

# Rowdown Primary School Mathematics Policy



## Aims and Objectives:

The national curriculum for mathematics aims to ensure that 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.

(New National Curriculum July 2014)

## Across each Key Stage we aim to develop the following:

- An understanding of number and the number system and competence in basic mathematical skills.
- Mathematical fluency including quick recall of basic facts.
- Enjoyment and curiosity of learning through practical activity, investigation and discussion.
- Knowledge and understanding of how mathematics is used in the wider world and its importance in our everyday lives.
- Ability to select and use a range of mathematical tools effectively.
- Use of appropriate mathematical language.
- Ability to work independently and collaboratively.
- Knowledge of shape and space and development of measuring skills in a range of contexts.
- A practical understanding of the ways in which information is gathered and presented.

## Teaching and learning

We understand that children learn in different ways and so we use a variety of teaching styles in mathematics, adapting to the needs of the children as necessary and appropriate. The school has recently joined a Mastery Readiness Programme run by the Thames Maths Hub.

We are developing a mastery approach, based on the principle of keeping all the children together on the same learning concepts but also challenging those children who grasp concepts quicker and supporting those who need more time.

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We ensure that the children experience the presentation of concepts in different ways and that they learn to make links between different areas of maths more securely.

We are aiming to embed a deeper understanding of maths by utilising a concrete, pictorial, abstract approach so that pupils understand what they are doing rather than just learning to repeat routines without grasping what is happening.

As part of the school's development of mathematics teaching and in line with the government's Maths Hub programme, we are developing our use of a Mastery Approach to teaching and lesson planning. To support this development, we are using The White Rose Maths block plans and small steps guidance as well as NCETM materials.

## Using and Applying

Children are specifically taught problem solving skills such as working systematically, trial and improvement, visualising and reasoning logically. They have opportunities to work independently and collaboratively to solve a range of problems. Although problem solving activities and challenges are integrated into the daily maths lessons, longer investigations which allow children to develop their mathematical reasoning through explaining, convincing, justifying and explaining take place at least once a fortnight.

## Mental Maths

Mental maths skills are practised and tested regularly in daily lessons. Kung Fu maths tests are worked on weekly or fortnightly and involve a progression of skills through a series of Kung Fu belts. This consists of a range of number facts at EYFS and KS1 and recall of times tables at KS2. We are also taking part in a Times Table Project which develops a more focused approach to teaching multiplication and division facts, beginning Autumn 2019.

## Cross Curricular Links/Events

At Rowdown we hold a Maths Week every November which each year has a specific theme. Children have the chance to take part in a range of engaging activities and competitions aimed at developing their love of maths. We also take part in the Count on Us Primary Maths Challenge every April where children practise the relevant skills in a Maths Club and tournament prior to the event. Teachers also seek to make cross curricular links within topic areas particularly science, ICT and geography.

## Calculation

There is a specific calculation policy outlining the methods used and taught for all four operations across the school. This ensures progression and continuity across year groups and the school when teaching calculation and embeds the knowledge of the four operations. For further information see our calculation policy.

## Inclusion

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We adapt our teaching to pupils' diverse learning needs, including those with English as an additional language, those with learning difficulties and able, gifted and talented pupils.

Children identified as having particular learning difficulties will be supported through work with a teaching assistant, either individually or within a small, focused group. This may include a particular intervention programme.

Teachers will plan for able, gifted and talented children by providing appropriate challenge at greater depth.

## Homework

In line with the school's homework document, specific homework will not be given. However, children are asked to practice mental mathematics skills at home, such as times tables and number bonds. They are also encouraged to use online maths resources including the program RM Easimaths.

## Assessment

In the Foundation Stage, children are assessed on the six areas of learning as stated in the Early Learning Goals, via observation and the Foundation Stage Record.

At Key Stage 1 and 2, children are assessed against the National Curriculum 2014. Assessment is predominately through assessment for learning (AFL) which enables children to see themselves as learners and take responsibility and control of their own development. Teachers use AFL to inform their planning, evaluate lessons and to give next steps to children through giving verbal and written targets in marking.

Summative assessment takes place each half term. Children will complete a maths quiz based on that half term's learning. Lessons also incorporate times tables tests to further develop fluency. At the end of KS1 and 2, children will be entered in statutory tests in line with government policy. For further details, see the assessment policy.

Agreed 18<sup>th</sup> November 2019