The Rationale

Mathematics is a core area of the National Curriculum. It is concerned with understanding the patterns and processes of mathematics and it can be used as a cross-curricular tool to enhance other areas of the curriculum. It is used to enhance our curriculum driver of communication. Ready, respectful and safe runs through our curriculum preparing the children for challenges they will meet in adult life.

The importance of maths can be demonstrated in a wide variety of every day situations, from telling the time, or paying for shopping to re-arranging the bedroom. This being so, it is important that children perceive mathematics as a useful tool which is part of their everyday lives now and in the future. It is our aim to fulfil all the National Curriculum requirements in relation to maths and thus prepare children for adult life by giving them skills to tackle situations and solve problems.

The Purpose of the Policy

This policy is written to try and ensure a coherent approach to the teaching of maths throughout the school and to promote continuity and progression.

It is to support new and existing members of staff and to inform parents, governors and outside agencies of our practice in mathematics.

Aims and objectives

- To increase pupil interest and enjoyment in maths and promote a positive attitude to the subject.
- To give children confidence both in their ability to do maths at an appropriate level and in their use of a range of equipment.
- To provide the opportunity for children to experience the widest possible mathematical activities including investigations and problem solving work as well as more structured procedures.
- To develop the children's ability to persevere with problems/ investigations and use and apply their knowledge.
- To provide where possible mathematical activities in real-life contexts using every day experiences.
- To provide a stimulating environment for the learning of maths e.g. good quality interactive maths displays, use of interactive whiteboards, highly visible number squares and number lines etc.
- To experience maths everyday and to develop good work habits.
- To provide a varied selection of resources and games which are readily available for the children to select the most appropriate equipment for the task in hand.

Current Practice



FLUENCY INVOLVES:

□ Quick recall of facts and procedures

- □ The flexibility and fluidity to move between different contexts and representations of mathematics.
- □ The ability to recognise relationships and make connections in mathematics

REPRESENTATION & STRUCTURE

Mathematical structures are the key patterns and generalisations that underpin sets of numbers – they are the laws and relationships that we want children to spot. Using different representations can help children to 'see' these laws and relationships.

VARIATION

Procedural variation – This is a deliberate change in the type of examples used and questions set, to draw attention to certain features.

Conceptual variation – When a concept is presented in different ways, to show what a concept is, in all of its different forms.

MATHEMATICAL THINKING INVOLVES:

- $\hfill\square$ Looking for pattern and relationships
- Logical Reasoning
- □ Making Connections

COHERENCE

Teachers should develop detailed knowledge of the curriculum in order to break the mathematics down into small steps to develop mastery and address all aspects in a logical progression. This will ensure deep and sustainable learning for all pupils.

As a result of teaching and learning in mathematics, our aim is that pupils will be able to meet the key aims of the National Curriculum for maths.

□ In our school we aim to promote children's **curiosity** and enable them to safely take risks and learn from first hand experience wherever necessary

□ Our primary focus is to support the children to become fluent in mathematical **understanding** from the most basic level so that they can build upon their own understanding.

□ We aim to enable our children to develop conceptual understanding, **recall** of number facts and patterns and apply their knowledge rapidly and accurately.

□ We aim to promote children's ability to **reason** through opportunities to discuss their thinking and understanding. This emphasis may result in less written work but much deeper understanding.

• We promote **problem solving** and solution finding. This is not only true in mathematical learning but in almost all aspects of school life.

□ We aim to support children to make **progress at their own pace**. Often misconceptions cause greater difficulties at a later stage of learning. We will promote smaller group learning opportunities whenever possible and encourage children to revisit their thinking to ensure they feel secure in their understanding and able to move confidently on to next steps and challenges.

Organisation

□ All children receive a daily maths lesson, although mathematical skills run through many other areas of the curriculum.

□ Each lesson focusses on one clear learning objective which all children are expected to master; extension activities enable those children who grasp the objective rapidly to extend their learning by exploring it at greater depth.

Each lesson includes elements of: **fluency**, to practise skills; **reasoning**, to deepen understanding; and **problem solving**, to apply skills

□ Teachers use the White Rose Mastery planning and other resources to draw up medium term plans for each term, and a daily lesson plan is produced to incorporate the above elements

□ Whole class teaching is adopted and children work in mixed ability groups OR children are placed into ability sets within their year groups. All classrooms have maths displays with key vocabulary clearly displayed.

□ Every classroom has a range of practical apparatus to support children's learning, with additional resources stored centrally.

Foundation Stage

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 pupil's interests and current themes and will focus on the expectations from Development Matters / Early Years Outcomes. Mathematical understanding can be developed through stories, songs, games, imaginative play, child initiated learning and structured teaching. As pupils progress, they will be encouraged to record their mathematical thinking in a more formal way.

Entitlement / Equal Opportunities

- All children have equal access to the Maths curriculum, irrespective of race or gender.
- Children access the curriculum at the appropriate level, thus ensuring progression and differentiation.
- Suitable resources and learning environments will be made available to enable children access to the learning required.

Special Educational Needs

Differentiated activities may be given to support less able and to extend more able pupils. Support is offered to children with SEND throughout sessions and activities/targets set accordingly.

Children with learning difficulties are diagnosed and have provision map made for their particular needs. Teaching Assistants are used where appropriate to give support to children identified as having difficulties (i.e. Provision Maps).

Pupils may be withdrawn to work in small groups or individually. They follow a structured but stimulating programme within the guidelines of the National Curriculum for Maths.

Parents are kept informed of progress and targets through regular meetings with the class teacher and SENCO when appropriate.