently. This helps children to develop a positive attitude towards Maths and develop the ability to work independently with confidence in their work. Children are encouraged to solve problems each day through the use of concrete resources, pictorial representations and abstract thinking. At the heart of this programme is the idea that all children can achieve and be successful mathematicians with the right growth mind-set.

At St. Paul's, we are also fortunate to be part of the DfE funded Maths Hubs programme and are in our fourth year of this programme; embedding a Mastery approach to Mathematics across the school. Staff training for this academic year will focus on ensuring that staff at all levels understand the pedagogy of the approach.

Alongside Power Maths, we use various additional resources, for example NCETM resources in KS2. Teachers also may supplement their classroom work with resources from White Rose in order to incorporate sustained levels of challenge. Both greater depth and struggling learners are given small group work, 1-2-1 and/or timetables intervention in order to ensure every child is reaching their full mathematical potential. Prior learning in maths is often revisited at the beginning of each lesson, with retrieval tasks that enable children to recall concepts previously taught. At St. Paul's, we also believe in enriching our Mathematics curriculum by using working walls and involving children and their families in homework and the use of Times Table Rockstars.

Mathematics work is recorded consistently across the school. Each lesson, pupils complete their Retrieval Task, Discover and Think Together tasks within their Maths Journal. Pupils' independent work for each lesson is recorded in the pupil Practice Book. Any further challenges or supplementary work from, White Rose for example, is recorded as next steps within the Maths Journal.

At St. Paul's, we see formative assessment as being integral to each lesson through addressing misconceptions, challenging with questions, analysing learning, extending learning and discussions with peers. Each unit of work completed is assessed using the Power Maths end of unit assessment sheet as well as end of unit check in the practice book. Each class completes arithmetic and reasoning tests using the Power Maths half termly progress tests, the results of which are recorded and tracked by the Subject Leader.

In order to address areas in which there are identified gaps from previous year groups, we aim to deliver essential schema that will provide children with the appropriate knowledge and skills required to progress on to age-appropriate content.

In Maths, children's prior knowledge will be assessed before the delivery of topics that were not taught/taught inconsistently in previous years, and identified missing schema will be taught in order to form the foundations for new content.

Bespoke retrieval tasks will also be used to target areas in which there are gaps/areas in which the previous year's curriculum has not been taught/taught inconsistently. Maths-based pre/post learning intervention is also provided to pupil premium children and children with significant gaps.

Impact

The impact of our vision for Mathematics, our curriculum and how it is implemented will ensure that children -

- Are fluent in the fundamentals of Mathematics.
- At each stage of learning, can demonstrate a deep, conceptual understanding of the topic and be able to build on this over time.
- Demonstrate efficiency by recalling facts and procedures quickly, including the recollection of the times tables
- Experience challenge and success in Mathematics by developing a growth mindset.
- Develop the ability to recognise relationships and make connections within their maths lessons and beyond.
- Achieve the objectives set for their year group, therefore being at an age-related expected level.