St. Francis Xavier's RC Primary School

Love one another as I have loved you

Mathematics Policy

Our Mission

Share God's love with one another
Follow your dreams
E**x**cel in citizenship

Our Mission is to:

- Be a witness to the values, teaching and beliefs of the Roman Catholic Church
- Promote achievement and enjoyment for all
- Expect the best for each individual
- Inspire learning
- Collaborate with the community
- Promote a healthy and safe life style
- Create a sustainable school
- Continually strive to be effective

INTENT

A St. Francis Xavier's pupil will:

- Be able to calculate accurately and confidently using the four operations.
- Have quick recall of times tables facts and key age related facts to enable fluency in Mathematics.
- Be able to derive answers from knowledge held in their long-term memory.
- Be able to reason in Mathematics, using a range of precise mathematical vocabulary, including well-structured stem sentences.
- Be able to represent their thinking through the use of models, images and concrete apparatus.
- Be able to problem solve, using a range of strategies, including bar modelling, always choosing the most efficient methods.
- Show resilience when tackling a difficult problem and be able to describe the small steps to achieve a solution.
- Be confident in the topics taught within the National Curriculum showing age appropriate fluency, knowledge and skills to reason and problem solve in a variety of contexts.

IMPLEMENTATION

What does our Mathematics Curriculum look like?

We have adopted a Mastery approach in Mathematics, following extensive CPD for staff. We have shared expertise and good practice with other schools, through our local Maths hub.

The 'White Rose Schemes of Learning' provide the small steps planning we follow. These are supplemented by resources from a range of sources including: The White Rose Maths Hub, NCETM, Nrich, Third Space Learning, Twinkl, Deepening Understanding, Primary Stars and Isee Reasoning. Teachers plan and sequence small steps for the needs of their class, following formative assessment daily. The Mathematics leader is responsible for keeping a pace with developments in Mastery resources and theories. Teachers share good practice and knowledge of high quality resources with each other and teachers in other settings.

IMPACT

Our Mathematics curriculum facilitates sequential learning and long-term progression of knowledge and skills. Teaching and learning methods provide regular opportunities to recap acquired knowledge through high quality questioning, discussion, modelling and explaining, to aid retrieval at the beginning and end of a lesson or unit. This will enable all children to alter their long-term memory and know more, remember more and be able to do more as mathematicians.

Additional Needs

- Questions and tasks are differentiated and sometimes targeted at specific children.
- Teachers use a wide range of concrete and pictorial models and images as visual resources to illuminate meaning for all pupils.
- During whole class teaching, discreet help is given to particular children wherever possible.
- During activities, children are supported by teachers or teaching assistants where appropriate to the learning.
- Same day intervention ensures that misconceptions are addressed in a timely fashion.

'Froggy' Maths

All children in St Francis Xavier's School learn addition and subtraction bonds, multiplication tables and division facts through this 'whole school' initiative that allows children to see and keep track of their progress and achievement. These are supplemented with extra sheets and through adaptive teaching within each year group, so that children experience mastery in the appropriate stage for their age phase.

Early Maths

Children in Y2, Y3, Y4, Y5 and Y6 undertake early maths work from 8:40 am. This can be an opportunity to partake in daily arithmetic practice or undertake slow maths problems where bar modelling may be used as a tool for problem solving.

Working Walls

Each class has a 'mathematics working wall' where children can view daily learning, mathematical vocabulary and where efficient methods, misconceptions or mistakes can be discussed and used as a teaching and learning point.

Intervention Programmes

Teaching is focused, rigorous and thorough, to ensure that learning is sufficiently embedded and sustainable over time. Long-term gaps in learning are prevented through speedy teacher intervention. More time is spent on teaching topics to allow for the development of depth and sufficient practice to embed learning. Carefully crafted lesson design provides a scaffolded, conceptual journey through the mathematics, engaging pupils in reasoning and the development of mathematical thinking. The timetable has been adjusted so that 'same day intervention' is possible. During a break in teaching, a teacher and TA can identify misconceptions so that a group of children can be targeted during the next short session. Similarly, where a child has been identified as moving swiftly through a task, they can be progressed onto the next 'zone' to encourage deeper thinking and learning.

At times, children may need specific 1:1 support in order to 'keep up' with the rest of the class. The following intervention programmes are used when appropriate to help children who are currently performing below age – related expectations:
Wave 3
Success at Arithmetic
Power of 2
Numicon
Materials by Third Space Learning (Year 6)
These are usually taught by teaching assistants, class teachers or the SENCO, through small intervention groups in addition to class lessons.

Extending More Able Pupils

As outlined in the NCETM materials, teachers will adhere to '**Teaching for mastery'**: a set of pedagogic practices that keep the class working together on the same topic, whilst at the same time addressing the need for all pupils to master the curriculum and for some to gain greater depth of proficiency and understanding. Challenge is provided, by going deeper, rather than accelerating into new mathematical content. Children who are capable of achieving above age related expectations will be identified from Year R and on. These children will be monitored, through termly updated class profiles, to ensure experience of the curriculum in depth, in order for them to achieve mastery at greater depth. All children will have access to the 'Blue Zone' activity within a lesson, which offers the opportunity to engage in a task showing mastery at greater depth. Regular staff CPD ensures that teachers have an understanding of the difference between those achieving mastery and those working with mastery at greater depth.

Tracking Progress and Assessment/Target Setting

Children's progress and attainment is closely tracked through termly assessment which is carried out:

- orally through questioning
- by observation of children at work
- live marking of children's work thereby creating pupil teacher discussion leading to formative assessment
- planned summative assessments which are built into half-termly planning to include those from the White Rose Maths Hub either at the end of a block of work or at the end of a term
- Multiplication Tables Check for year 4 pupils
- Key Stage 2 statutory assessments at the end of Year 6

Formative Assessment/Marking and Feedback

Maths work is marked 'live' during the lesson in order to address any misconceptions. The codes from our marking policy are used against the learning objective.

Termly Pupil Progress meetings with the Head teacher and class teacher enable identification of children who are not achieving age related expectations and the need for intervention is discussed and implemented accordingly. The maths leader will monitor half-termly progress using Educater.
Children are encouraged to review their work and make corrections as required.
The assessment and tracking system supports target setting throughout the school. A 'growth mindset' approach means that rather than grouping children by ability, tasks are set to ensure progression for all within a lesson. Through immediate feedback and same day intervention, all children are offered the opportunity to master the objectives within their year group. Where it is needed, scaffolding is provided to assist learners. Deeper thinking tasks are provided for all children who have mastered the initial content. Materials such as 'Barvember' will offer challenge to all pupils. Differentiated targets are set for individual pupils as appropriate in order to meet their needs. These are communicated to parents during termly target reports and at parents' evenings.

Homework

All KS1/KS2 may set online work using the parent workbooks from White Rose, to be completed in Seesaw, as deemed appropriate by the class teacher. Teachers may offer additional resources for home learning as deemed appropriate, e.g. learning tables etc and maths tasks may be set within the cross-curricular learning log homework book.

Monitoring and Evaluation

Monitoring and evaluation will be carried out by:

- Pupils as appropriate
- Head teacher
- Mathematics leader
- Mathematics Governor
- External advisors
- Colleagues from other schools

The monitoring of progress is against age related expectations so that pupils falling behind or exceeding targets are swiftly identified and intervention is then provided accordingly on a daily basis, either within the lesson or immediately following the main part of the lesson.

Classroom Observations

The Headteacher, Mathematics leader and colleagues are responsible for classroom observations and feedback to teachers, to provide professional development and develop further outstanding teaching and learning.

CPD and Staff Development

The ready to progress materials, provided by the Department for Education in June 2020, have been outlined during INSET training, adopted by each class teacher and are incorporated into the White Rose Schemes of learning. Relevant materials from the NCETM are also used to deliver specific interventions. Having

completed the Maths Mastery training and delivered lessons for other schools to observe, the school has now embedded a range of excellent resources and materials using the CPA approach. Professional discussion regularly takes place within INSET training and staff meetings on the teaching of Mathematics to enable confident mathematicians. The Maths leader will regularly liaise with the Herefordshire Maths Hub and keep abreast of developments within the NCETM and from the Department for Education.

This policy was updated July 2023. The policy was adopted by the Standards and Curriculum Committee of the Governing Body of St Francis Xavier's RC Primary School on 20th May 2024. This policy will be monitored every two years.

Signed: *Sylvia Cockroft* Date: 20.5.24 Chair of Standards and Curriculum Committee

Signed: *Diana Pearce* Date: 20.5.24 Headteacher

Mel Green
Mathematics Subject Leader
July 2023