

Rosa Street Primary School



Rosa Street
Primary School

Mathematics and Calculation Policy

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Head Teacher: Mrs H Ashton

Chair of Governors: Mrs K Bage

A member of the Cleves Cross Learning Trust



Rationale

Mathematics is regarded as a high status subject and can be used to present information in many ways, which provide a means of communication. It is seen as providing a useful set of skills and reasoning for meeting the needs of everyday life. Mathematics enables children to describe, explain, communicate, predict and suggest possible answers to problems.

Good mathematical teaching should challenge all children and develop independent and co-operative work as well as offering the opportunity for creative and intellectual work. It should be a pleasurable, lively and exciting learning experience, incorporating cross curricular links and opportunities.

Aims

To provide all our pupils with a continuous and progressive mathematical education, which meets their individual needs, thus encouraging a feeling of confidence, understanding, sense of achievement, enjoyment and satisfaction in mastering mathematical concepts.

- To satisfy the requirements of the National Curriculum effectively through the programmes of study by using the Primary National Renewed Strategy Framework.
- To ensure that the pupils are able to use and understand mathematics and to enable them to develop their abilities and qualities to tackle problems both now and in later life.
- To develop the mathematical learning of our pupils, this will involve a combination of skills, facts, conceptual structures, rules, patterns, general strategies, reasoning and processes.
- To provide opportunities to use their mathematical knowledge in real life experiences, context and meaning (outlined in Excellence and Enjoyment: Learning and Teaching in the Primary Years).
- To develop their mathematical knowledge through the medium of ICT.
- To encourage flexibility within the structured learning to achieve co-coherent progression.

Entitlement

Rosa Street Primary School believes that each pupil is entitled to a curriculum, which is broad and balanced. It should cover the appropriate National Curriculum levels at KS1 and KS2 and support children in their progression towards the Early Learning Goals.

Pupils should have the opportunity to:

- Become confident and competent with their use and knowledge of number, algebra, shape, space, measures and handling data.
- Select materials and the strategies they use, making use of appropriate methods and tools for calculation.

- Practice and consolidate, engage in practical tasks, real life situations and investigative work.
 - Engage in work which focuses on the practical value of mathematics as a tool for everyday life and to explore and appreciate the structure of mathematics itself. In particular, using and applying mathematics should stretch across and permeate all other work in mathematics.
 - All pupils are entitled to have an opportunity to study all aspects of mathematics. There should therefore be a variety of learning experiences and teaching styles.
- Rosa Street School Mathematics & Calculation Policy 2018

Outcomes

Mathematics education should sustain and develop in all pupils confidence, understanding and enjoyment in mathematics. We hope to instil in our pupils:

- An awareness of relationship and pattern, and how these can bring about a clearer understanding of a situation.
- The opportunity to enquire, question and explore mathematical concepts.
- An appreciation of mathematics as a means of communication, through which they can analyse information and ideas.
- The ability to work systematically where the task requires a careful, accurate approach, as well as the ability to show imagination, initiative and flexibility where appropriate.
- Independence of thought and action, as well as the ability to cooperate within a group.
- Problem solving skills and strategies.
- The effective use of ICT to enhance their mathematical understanding.
- The ability to use mathematics effectively as a tool in a wide variety of situations.
- The sensible use of factual recall, mental and written methods, calculators and other mathematical aids.
- A development in speaking and listening skills, through mathematical reasoning and problem solving.

Key Objectives

As a school we are following the core learning objectives of the White Rose Math Hubs in order to meet National Curriculum requirements. This is structured around five blocks of:

- Number and Place Value
- Addition and Subtraction
- Multiplication and Division
- Geometry & Measurement
- Fractions, Decimals, Percentages, Ratio & Data Handling

Teaching methods and approaches

The approach of teaching mathematics is based on five key principles:

- Dedicated mathematics lessons everyday – mental maths will also be taught during soft start activities to children when they first enter the class
- Interactive oral work with the whole class and groups
- Build competency by using the concrete, pictorial and abstract approach
- An emphasis on mental calculation and using and applying mathematics
- Controlled differentiation, with all pupils engaged in mathematics relating to a common theme, incorporating cross-curricular links and real life application of skills

Early Years

In Early year and Foundation Stage we teach basic number skills and formation through practical activities and number songs. In EYFS we also ensure children can securely count to 20 and then count to 100 in tens before beginning to count backwards.

Most children at the end of Foundation stage will have met most of the Early Learning Goals and good mathematical teaching should incorporate these key goals with a strong emphasis and underpinning through play (For guidelines see Early Years Policy).

Advice on Calculation / Using and Applying

Calculation and using and applying should be a high priority in mathematics teaching, so that clear progression is made through each year group and children can use efficient and accurate methods and strategies. Mental mathematics and solid knowledge of number facts should be taught in all aspects of the lesson and not confined to only starter activities in lessons.

Staff should refer to the 'Calculation Policy' for guidance on recording calculations and the progression which needs to be made over the year.

Differentiation

The demands of individual pupils should be taken into consideration wherever possible so as to allow the highest standards to be maintained for the more able, while taking into account the need of the less able and those with learning difficulties and to provide for each pupil attainable goals.

This will be provided by clear structured and scaffolded planning and assessment, teacher and TA input, outcome and by task. It will be facilitated by formative and summative assessment and the use of Support Plans for children with special needs. Pitch and pace should be sensitive to the child's ability and children who require more support or need to be extended should be identified early to help them maintain good progress. The following intervention programmes are available to support this:

- Plus 1

- Power of 2
- Booster sessions for groups

Special Needs

The daily mathematics lesson should be appropriate for all pupils. At Rosa Street Primary School we aim to ensure that each pupil progresses to their limits of their ability and therefore make clear progression. This will be facilitated by appropriate support and differentiation in planning and assessment and matched to Support Plans.

Parental Involvement

Parents are informed of the changes in teaching approaches and are given booklets detailing the approaches we use for calculations with methods and strategies and activities for use at home.

We continually aim to provide parents with ideas to support their children's mathematical development. Parents are informed of their children's mathematical progress through 2 open evenings over the academic year, as well as an end of year report.

Assessments

End of year assessment will be done through KS1, KS2 and optional SATs.

Each half term children will be given a formative assessment level using past SAT paper for upper KS2 children and test base assessments for lower key stages. Every pupil's termly summative assessment level will be recorded at the end of Autumn, Spring and Summer term (Age-Related Expectations) on the school step trackers and assessment database. This database highlights as to whether the pupil is working at expected, below or above their level.

Key step tracker grids are kept with pupil's progress and passed onto the next year group at the end of each academic year.

Homework

All children will be set weekly and relevant homework relating to work completed in class. Children from year 2 onward have their own login and password to access interactive homework using Conquer Maths. Homework is automatically checked, tasks are highlighted to the class teacher when children have completed or not on time, also providing information of the level they scored. Year 1 and Early Years children are provided with practical homework tasks.