

**ST FRANCIS OF ASSISI CATHOLIC
PRIMARY SCHOOL**



MATHS MASTERY POLICY

December 2017

MATHS POLICY

Introduction

At St Francis of Assisi we are developing a mastery approach to the teaching of mathematics. At the centre of this approach is the belief that all pupils have the potential to succeed. All children should have access to the same curriculum content and, rather than being extended with new content from other year groups, they should deepen their conceptual understanding by reasoning and problem solving.

Aims

- To develop a growth mindset about ability to learn mathematics,
- To develop a positive attitude towards the subject,
- To become confident and proficient with number, including fluency with mental calculation and looking for connections between numbers,
- To create problem solvers, who can reason, think logically, work systematically and apply their knowledge of mathematics,
- To develop mathematical language which children can use appropriately,
- To help children to become independent learners and to work cooperatively with others,
- To give a real life context to learning in Mathematics.

Teaching and Learning

- All teachers plan from the White Rose medium term plans, which allow time to focus on topics by teaching in blocked units. These also address the aims of the 2014 National Curriculum of fluency, reasoning and problem solving. The class work together on the same key point, whilst at the same time challenging and supporting pupils to gain depth of understanding and proficiency.
- Teachers plan on a weekly planning proforma and produce smartnotes, or equivalent for each lesson.
- Lessons will contain a combination of practise me fluency work, use me reasoning tasks and show me problem solving activities. Lessons will not always contain all three.
- Pupils should work in mixed or ability groups according to teacher discretion.
- Precise questioning during lessons ensures that pupils develop fluent technical proficiency and think deeply about the underpinning mathematical concepts.
- Pupils are encouraged to make rich connections across mathematical ideas to develop deep interconnected understanding: In KS1, children partake in number talk sessions three times a week.
- Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems rather than accelerated onto new content.

- Additional support may be given in the following ways: further use of representations; careful directed questioning; additional time or activities to consolidate understanding and use of flexible grouping.
- New concepts are introduced by using a concrete, pictorial, abstract approach. See calculation policy.
- Every Maths lesson should show progress and/or help children to deepen their understanding and should build on prior knowledge, therefore all children should be challenged.
- Maths vocabulary should form part of every lesson and it should be used in the correct way in order to develop children's knowledge. Stem sentences should be used where appropriate.
- Every classroom should have helpful, appropriate, display materials, including Maths vocabulary. There should be a clearly defined maths area/ working wall, with resources that can be easily accessed by the children.
- All calculations should follow the calculations policy, according to individual needs.
- The learning intention for each lesson should be clear, should be taken from the objectives for the year group and written as a 'Can I....?' It should be shared with the children and they should be aware of the success criteria.
- All adults working with the children should be used effectively in order to develop the children's knowledge and they should be aware of the focus children for the class where appropriate.
- Mop Up Maths is embedded from Years 2 – 6. This is an opportunity for children to address any misconceptions from the previous Maths lesson.
- Opportunities for self and peer assessment should be incorporated into every lesson. Children should consider what they did well and how to improve. Children are expected to perform to the best of their ability. All work should be self assessed using traffic light colours and there should be indication of support from an adult (see marking code).
- Children should record at least 3x weekly in their Maths books.
- Children should have regular opportunities to practise their targets; times tables challenges and awards; number sentence missions.
- All children should be given a Next Step every week in their book (see Marking Key) and given time to go back and work on this or show their reflections using pink pen.
- Children in KS1 and KS2 have their own Mathletics account, which is used to support learning at school and at home.
- Children in KS1 and KS2 receive Maths homework every Wednesday. This will be either online or in their homework books.

Early Years Foundation Stage (EYFS)

Teachers support children in developing and expressing their understanding of problem solving, reasoning and numeracy in a broad range of contexts through exploration. Teachers offer

opportunities for these skills to be practised, in order to give children confidence and competence in their use.

This Area of Learning and Development includes seeking patterns, making connections, recognising relationships, working with numbers, shapes, space and measures, and counting, sorting and matching. Children use their knowledge and skills in these areas to solve problems, generate new questions and make connections across other Areas of Learning and Development. Mathematical understanding will be developed through whole class sessions as well as stories, songs, games and imaginative play.

Assessment and Record Keeping

- Assessment is continuous and ongoing. There should be assessment opportunities in every lesson. NCTEM assessment materials can be used to plan appropriate assessment activities.
- Assessment values knowing 'why' and 'how', as well correct answers.
- Assessment does not solely focus on the need to memorise key facts and procedures and answer test questions accurately and quickly.
- Assessment values applying mathematics to new and unfamiliar situations.
- Each half term children's progress is assessed against the NC statements on the Maths spreadsheet grid. Teachers will then use this to identify gaps.
- Times tables are assessed termly. Children also have the opportunity to work through times table challenge awards.
- Children in KS1 complete number sentence missions regularly.
- Each term children are assessed using the White Rose assessment materials.

Home/School Link

The link between home and School is forged in a number of ways. In EYFS through weekly overview homework from January and tapestry observations. In key stage 1 and 2 homework is assigned on a weekly basis. This will support the Mathematics work in the classroom. To give more detailed outlines of the child's progress, annual reports and formal Termly Learning Conferences (TLCs) are arranged but informal meetings are encouraged when needed. Maths targets are sent home.

Inclusion and Special Needs

We aim to meet the needs of all, taking into account gender, ethnicity, culture, religion, language, disability, age and social circumstances. The provision for children with special needs is detailed in the SEND Policy. Central to this is the early identification, intervention and careful planning for intervention through Provision Mapping.

Monitoring and Evaluation

Monitoring and evaluation of Mathematics teaching and learning in the school is carried out by the Mathematics Co-ordinators and SLT. When possible, discussion with children will take place along with scrutiny of work.

Role of subject leader

The subject leader will be responsible for improving standards of teaching and learning in Mathematics through:-

- Pupil progress,
- The quality of the learning environment,
- Taking the lead in policy development,
- Auditing and supporting colleagues in their CPD,
- Purchasing and organising resources,
- Keeping up to date with mastery Maths developments.