

# Old Dalby C of E Primary School



## Mathematics Policy

**Kind Hearts, Open Minds, Courageous Spirits.  
Together we will explore life in all its fullness.**

Approved date	September 2023
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# Mathematics Policy

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

## A. Introduction

This policy outlines the teaching, organisation and management of the mathematics taught and learnt at Old Dalby C of E Primary School. As a team we are committed to providing a curriculum which achieves the 3 main aims stated in the 2014 National Curriculum: All pupils:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

## B. Teaching Mathematics

### Teaching time

To provide adequate time for developing numeracy skills each class teacher will provide a daily (or equivalent) mathematics lesson. This may vary in length but will usually last for about 45 minutes in the Foundation Stage and Key Stage 1 and 50 to 60 minutes in Key Stage 2. We place a strong importance on links to mathematics within other subjects so pupils can develop and apply their mathematical skills in a range of different contexts, adding interest, variety and 'real life' to the learning experience. As a staff we have a strong awareness of different learning styles and are committed to ensuring a multi-sensory approach to learning for all children.

## **Class Organisation**

From the Foundation Stage, all pupils will have a dedicated mathematics lesson. Within these lessons there will be a good balance between whole class work, group teaching and individual practice. Children are divided into ability groups (within the classroom situation) rather than year groups to aid differentiation. These groups will vary according to the focus of each session.

A maths lesson in year 1-6 will include:

- Oral work and mental calculation
- The main teaching activity
- Individual, group or paired work
- A plenary or mini-plenaries

The structure of the lesson will be as appropriate to the stage of the teaching and learning cycle.

Mental math sessions may be incorporated as part of the lesson or be taught separately throughout the week.

Maths homework is given in line with the homework policy.

## **Links between mathematics and other subjects**

Mathematics contributes to many subjects within the primary curriculum and opportunities will be sought to draw mathematical experience out of a wide range of activities. This will allow children to begin to use and apply mathematics in real contexts.

## **C School and Class Organisation**

### **How we cater for pupils**

Teachers will involve all pupils through differentiation. Intervention programmes and more able challenge are implemented as appropriate to meet the needs of our children.

### **Resources**

Generic maths equipment is kept outside the staff room in labelled drawers. Cohort specific resources are kept within individual classrooms. The numeracy co-ordinator will audit and update resources on a yearly basis. Class teachers are encouraged to utilise a range of resources and planning tools however we do subscribe to abacus evolve and will be using the medium term plans provided to ensure full coverage of the new curriculum. Children also have access to abacus evolve from home and all have relevant games and activities assigned to them by their class teacher.

## **Information and Communication Technology**

ICT will be used in various ways to support teaching and motivate children's learning. ICT will involve the computer, calculators, and audio-visual aids however calculators should not be used as a substitute for good written and mental arithmetic. Abacus Evolve materials provide ICT opportunities at whole class, group and individual level. They will only be used in a mathematics lesson when it is the most efficient and effective way of meeting the lesson objectives.

## **Spoken language**

The national curriculum for mathematics reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

## **Display**

Interactive, regularly updated displays aid children's learning. Learning objectives and necessary vocabulary are visible and referred to in order to highlight the learning focus.

## **Assessment**

In order for children to achieve their full potential ongoing assessment provides teachers with the information they need to plan the next learning steps.

### *-Attainment targets*

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

### *-Individual targets*

All children should be aware of their individual targets. Targets are set at least on a half termly basis and are recorded in children's individual books and are reported to parents/carers via Partnership diaries.

## **D Management of Mathematics**

### **Role of the Co-ordinator**

- Ensure teachers are familiar with the National Curriculum and help them to plan lessons
- Lead by example in the way they teach in their own classroom
- Prepare, organise and lead INSET, with the support of the Headteacher
- Work co-operatively with the SENCO
- Observe colleagues with a view to;
  - identifying and supporting their needs
  - identifying and sharing good practice
- Attend CPD as appropriate
- Discuss regularly with the Headteacher and the numeracy governor the progress of implementing the curriculum in the school.
- To write a yearly action plan identifying strengths and areas of development to be addressed the following year.

### **Role of the Headteacher**

- Lead, manage and monitor the implementation of the Framework, including monitoring teaching plans and the quality of teaching in classrooms
- With the Numeracy governor, keep the governing body informed about the progress of the curriculum
- Ensure that mathematics remains a high profile in the school's development work
- Deploy support staff to maximise support for the curriculum.

This policy has been drawn up as a result of staff discussion and has the full agreement of the Governing Body. The implementation of this policy is the responsibility of all the teaching staff.

## Maths at Old Dalby 2023

We continue to use a mastery approach to teach the National Curriculum maths objectives. See Maths Policy and Calculation Policy for further information.

- The class work together on the same topic at the same time.
- There are same-day, speedy interventions to prevent gaps
- The lessons follows the same process: Real life – concrete –pictorial— reasoning/problem solving
- The challenge is provided for the ‘rapid graspers’ by going deeper not accelerating
- We spend more time on teaching topics (particularly on place value at the start of the year)– with an emphasis depth and practice of knowledge and skills.

### White rose maths

- Yearly overview-time table and objectives
- Small steps planning for more in depth ideas.
- Booklets so that you can pick and choose activities

### NCETM and ‘I see reasoning’

- Challenges to extend GDS children

### Assessment-

- Termly Puma assessments.
- Daily, self and peer marking with purple polishing pens.

### Lesson format

- Review, practise, teach, apply. Ping pong method.
- No differentiation – all children need to be exposed to the same objectives, and to challenge the the GDS children, it isn’t about giving them harder numbers, so all children move forwards together in the lesson. GDS children are challenged by eg finding more ways etc. and SEN children are either supported with an adult at their table, or a rapid intervention in the afternoon if they need it.
- All lessons follow same format.  
(concrete-> pictorial-> real life context -> varied fluency -> problem solving/reasoning )

### Maths resources in classrooms

- Resource boxes always available for all children. Base 10 blocks and place value counters essential in almost every lesson.

### Mixed year group approach.

Each teacher will map the whole year out at the start of the year, to ensure curriculum objectives can be taught efficiently. We follow WRM split year group planning which suggests an order which works where curriculum objectives cross over.

The decision was made this year that in the case of Year R,1,2,3, they do not have enough base knowledge to be able to efficiently learn in split year groups the same way the older children can further up in the school. Therefore, they are taught in smaller groups using Jeni (as she is a qualified teacher).

Let us be concerned for one another, to help one another to show love and to do good.

Hebrews 10:24

EYFS – Taught as one group by their class teacher.

Year 1: Taught by Megan/Maria

Year 2: Taught by Jeni/Maria

Year 3: Taught by Lucy

Year 4/5: Taught by class teacher in mixed year groups.

Year 5/6: Taught by class teacher in mixed year groups. (Whilst the year 5s are taught exactly the same objectives, the Year 5s in class 5 may reach these objectives earlier in the year to year 5s in class 4. This ensures we can adapt for year 6 expectations. Therefore after May the year 5s in class 5 spend time recapping and consolidation their knowledge.

Next steps: In the summer term, our action plan states we will look into ICT for GDS and PD for support staff to develop their understanding of pre-teach and rapid interventions.