

St Wilfrid's CE Primary School



Parable of the Mustard Seed - Mark 4: 30-32
"We will ensure children acquire the skills and knowledge our children need to thrive and flourish."

Maths Policy

Our Mission Statement is:

Our Christian school exists to provide a welcoming environment in which everybody is cherished and challenged to fulfil their potential.

Our three key values we embrace are:

Belonging, Believing and Becoming

UNICEF Rights:

Article 6: The right to be alive.

Article 12: The right to give your opinion.

Article 14: The right to choose your own religion and beliefs.



Article 24: The right to healthcare, safe water, nutritious food and shelter.

Article 28: The right to a good quality education, where you're encouraged to reach your full potential.

Article 31: The right to rest and play.

Purpose of the Policy

Mathematics is a core subject in the National Curriculum. This policy will form the basis in which we outline the purpose, nature and management of how mathematics is taught and learnt in our school, and will inform new teachers of expectations.

Our policy recognises mathematics as a functional tool and a valuable key life skill. We want all pupils leaving St Wilfrid's CE Primary School to not only be numerate, but to be able to transfer their mathematical skills to other curriculum areas and into everyday life. By being 'numerate' we are referring to individual's abilities to thinking and reacting mathematically; to applying number sense to everyday situations encountered and to reasoning, using number knowledge acquired. It is important the pupils at Churchfields Junior School are confident in their mathematical ability and can verbally explain their ideas and process using mathematical vocabulary with confidence.

We want to impart to our pupils that mathematics is not confined to just acquiring mathematical skills, but most importantly it is about fostering inquiring minds, inciting enthusiasm and valuing curiosity.

The policy reflects the views of all the staff of the school. It has been drawn up following consultation with all staff and pupils, and has full agreement of the Governing Body.

Staff have access to the policy on the school's website as well as the Shared Drive. Parents are also able to access a copy via the school website.

Aims and Outcomes

- To ensure a broad, balanced, creative and stimulating mathematical education in line with the 2014 mathematics curriculum.
- To present mathematics in meaningful contexts and to embed a range of practical activities designed to enhance pupils' mathematical experiences (Maths CPA).
- To include mathematical skills and content in a range of different curriculum areas.
- To ensure continuity and progression in the pupils' learning as they progress throughout the school.
- To instill in pupils a positive and confident attitude towards mathematics through the stimulation of thinking and reasoning skills as well as the fostering of logic and mental agility.
- To enhance pupils' use and understanding of the language and vocabulary of mathematics.
- To involve our parents in their pupils' mathematical learning both in school and at home.

Maths and the Primary Curriculum

White Rose Maths (WRM) provides a systematic and structured approach to mathematics teaching across the year groups. The White Rose Maths Scheme is designed to support a mastery approach to teaching and learning and are consistent with the aims and objectives of the National Curriculum. It focuses on the following:

Putting Number First: A significant amount of time is spent reinforcing number in order to build competency and ensure pupils can confidently access the rest of the curriculum.

Depth before breadth: The scheme supports teachers to stay within the required key stage so that pupils acquire depth of knowledge in each topic. Opportunities to revisit previously learned skills are built into later blocks.

Fluency, Reasoning and Problem Solving: The scheme develops all three key areas of the National Curriculum, giving pupils the knowledge and skills they need to become confident mathematicians.

Roles and Responsibility of the Maths Lead

- To support and guide the classroom practice of teachers and support staff.
- To ensure coverage, continuity and progression in planning.
- To monitor and evaluate the effectiveness of mathematics teaching and learning through lesson observations, work scrutiny, planning scrutiny and pupil conferencing.
- To update documentation where necessary.
- To produce action plans for the School Development Plan, prepare bids and manage the mathematics budget effectively.
- To liaise and consult with outside agencies where appropriate.
- To prepare and lead Professional Development Training.
- To attend relevant training to support the teaching and learning of Maths at St Wilfrid's.
- To review regularly the contribution made by mathematics to a meaningful curriculum.

Equal Opportunities and Inclusion

All pupils will be given an equal opportunity to maximise their individual potential; this is regardless of ability, gender, race, religion, disability or talent. Activities both within and outside the classroom are planned in a way that encourages full and active participation by all pupils, matched to their knowledge, understanding and previous experience.

Equal emphasis will be given to the roles of both men and women using mathematics in society. Every effort will be made to ensure that activities are equally interesting to both boys and girls.

We follow the aims and philosophy of the New National Curriculum as detailed below:

'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. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.'

When a child has a very specific SEN they should have differentiated planning written by the class teacher and adapted to support their needs. The White Rose Maths scheme supports the scaffolding process enabling teachers to embed the previous learning easily and build on this in subsequent lessons. This enables the provision for SEN children to be matched to their needs appropriately.

All classrooms contain a bank of easily accessible resources for children who have additional needs. These resources will be specifically chosen to support learning in a current unit of work. It is expected that some resources will be universally used across all units (multiplication squares, number lines etc.). These resource banks support children and promote independence during maths lessons.

All children access Quality First Teaching and only if this does not meet their needs would an intervention be planned and carefully monitored. When a child has secured an objective they should be taught to apply their skills through reasoning and solving problems.

Long Term Planning

We have adapted the White Rose Maths scheme of learning to support our school structure. Being a one and a half form entry school it is important that our children in the mixed aged classes are exposed to the correct year group objectives and are supported in their learning. We have also created our own calculation policy based on White Rose Maths, also using the NCETM calculation policy. This suits the needs of the pupils and enables them to use manipulatives and formal methods where appropriate.

In KS1, the Year 1/2 class teaches children either the year 1 or year 2 curriculum based on the child's year group. All year 1 children are taught the year 1 objectives and a second teacher teaches all year 2 children the year 2 objectives.

In KS2 the children are taught maths in ability groups. This is to ensure mixed aged classes are able to access maths lessons successfully. In LKS2 the Year 3/4 class adapts the year 4 curriculum. The objectives are taught whilst recapping the Year 3 objectives where appropriate. This works similarly in UKS2. The Year 5/6 class adopts the year 6 curriculum to ensure children are ready for secondary school, but recaps on the year 5 curriculum where appropriate.

The Overview for Reception – Year 6 can be found on our website: Curriculum > Maths > Whole School Overview.

Teaching and Learning

For pupils to progress and achieve excellent outcomes in mathematics, staff must ensure that the principles outlined in the Teaching and Learning policy guide their teaching.

Every class teacher also has access to a range of policies and progression documents:

- Maths Handbook
- Calculation Policy
- Progression in Maths Topics Document
- Progression in Methods Document
- Progression in Maths Vocabulary

Maths CPA

Research shows that all pupils, when introduced to a new concept, should have the opportunity to build competency by following the CPA approach. Pupils in KS2 have **four** 15 – 20 minute sessions at the beginning of their Maths Lessons focusing on the CPA Approach.

Concrete: Pupils should have the opportunity to work with physical objects/concrete resources, in order to bring the maths to life and to build understanding of what they are doing.

Pictorial: Alongside concrete resources, pupils should work with pictorial representations, making links to the concrete. Visualising a problem in this way can help pupils to reason and to solve problems.

Abstract: With the support of both the concrete and pictorial representations, pupils can develop their understanding of abstract methods.

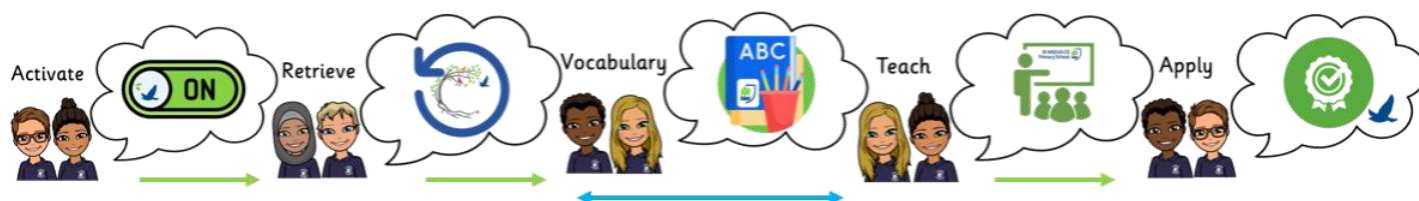
Pre-Assessments and End of Unit Assessments

Before each unit is taught, teachers give the pupils a pre-assessment, which is taken from the previous year's end of unit assessment. This enables teachers to identify what pupils already know, and are confident with and inform teachers of objectives pupils are particularly unsure of. End of Unit Assessments are used at the end of the teaching of the topic to check progress and identify gaps in knowledge and understanding. If pupils have gaps in knowledge on the End of Unit Assessment, revision and recapping lessons are implemented in order to address misunderstandings.

Lesson Content and Structure:

5 Steps to Memorable Teaching

(Rosenshine's Principles of Instruction)



Lesson Objective

Flashback Starter: Flashback 4 Starter Activities are used to improve retention. These usually follow this pattern:

- Q1 is from the last lesson;
- Q2 is from last week;
- Q3 is from 2 to 3 weeks ago;
- Q4 is from last term/year.
- There is also a bonus question on each one to recap topics such as telling the time, times-tables and Roman numerals.

Teaching Input: This includes a range of teaching approaches in order for the pupils to practice the skill through a guided approach as well as opportunities for the pupils to do this independently.

Fluency

Reasoning and Problem Solving

Extension

Weekly Arithmetic Practice

Each week there will be one lesson planned dedicated to a mental maths strategy. Pupils will complete an Arithmetic Paper (Rising Stars) aged appropriately for their year group. Weekly arithmetic practice provides a regular opportunity for pupils to review key mathematical skills that are needed throughout Maths.

When completing arithmetic tests in a class, pupils should complete them independently, however strict test conditions are not necessary. As in all lessons, pupils should work in silence, however teachers should be offering guidance to pupils who may need it. The aim of Arithmetic Practice is to revisit previously learnt material, however there will be occasions where pupils may not remember how to solve certain questions. These can be addressed individually or may form a teaching point in the lesson with the whole-class.

Early Years (EYFS)	5 x 20-minute Maths sessions following WRM. These lessons include the opportunities for fluency, reasoning and problem solving. 1 x Focus session per week and fortnightly in Nursery. Throughout continuous provision carefully planned maths provision activities are available, every day linked to previous learning to be carried out independently. A variety of Maths resources are available for use during continuous provision including: Numicon, tens frames, shapes and various counting equipment.
Key Stage 1 (KS1)	4 x 45-minute maths lessons focused on WRM scheme. These lessons include opportunities for fluency, reasoning and problem solving. 1 x 30-minute arithmetic lesson. (Year and Summer Term Year 1).
Key Stage 2 (KS2)	4 x 15 – 20 minute CPA sessions. 4 x 1-hour maths lessons focused on White Rose Maths scheme. These lessons include opportunities for fluency, reasoning and problem solving. 1 x 1-hour Arithmetic lesson. This includes using Rising Stars Arithmetic books to revise key concepts.

Pupils' Work

Pupils must always work in pencil in their maths books. Where a formal written method has been used, this should be recorded in their books. Jottings used to solve a problem do not always need to be recorded in books. These can be made in books or on whiteboards. Pupils should always write the short date at the start of each piece of work, and stick in the learning objective and success criteria strip. Pupils should write digits inside the printed squares in their maths books. Please refer to the maths Presentation Policy for more detail. Pupils are encouraged to mark their own work at the end of each lesson with teacher guidance. This helps them to quickly assess their own understanding. Teachers monitor books daily and assess pupils' understanding by ticking achieved success criteria on each learning objective. Feedback should be given weekly. Read the

Feedback and Marking policy for more information.

Times Table Rockstars (TTRS)

TTRS is an engaging online platform that can be accessed by the web or through apps. It provides children with opportunities to practise recall of multiplication and division facts at home and in school. It offers a range of different game types, where pupils can test their accuracy and speed when answering times table facts. It also has an 'Automatic Training Mode' which provides incremental progression based on pupil competence. In the first 10 mins, before every computing lesson, pupils should log on and play TTRS. Each week the maths subject leader sets up class battles, where scores are recorded over the course of a week. Winning classes are announced on the display screen in the main corridor. A league table has also been created to record scores to further encourage pupil engagement. TTRS is also part of pupil homework. Pupils are expected to log in and play at home. They can also access TTRS during lunchtime computing club. Children's progress is to be monitored by both the class teacher and maths subject leader to ensure that they are participating and increasing their accuracy. Progression on pupil fluency is shared at parents' evening as well. TTRS forms part of the morning maths intervention group practice, with Numbots.

Assessment

The use of formative and summative assessment is an integral part of learning and teaching.

Formative Assessment

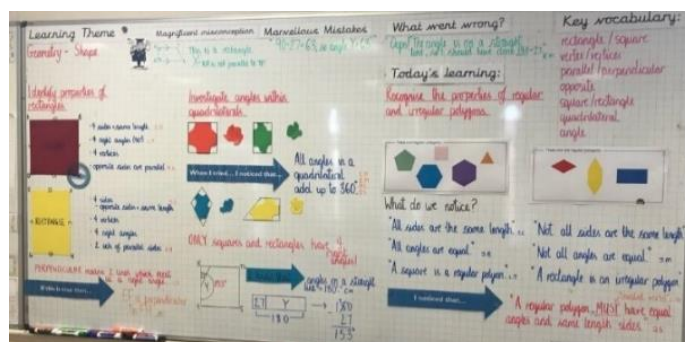
Daily formative assessment checks pupils' learning throughout the lesson and to inform teacher's planning. Maths book are marked every lesson by the class teacher or some pieces of work (where appropriate) can be self-marked by the children. This formative assessment informs planning and identifies where more in depth learning may be required. At the beginning of each unit, teacher carry out a pre-assessment to understand where pupils' gaps may be from the previous year group, and to inform planning and teaching. At the end of each unit of work, each child will complete an end of unit assessment. This helps teachers to gauge which children are working towards, meeting and are secure with each National Curriculum objective.

Summative Assessment

Summative assessment is carried out once a term through the use of PUMA tests in KS2: Years 3 – 6. In Spring Term, Year 6 use previous SATs papers and carry out a SATs baseline in September. Raw and Standardised Scores for each child are recorded centrally on the Tracker Document. Data analysis of pupils' test results and teachers' assessments are intrinsic to identifying target pupils for intervention. These include those working below the expected standard and those making less progress than expected. Pupils that show high attainment, and are making significantly higher progress than expected, will also be identified and considered as more able and working at greater depth.

Working Walls

Unlike traditional wall displays, working walls are interactive and can be used to record, visualise and assist learning. Maths Working Walls allow children to see written methods for calculations, while absorbing the mathematical language used in a particular area of the subject. They are interactive and include differentiated challenges for children so that learning is extended for children of all abilities. At St Wilfrid's, we intend to use working walls as a guide to children that can always be referred to, to support learning.



Homework

At St Wilfrid's, Maths homework is Times Table Practice using Times Table Rockstars as well as other approaches to learning the times tables.

Calculation

Written calculation strategies will be taught alongside mental calculation strategies and should be seen as complementary to, and not as separate from them.

Our aim is for children to be able to select an efficient method of their choice (whether this be mental or written) that is appropriate for a given task. They will do this by always asking themselves:

- 'Can I do this in my head?'
- 'Can I do this in my head using drawings or jottings?'
- 'Do I need to use a pencil and paper procedure?'

The Calculation Policy can be found on our school website: Curriculum > Maths > Calculation Policy

Resources

Policy Written by: Jenna Melody and Annabel Clark (Maths Leads)

Executive Headteacher: Helena Miller

Chair of Governors: Andrew Bradley

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