

St Catherine's Catholic Primary School

"Loving and Learning Together as Jesus taught us"



Mathematics Policy

Date of policy review: October 2020

Next review: October 2022

Policy Reviewed & Passed by the Governors

Key Person Responsible: Maureen Kelly

Rationale

At St. Catherine's we aim to inspire all children to achieve their full potential. In mathematics this means ensuring a curriculum that is fully inclusive of all children which:

- Develops children's knowledge and understanding of Mathematical concepts whilst enabling them to practise and sharpen skills and methods;
- Enables them to think critically and communicate their understanding;
- Gives them opportunities to apply learnt mathematical skills to different contexts across the curriculum;
- Provides opportunities to develop problem solving skills, useful for maths and across the curriculum.

Principles

Planning

- Planning begins from a thorough understanding of the children's needs together with rigorous and effective assessments and tracking, combined with high expectations and ambition for all children to achieve.
- Medium Term Planning is taken from the White Rose Maths schemes of. This outlines the key areas and ensures coverage of the national curriculum. These new schemes provide additional support and guidance for teaching mathematics next year. White Rose Maths has suggested where teachers might want to spend longer on topics to secure understanding and also suggests any content that children may have missed last year. Updated schemes of learning are outlined on our school website.
- Within short term planning, clear success criteria for each learning objective taught should be created – demonstrating the progression needed to reach and exceed the objective.
- Activities and tasks are planned to meet the needs of all the children in the class. Children choose the task which they think will suitably challenge them.
- Lessons are differentiated within the years curriculum – extending children by deepening their understanding rather than accelerating them through the curriculum.
- Class teachers should regularly plan for opportunities for children to apply their maths skills to different problems within maths lessons and across the curriculum. This will also allow children to revisit, practice and consolidate different areas of maths and apply them within different contexts.
- TestBase and Nrich resources are used to support teachers with planning, teaching and learning.

Teaching

- In the Foundation Stage, children are given the opportunity to develop their understanding of number, measurement, pattern and shape and space through a combination of short, formal teaching as well as a range of planned structured play situations, where there is plenty of scope for exploration.
- Children will become very competent 'counters' so that their fluency with the number system provides a foundation for mathematical understanding. Counting forwards and backwards in many different sized steps as well as from different starting and ending points is essential.
- Maths learning builds from a concrete understanding of concepts where children are manipulating objects. When children are able to see concepts this way, they then need to understand the same concepts represented pictorially. Children are then ready for abstract representation before being able to apply their knowledge to different situations.
- Children should be encouraged at all times to communicate their understanding of maths so that it clarifies their thoughts.
- Modelling of language is key the teaching and learning of Mathematics. We encourage children to respond to answers in full sentences so children are continuously using and applying new and previously learnt mathematical vocabulary in each lesson. Speaking in full sentences also; allows children to associate the question to the answer therefore making connections to concepts, promotes use of correct vocabulary in context, enhances language development and is a method to engage the whole class.
- Children's mental maths is of great importance, with number bonds, times tables facts and various strategies for calculation taught and practised at school with support sought from parents through homework activities.
- A progression towards efficient written calculations should be developed and applied consistently in each year-group.
- Though the nature of lessons will be very different depending on the needs of the class, children should be; active, practising skills, learning something new OR learning to apply their knowledge to different contexts. They should be working at a good pace and being productive; sharing their thoughts and methods and being successful.
- When teaching problem solving skills, time (and sometimes whole lessons) should be given to each aspect of problem solving ensuring children get thorough practice at: 'preparing for problem solving', 'thinking through problems to establish what they know and don't know so far'; actually 'doing the problem solving' effectively AND 'communicating the answer effectively'. They should evaluate the process too. Over time children will improve at each aspect.

Assessment

- Assessment for learning should occur throughout the entire maths lesson, enabling teachers/teaching assistants to adapt their teaching/input to meet the children's needs. This feedback should be incisive and regular.
- Pupil's work should be marked in line with the Marking Policy and should model how corrections should be made, giving children a chance to learn from their misconceptions or incorrect methods.
- Future lesson design should depend on class success evaluated through marking and observations made during the lesson.

- Assessment of pupil work and progress is ongoing by the class teacher and informs future planning. Teachers mark work in line with the school marking policy. Teachers use a tracking tool and this allows teachers to assess children's progress in mathematics, gathering evidence over the course of the year. Teachers use this information to inform planning for groups and individual pupils.