

# **St. Oswald's Catholic Primary School Maths Policy 2021/22**

**Written by:**

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Maths Leaders**



**St. Oswald's Catholic Primary School**

**Mathematics – Intent, Implementation and Impact –**

**Maths Leaders – Miss Clegg and Mrs Wibberley**

As a school we ensure that all children and staff are treated fairly and equally. All children have equal rights to access all areas of the curriculum, regardless of race, gender and disability. Within this subject area, the SMT and all staff endeavour to provide the appropriate provision for this to occur. This policy follows the guidelines and practices that are stated and outlined in St. Oswald's Equality Scheme.

**INTENT**

Mathematics teaches us how to make sense of the world around us through developing a child's ability to calculate, to reason and to solve problems. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many cultures to the development and application of mathematics.

**Our Intention for Maths at St. Oswald's is:**

- to promote enjoyment and enthusiasm for learning through concrete, pictorial and abstract approaches, exploration and discussion;
- to promote confidence, resilience and competence with numbers and the number system;
- to develop the ability to solve problems through decision-making and reasoning in a range of contexts;
- to explore features of shape and space, and develop measuring skills in a range of contexts;
- to apply skills in statistics across the curriculum in a variety of contexts and gather, present and interpret it in a number of ways;
- to understand the importance and relevance of mathematics in everyday life;
- to be fluent, reasoners and problem solvers in equal measure;
- to ensure all pupils access a mastery curriculum so that they have a number of opportunities to achieve their full potential in a safe and supportive environment;
- to ensure all of our pupils fulfil the expectations of the National Curriculum 2014.

**IMPLEMENT - How we implement Maths at St. Oswald's:**

The school uses a variety of teaching and learning styles in mathematics lessons. We do this through a daily lesson that has a high proportion of whole-class and group-direct teaching. During these lessons we encourage children to ask as well as answer mathematical questions. They have the opportunity to use a wide range of resources such as number lines, number squares, digit cards and small apparatus to support their work. Pupils are interactive throughout the lesson and not passive. Children use ICT in mathematics lessons where it will enhance their learning, as in modelling ideas and methods.

Work is recorded in a number of ways: Maths Workbooks, jotters, Celebration books, photographs and videos, Twitter, Seesaw and observations. These methods help us to build up a broad picture of each individual's mathematical knowledge and understanding, so that lessons can be adapted and TAs deployed to support. Additional intervention can also be planned for if necessary.

Wherever possible, we encourage the children to use and apply their learning in everyday situations and contextualise the learning by making links with our topics in Science, Design and Technology, History and Geography. We also engage in STEM activities across school. We consciously plan for our pupils to have: concrete, pictorial and symbolic experiences in order to ensure our pupils have a full understanding of a new concept.

In all classes there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies – in some lessons through differentiated group work, and in other lessons by organising the children to work in pairs on open-ended problems or games. We use teaching assistants to support some children and to ensure that work is matched to the needs of individuals. Teaching assistants are used to support and challenge. They work with a range of abilities and are not merely there for the SEN/D pupils.

Homework is used to support mathematics. We believe that parents have a valuable role to play in assisting their children's learning and are encouraged to ensure that children who have homework complete it. This is identified on the Home/School agreement and is also discussed at the parent workshops and during termly parent interviews. With the new addition of Seesaw, teachers can model strategies and post these to support parents with supporting their children.

Termly workshops, led by the subject leader are available to a variety of parents from differing year groups. These workshops provide an opportunity for parents to become more familiar with the various mental and written strategies taught within school. This will then allow parents to support children with their mathematics, more effectively, at home. These workshops also provide an opportunity for parents to be aware of the curriculum for maths and what the statutory and non-statutory expectations are of the Curriculum for mathematics (2014).

Mathematics is a core subject in the National Curriculum, and in 2020/21, we use the Curriculum 2014 objectives from Y1 – Y6 especially as the basis for implementing the statutory requirements of the programme of study for mathematics.

We carry out the curriculum planning in mathematics in three phases (long-term, medium-term and short-term). The National Curriculum programmes of study for teaching gives a detailed outline of what we teach in the long term, while our yearly teaching programme identifies the key objectives in mathematics that we teach in each year. The 2014 Curriculum is used throughout the school. To support this, we use the White Rose long and medium term plans and supplement this with resources from

Focus, White Rose Materials, Classroom Secrets, Twinkl, Lancashire Grid for Learning, TT Rockstars, Teach Active and NRICH. We have invested in the premium resources from White Rose to support staff with their subject knowledge and delivery for 2020/21.

Our medium-term mathematics plans, which are adopted from the Framework and give details of the main teaching objectives for each term, define what we teach. The White Rose Medium and Short Term Plans support teachers with delivering a clear sequence of objectives.

Short term planning is teacher screens and White Rose annotated if necessary.

We teach mathematics to all children, whatever their ability. It is part of the school curriculum policy to provide a broad and balanced education to all children. We provide learning opportunities that are matched to the needs of children with learning differences. All children benefit from the emphasis on oral and mental work and participating and explaining their methods. However, a pupil whose differences are severe or complex may need to be supported with an individual programme in the main part of the lesson. Work in mathematics takes into account the targets set for pupils based on pre-learning.

Pupils who are more able also receive a greater depth curriculum. We adopt a mastery approach, making effective use of NRICH activities and problem solving websites, to encourage pupils to apply their knowledge and understanding in a range of contexts.

#### Assessment and recording

We assess children's work in mathematics from three aspects (long-term, short-term and medium-term). We make short-term assessments which we use to help us adjust our daily plans. These short-term assessments are closely matched to the learning challenges. Regular arithmetic and times tables tests are completed, any misconceptions thus feed into daily planning.

We make medium-term assessments to measure progress against the key objectives, and to help us plan the next unit of work. These assessments take the form of termly written and arithmetic assessments. The classteacher then analyses these results against each pupil's individual target. The results are then given to the subject leader and the Head teacher for further analysis. Progress meetings are held with the class teacher based on the analysis of the subject leader and Head teacher. We also use pre-learning and post-learning tasks, to support us with assessing the ability of our pupils before and after we start a new skill in our maths teaching. These are recorded in the pupil workbooks or jotters.

The Target Tracker statements for the various bands are updated termly for the individual pupils so that staff can continue to identify the strengths and gaps in their teaching. This leads into targeted learning intentions and intervention if pupils have a number of gaps.

We make long-term assessments towards the end of the school year. We use these to assess progress against school and national targets. The SLT can then set targets for the next school year and make a summary of each child's progress before discussing it with parents. We pass this information on to the next teacher and the Head teacher at the end of the year, so that they can plan for the new school year. We make the long-term assessments with the help of end-of-year tests and teacher assessments. We use the national tests for children in Year 2 and Year 6, plus the Rising Star tests for children at the end of Years 1, 3, 4 and 5. We also make use of Rising Stars assessments progress tests and Twinkl arithmetic tests.

Children are involved in the assessment of their own learning. They are given an L.I. and clear success criteria called, "Steps to Success." This helps them to recognise their own strengths and how they need to move their learning forward. Self-assessment is recorded in the children's books, the teachers review this self-assessment and use the information to inform their future planning. In EYFS and KS1, the pupils will use a red, amber or green traffic light and in LKS2 they will use 1, 2 or 3 (1 indicates that the pupil has full understanding and 3 shows little understanding). In UKS2, pupils will write a reflective comment based on their understanding of what went well and what the next steps are.

Marking and feedback of mathematics is ongoing throughout the lesson and this is in line with the feedback and marking policy. This can be through verbal feedback, self-marking and /or teacher marking. Teachers are encouraged to give ongoing feedback throughout the lesson to individuals and groups of pupils so that pupils are progressing well and misconceptions are quickly picked up. Staff are not expected to write marking comments in individual books, but they will complete a feedback sheet where necessary so that they can pick up pupil misconceptions and plan for future learning.

Pupils must correct work in green pen and they must have opportunities to revisit work quickly if there are clear misconceptions. There must be evidence of support in place for pupils who find the maths challenging.

### Resources

There is a range of concrete resources to support the teaching of mathematics across the school. All classrooms have a number line and a wide range of appropriate small apparatus. Mathematical dictionaries are available in all classrooms. Calculators and a range of audio visual aids are available from the central storage area. The library contains a range of books to support children's individual research. A range of apps are used and TT Rockstars as well as Discovery Education to support pupil learning. There is a wealth of Mathematics textbooks and other teacher resources to support the teacher in their planning and teaching of the subject.

The Maths Leader consistently monitors the implementation of the Maths curriculum at St. Oswald's and carries out analysis of results each term, feeding back to SLT and governors. She has a responsibility for standards across the school and monitors the progress, ensuring that no child is left behind. Most years, Maths has a high priority and

is a key objective on the School Improvement Plan. This ensures the profile of this core subject remains high and the subject leader is very accountable to ensuring the positive outcomes at the end of phases are maintained and continue in an upward, positive trend.

#### **IMPACT - The Impact of Maths at St. Oswald's:**

- Children achieve very high standards in arithmetic;
- The vast majority of children achieve their year group expectations;
- The vast majority of children make 6 steps of progress each year;
- Children are resilient and relish opportunities to apply their mathematics' skills.
- Children have a, "Can do," attitude to Maths;
- There is a rising trend of greater depth achievers at the end of KS1 and KS2
- Pre-Learning tasks allow for precise teaching to take place, targeted to the needs of individuals.
- Children build on their reasoning and problem solving skills every year, which has been a priority for a few years, meaning its profile is raised.

#### **MATHS FROM SEPTEMBER 2020 IN RESPONSE TO COVID-19**

##### **Intent:**

- ✓ to use resources from the DFE and White Rose to plan an effective catch up mathematical sequence for all of our pupils;
- ✓ to use pre-learning activities to ensure planning is matched to where individuals are at;
- ✓ to build the confidence, resilience and competence with number post lockdown – maths is fun and everyone can do it;
- ✓ to ensure all pupils access manipulatives to deepen understanding;
- ✓ to ensure mathematical language opportunities are maximised in every lesson to enhance pupil confidence further;
- ✓ to identify gaps from 2019-20 and plan catch up opportunities to fill these gaps
- ✓ to use an additional hour of catch up time a week to address gaps in geometry and statistics;
- ✓ to develop the ability to solve problems through decision-making and reasoning in a range of contexts;
- ✓ to be fluent, reasoners and problem solvers in equal measure;
- ✓ to ensure all of our pupils fulfil the expectations of the National Curriculum 2014.
- ✓ to use Seesaw to maintain the learning journey if the class goes into isolation or a 2<sup>nd</sup> national lockdown is put in place and to set more supportive homework activities.
- ✓ Monitor closely the progress and development of the vulnerable groups throughout the school.
- ✓ To develop confident early mathematicians in EYFS, where the environment enables pupils to succeed and practise mathematical skills daily.
- ✓ Identify individuals early who need additional intervention and support to continue to develop in their learning.

- ✓ Form greater links between home and school through Seesaw so that parents develop a greater awareness of how they can support their child.

**Implementation:**

- Teachers will use the White Rose Premium resources to support them with their teaching. These contain consistent vocabulary, a variety of ways of presenting numbers and questions and a good balance of fluency, reasoning and problem solving. The plans also take into account the previous year's learning which pupils must have to build on their understanding.
- Pupils will complete regular arithmetic tasks to assess pupils' raw number skills;
- Teachers will use daily ongoing quizzes and tasks to assess the pupils' ability. Flashback 4; Daily 5 and Corbett Maths will all support with keeping learning, "bubbling." This will support pupils with holding on to their learning.
- 4 daily Maths lessons a week which are 1 hour and 15 mins long and an additional afternoon catch up slot will be made available to pupils.
- Termly assessments will be completed and reviewed across all year groups.
- Baseline assessments will continue in EYFS in Maths and findings from this will support with curriculum delivery and opportunities in the continuous provision.
- TT Rockstars, Numbots, NRICH, NCETM, Number Blocks, Maths England Maths Week activities, White Rose and Oak National Academy – are all used for supporting home learning, homework and lessons in class. Through Seesaw, we are able to maintain the curriculum journey as opposed to giving one off, isolated learning experiences.
- CPD for staff on the effective use of Seesaw and how this can be used in the best way.

**Impact:**

- Children by the end of the year will have shown sufficient progress – it is difficult to define, "sufficient," as the pandemic is ever-changing;
- The vast majority of pupils will be performing mostly within age-related expectations;
- Children will report that they feel happy in Maths and they are not anxious or worried about it;
- Pupils are: fluent, reasoners and problem solvers in equal measure;
- Arithmetic scores indicate good progress has been made;
- Seesaw illustrates the confidence pupils have to recall their learning at home.
- Pupils have a wide range of skills and strategies to solve a wide range of mathematical questions in a wide range of mathematical contexts.
- Pupils have a strong sense of the value of mathematics and can make links across all areas of the curriculum applying their skills.