



EAST BRIDGFORD ST. PETER'S C. OF E. ACADEMY MATHS POLICY

Reviewed by Maths Lead: March 2024
Approved by SLT/Governors: 2nd July 2024

Intent

At St. Peter's we believe that mathematics provides an opportunity to help children achieve our core value of 'Profound Personal Development'. Alongside other subjects, Maths at St. Peter's offers the chance for every child to learn, achieve and enjoy a culture of opportunity and ambition within a climate of participation. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the world. Maths is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems.

Implementation

- All classes from EYFS to Year 6 follow the White Rose scheme of learning, which is based on and also delves deeper into the National Curriculum objectives. White Rose breaks down objectives into smaller, more manageable steps for learning and better understanding. St. Peter's goes even further than this, breaking down the White Rose small steps into even more specific targets presented onto stickers to support children's learning (see Feedback Policy).
- In addition to White Rose, at St. Peter's we also use a range of planning resources including (but not limited) to those provided by the MathsHub, NCETM and NRICH, to enrich our children's learning.
- We have a designated timeslot within our timetable each day dedicated to Arithmetic to ensure general maths knowledge and fluency are maintained and developed. This may take many forms, for example: Flashback Four, specific times tables or several questions about a mixture of maths topics to address misconceptions.
- Maths Lessons contain a careful mix of intelligent practice: fluency facts; conceptual and procedural variation; CPA; intelligent questioning; misconceptions explored; scope to problem-solve throughout; use of manipulatives where useful; STEM sentences throughout; regular short, sharp tasks.

- We implement our approach through high quality teaching delivering appropriately challenging work for all individuals - and differentiating work where appropriate to support all learners.
- To support learning, we have a range of mathematical resources available for staff to use and share, stored in our Central Maths Resource Base (school hall) including Numicon, Base10 and other concrete equipment (see resource inventory). Staff incorporate the use of manipulative into planning using their professional knowledge.
- We continuously strive to better ourselves and frequently share ideas and best practice that has been particularly effective. Subject lead reviews the curriculum, teaching and learning throughout the year and provides feedback to SLT and staff as appropriate. Staff take part in Maths CPD delivered by the Maths lead and facilitated from White Rose CPD training.

Impact

- Through discussion and feedback, children talk enthusiastically about their maths lessons and speak about how they love learning about maths.
- Children can articulate the context in which maths is being taught and relate this to real life purposes.
- Children show confidence and believe they can learn about a new maths area and apply the knowledge and skills they already have.
- Language such as 'tell me', 'describe', 'why', 'explain' and 'I know this because' are commonly used and heard. STEM sentences are accessible in the classroom so that all children are exposed to this language and vocabulary.
- Pupils know how and why maths is used in the outside world and in the workplace.
- Children are continuously assessed by their teacher during Maths lessons and through end of block assessments to check more formally on their progress at the end of a particular unit. St. Peter's formally assesses children on their learning three times a year, during Autumn, Spring and Summer assessment weeks, At these times, children take part in a formal assessment and are assessed as working below, working at or working above the expected standard for their year group (WTS, EXS and GDS).
- At the end of each year, we expect the children to have achieved the Expected Standard for their year group (EXS). Some children will have progressed further and achieved greater depth (GDS). Children who

have gaps in their knowledge receive appropriate support and intervention.

Challenge

- Within the daily maths lesson, teachers provide additional opportunities and activities to support and challenge those children who are high achievers in mathematics.
- Teachers are encouraged to provide opportunities for the most able children to be challenged in their thinking, in a variety of ways.

Planning

- The National Curriculum objectives are at the heart of planning for Mathematics. The National Curriculum for Maths constitutes the long term plan for schools to follow and St. Peter's follows the adaptation of this by White Rose. White Rose learning objectives are appropriate for our school context as they have both single year plans and mixed year plans.
- In addition to White Rose, at St. Peter's we also use a range of planning resources including (but not limited) to those provided by the MathsHub, NCETM and NRICH, to enrich our children's learning.
- Maths related research which may be useful to inform planning, are regularly updated and communicated to staff and made available for teachers to use and refer to throughout the year, stored within the Maths channel on Microsoft Teams. As new research become available, staff will be made aware of this availability and if necessary training will be provided by the Math's Lead.

Feedback

- In line with our Feedback policy, we believe that feedback is a positive means of assisting children's development as a means of assessment, and a valuable communication and involvement in learning tool.
- Each lesson follows a White Rose small step. St. Peter's believes that to cement understanding and best meet the needs of our learners, it is important to go even further than the small step, by breaking down the White Rose small steps into even more specific targets presented onto stickers to support children's learning (see Feedback Policy). All lessons are broken down into a Learning Objective (White Rose small step), and Gold, Silver and Bronze lesson targets. These are highlighted in green when achieved by the child.

- As with Writing, teacher's responses to work in Maths need to be a combination of written and verbal comments on how children can progress and these will be in green pen. Children are not to use green pen and this colour is for staff use only.
- Best feedback is provided in class, either verbally or with 'pen in hand' feedback.
- Any abbreviations used should be in line with the Feedback policy.
- Children's corrections and amendments will be written in red pen, in line with the feedback policy ('Red re-do'). Children are encouraged to edit and amend their work using Red re-do pen rather than erasing their answer using a rubber, so that their teacher can see the progression of their Mathematical thinking/learning.

Presentation

- Children have a White Board Maths book and Maths section in their subject folder.
- In their White Board Maths books, methods are practised, there may be rough numerical jottings, Arithmetic recording (e.g. Flashback Four) alongside other inclusions which are informed by the teacher's professional judgement based on the needs of their class.
- Folders should be used to file work completed on sheets from the main body of the lesson. This year, KS1 have trialed a hole-punching and treasury-tagging method to include work completed on sheets alongside the jottings entered into a child's White Board Maths books. This is to be reviewed at the end of 2024 as to what the impact has been and whether this will be adapted/continued into the next academic year.
- All work should be dated and include a label detailing the Learning Objective (White Rose small step), and Gold, Silver and Bronze steps.

Resources and Displays

- Resources for Maths are audited annually, according to need.
- Daily resources that are used in each Maths lesson are easily accessible in every classroom; those which are not used regularly or which vary through block to block, are stored centrally in the Central Resource Base in the school hall.
- Maths related research and resources are regularly updated and communicated to staff and is made available for teachers to use throughout the year, through the Maths channel on Microsoft Teams. As new resources become available, staff will be made aware of their

availability and if necessary training will be provided by the Math's Lead.

- Children are encouraged to independently and regularly use the Maths support pages of their work diaries, and supportive resources included on displays to aid their independent learning.

What does Maths look like in our classrooms?

- At St. Peter's we apply the principles of for Mastery. We are members of the East Midlands MathsHub. As we progress through our Mastery journey, we endeavour for our Maths teaching and learning to look like this:
 - The whole class is taught mathematics together, without acceleration to new content - broadening the concept that the children are learning about through depth not breadth of content.
 - The learning needs of individual pupils are addressed through careful scaffolding, skilful questioning and appropriate teacher discussion, in order to provide the necessary support and challenge.
 - Factual knowledge (e.g. number bonds and times tables), procedural knowledge (e.g. formal written methods) and conceptual knowledge (e.g. of place value) are taught in a fully integrated way and are all seen as important connected elements in the learning of mathematics.
 - The reasoning behind mathematical processes is emphasised. Teacher/pupil interaction explores in detail how answers were obtained, why the method worked and what might be the most efficient method.
 - Precise mathematical language is used by teachers, so that mathematical ideas are conveyed with clarity and precision.
 - Sufficient time is spent on key concepts (e.g. multiplication and division) to ensure learning is well developed and deeply embedded before moving on.
 - Programmes of study and lesson content are carefully sequenced, in order to develop a coherent and comprehensive conceptual pathway through the mathematics.
 - Learning is broken down into small, connected steps, building from what pupils already know.
 - Where necessary, teachers use their own professional judgement informed by formative assessment to decide when necessary to recap on concepts that children have not understood (for example, deviate away from their planned lesson to revise an area that is important for understanding of the next steps).

- Difficult points and potential misconceptions are identified and strategies to address them discussed.
- Contexts and representations are carefully chosen to develop reasoning skills and to help pupils link concrete ideas to abstract mathematical concepts.
- The use of high quality materials and tasks to support learning and provide access to the mathematics, is integrated into lessons.
- Key new learning points are identified explicitly.
- Making comparisons is an important feature of developing deep knowledge. Questions such as "What's the same, what's different?" are often used to draw attention to essential features of concepts. Language such as 'tell me', 'describe', 'why', 'explain' and 'I know this because' are commonly used and heard. STEM sentences are accessible in the classroom so that all children are exposed to this language and vocabulary.
- Enrichment is used over acceleration. Greater depth children should be able to show recordings in more than one way or using a different method and all children should be able to apply their understanding to independent tasks.

Calculations

- At St Peter's, we use the Calculations policy recommended by the MathsHub which is largely adapted from the White Rose Calculations policy.
- The calculation policy is progressional through each year group (from Year 1) and features the four rules of number: Addition; Subtraction: Division and Multiplication.
- This policy is intended as a working document, to aid all staff and parents/guardians, in understanding the development of skills and progression of informal and formal written calculation methods. It will be revised and amended as necessary.
- However, within the structure of this progression, allowance must be made for children's personal methods of recording, ensuring that alternatives are both clearly understood and efficient.
- Where possible, calculations will be taught within a real life context, to enhance awareness of mathematical skills as a part of everyday life.