



**Mission Statement:**

**We walk in the footsteps of  
Jesus so that we may have life in  
all its fullness. John 10-10**

**Mathematics Policy**

**Mission Statement**

At St. Oswald's Primary School, we recognize the need for a mathematics curriculum that embraces mathematical reasoning, the ability to engage in problem-solving, and is underpinned by the fluency in the fundamentals of mathematics.

It is vital that positive attitude towards mathematics is encouraged amongst all our pupils in order to foster confidence and achievement in a life skill that is essential in our society. We aim to provide the pupils with a broad and balanced mathematics curriculum, which will produce individuals who have a deep, long-term, secure and adaptable understanding of the subject.

We endeavor to give all of our pupils' equal access to the whole mathematics curriculum, and where possible, to allow pupils to move through the programme at broadly the same pace. This means that:

- 'Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before acceleration through new contents.' (National Curriculum 2014 Mathematics Programme of study Key Stage 1 and 2.)
- We strive for all pupils to be curious about mathematics, the importance of mathematics within daily life and to understand how learning can be applied in every day life.
- Since the introduction of the new mathematics curriculum in 2014, a Mastery Approach to Maths has been fully embedded within school.

## **Aims and Objectives**

In line with the aims of the national curriculum for mathematics, we aim to ensure that our pupils gain:

- Deep and sustainable learning in mathematics, which they are able to apply to a range of contexts.
- An ability to build on prior learning and knowledge.
- An ability to reason using their mathematical knowledge and make connections within their learning.
- Develop methodical approaches to problems solving, developing sound procedural and conceptual understanding.
- An ability to solve complex problems by breaking them down into similar steps and showing resilience when encountering problems.

We want all children in our school to work towards these aims and develop an 'I Can' attitude towards mathematics.

## **Teaching and Learning Style**

In a typical mathematics lesson, you would see the following features of mathematical learning.

The large majority of pupil's progress through the curriculum content at the same pace, Adaptive learning is achieved by emphasizing deep knowledge, clear modeling and through individual support and intervention. The questioning and scaffolding individual pupils receive in class, as they work through problems, will differ depending on how rapidly concepts are grasped and how easily pupils apply this within their reasoning and problem solving. Those who grasp concepts rapidly are further challenged through more demanding problems and contexts, which deepen their knowledge further.

Practice and consolidation play a central role to mathematics learning. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts in tandem.

Teachers use precise questioning in class to test conceptual and procedural knowledge, and assess pupils regularly to identify those

requiring intervention.

Teachers use the CPA approach (concrete, pictorial, abstract) approach to ensure that concepts are modeled to pupils using multiple representations. This ensures that procedural and conceptual understanding are developed simultaneously.

Pupils are seated in either ability or mixed ability pairs or groups, as we believe that all pupils can attain highly in mathematics and every pupil will have different strengths and development areas. Therefore, groupings within class are flexible and pupils will work in different groups dependent on cohort needs.

## **Curriculum**

### **EYFS**

Mathematics within the EYFS is developed through purposeful, play based experiences and will be represented throughout the indoor and outdoor provision, the learning will be based on pupils' interests and current themes will focus on the expectation from Development Matters/ Early Years outcomes.

As the pupils' progress through the EYFS, more focus is placed on representing their mathematical knowledge through more formal experiences. Pupils will be encouraged to record their mathematical thinking when ready and this will increase over time. In EYFS, it is expected that Numicon Scheme and resources are incorporated into planning and the sequence of skills taught follow the White Rose Hub planning materials.

### **Year 1 to 6**

The amount of times pupils spend on key mathematical concepts is higher for the topic of number; to fully embed mathematical concepts. From Year 1 to 6, incorporate the Numicon scheme, specifically within KS1, alongside White Rose Hub planning that is supplemented by NCTEM master, NRich problems and Classroom Secrets activities to

challenge pupils, who grasp concepts rapidly to deepen their understanding further. However, if a pupil does not thoroughly grasp key concepts, there is flexibility for teachers to adapt and revisit concepts.

## **Lesson Design**

Teachers will briefly recap previous learning (sequential and from previous year groups if necessary) before then building on prior learning by introducing the next step to the pupils. Teachers use concrete apparatus when needed, alongside visual representations to reinforce the concepts and ensure deep and meaningful understanding. Pupils have the opportunity to practice the skills taught in the lessons using carefully crafted and varied questioning and talk within the lesson will be used to regularly allow pupils the opportunity to feedback and explain how they solved problems.

During teacher input, additional staff should be assessing and identifying those pupils who do not grasp the concepts as fully or as quickly as others. This information is then communicated to the teacher to allow for targeted intervention to take place during independent work.

During the independent learning, pupils should, as far as possible, practice the skills that they have acquired independently to avoid an over-reliance on adults, however, throughout this time, the teacher and additional staff should work with varying pupils to support and assess learning.

Lesson should:

- Begin with a 10-minute mental oral starter, revising or building on prior learning.
- Provide opportunities to practice mental calculation and for children to orally explain their methods and strategies

- Have clear focus; children should be aware of the lesson objective(s)
- Be interactive and incorporate all learning styles
- Include, where possible, concrete and pictorial methods of teaching to build towards using abstract methods.
- Include both teacher input and pupil activities, including a balance between whole class, grouped, paired and individual work.
- Include a plenary, which involves work with the whole class to address misconceptions, identify progress, summarise key facts, make links to other work and to discuss next steps.
- Be enjoyable, challenging and relevant.
- Pupils should be given opportunity to develop their fluency, reasoning and problem-solving skills.

### **Adaptive Learning**

Learning will adapt based on the individual pupils needs. This can include working on differing complexities of problems within the same objective or differing the amount of support or scaffolding provided to the individual pupil. More able pupils will have challenging problems to solve to ensure that they continue to make progress. Some pupils will use concrete resources for longer in order to support learning.

### **Intervention**

Using formative assessment gathered through tasks, questioning and other AfL methods, any pupil who has not grasped the concept or have consistent misconceptions will have intervention to ensure that they are ready for the next step of learning.

### **Resources**

Practical resources should be used where appropriate to ensure

that concepts are represented to pupils to gain depth of understanding. Teachers have access to several different resources to support with planning. Numicon should be used and planned into lessons where appropriate.

## **Assessment and reporting**

Teachers will use the White Rose Hub assessment to produce termly summative assessment, alongside formative assessment to produce data on the progress of the children as they move through the year. The children will be predicted or graded as either Working Towards the standard, at the Expected Standard or working at a Greater Depth Standard. This data will be shared on the Arbor system for SLT and Bishop Chadwick Trust leaders to access and collate, the data will be regularly monitored through termly Pupil Progress meetings ( See Assessment Policy for more details).

Year 6 also take part in termly SATS mocks to provide data , allow for intervention and identify gaps in pupils learning which the trust uses to produce bespoke questions for each pupil.

## **Marking and Feedback**

See Marking Policy

## **The contribution of mathematics to other curriculum areas**

Maths skills should be learn and practice across arrange of subjects and real contexts to provide 'real life' understanding. The curriculum must be planned and sequenced carefully to ensure that pupils have opportunity to learn and practice skills before being expected to independently apply it in another context. Links can be made in other curriculum areas, e.g. data handling within science. Mathematics skills should be applied to other

subjects and used to evidence pupils' depth of understanding.

## **The Role of Parents/Guardians**

Parents are key partners in the pupils' learning but for many mathematics is an area they feel less confident in supporting. We aim to run workshops for parents and their children to build confidence; the emphasis on providing enjoyable and engaging activities that will encourage communication and introduce newer ways of teaching mathematics. Useful websites and resources are shared during curriculum evening and our school website will have links to our Calculation policy and Mathematic Policy.

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Maths Lead

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