

Grindleton C.E. Primary School



Mathematics Policy

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As a unique village school, inspired by our Christian love, we strive to nurture our family to 'grow and shine in God's glory'. We will open our hearts to God's wonderful, diverse creation cherishing everyone as a child of God. Through Jesus' example, we will instil resilience and confidence for tomorrow.

'In the same way, let your light shine before others that they may see your good deeds and glorify your father in heaven.' Matthew 5 v16

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Mathematics Policy Introduction

Mathematics teaches children how to make sense of the world around them through developing their ability to use number, calculate, reason and solve problems. It helps children to understand relationships and patterns in both number and space in their everyday lives. The Mathematics curriculum should be bold, provide breadth and balance and be relevant and differentiated to suit the needs of all children in the modern world. It should be flexible, motivating to all pupils thus encouraging success at all levels.

INTENT

- a positive attitude towards mathematics and an awareness of the relevance of mathematics in the real world
- competence and confidence in mathematical knowledge, concepts and skills
- an ability to solve problems, to reason, to think logically and to work systematically and accurately.
- initiative and an ability to work both independently and in cooperation with others.
- an ability to communicate mathematics.
- an ability to use and apply mathematics across the curriculum and in real life.
- an understanding of mathematics through a process of enquiry and experiment

We AIM for all pupils to:

- Become fluent in the fundamentals of mathematics to develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- Reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.
- Solve problems by applying their mathematics to a variety of problems, including breaking down problems into a series of simpler steps and persevering in seeking solutions – including unfamiliar contexts and real-life scenarios.

IMPLEMENTATION

The National Curriculum for Mathematics 2014, and the EYFS Early Learning Goals provide the long-term planning for mathematics following White Rose Scheme to ensure whole consistency and progression following the CPA (concrete, pictorial, abstract) approach and a mastery curriculum. The White Rose Ready to Progress Mapping Document informs expectations for planning and progression throughout school.

The White Rose Maths curriculum links directly to the Key Stage 1 and 2 national curriculum. In each of the major topic areas (Number, Measurement, Geometry and Statistics), the curriculum has been broken down into key areas. For each of these areas, you can then see which National Curriculum objectives are covered in that year, together with the term and block in which that objective is first met in the White

Rose Maths schemes. The curriculum at Grindleton C.E. Primary School recognises the importance of children's conceptual understanding of number. It is therefore designed to ensure that time is invested in reinforcing this to build competency. Lessons are planned to provide plenty of opportunities to build reasoning and problem-solving elements into the curriculum. When introduced to a new concept, children have the opportunity to use concrete objects and manipulatives to help them understand the concept. Alongside this, children are encouraged to use pictorial representations. These representations can then be used to help reason and solve problems. Both concrete and pictorial representations support children's understanding of abstract methods. Mathematical topics are taught in blocks, to enable the achievement of 'mastery' over time. These teaching blocks are broken down into steps, to help children understand concepts better.

EYFS

- The Early Years Foundation Stage Curriculum is used to support teaching of Mathematics in the Foundation Stage. The EYFS White Rose Maths Hub Scheme of Learning supports this.
- The EYFS children have the opportunity to talk and communicate in a widening range of situations and to practise and extend their range of vocabulary and mathematical skills.
- The children explore, enjoy, learn about, and use Mathematics in a range of personalised situations.
- Mathematics is planned on a weekly basis and assessed using the criteria from the Early Learning Goals.

KS1 and KS2

- Children in Years 1,2, 3, 4, 5 and 6 are taught Mathematics in mixed ability class groups (years 1 and 2, years 3 and 4 and years 5 and 6).
- They are taught for approximately 1 hour daily.
- Teachers follow the White Rose Maths Hub mixed aged planning to support their planning and delivery of Mathematics teaching.
- The teachers use the guidance given in the White Rose Maths Hub Scheme of Learning to support their planning.
- The use of Mathematics resources is integral to the concrete – pictorial – abstract approach (CPA) and thus planned into our learning and teaching.
- Maths lesson starts with the White Rose Maths 'Flashback 4' resource, children then work through four retrieval questions with the teacher to revisit and consolidate previous learning
- Following this, new learning is taught, and a mathematical concept is presented in the form of a contextual problem, to support application. The children will then complete an initial 'Independent Practice' questions. During this part of the lesson, the teacher can ascertain the level of children's understanding and the extent to which they have grasped the initial concept. This part of the lesson is responsive, and teachers can use it to address remaining misconceptions.
- The next part of the lesson is a further phase of whole class input/discussion. Children then continue with their independent practice task, following the input

given. This practice uses conceptual and procedural variation to build fluency and develop greater understanding of underlying mathematical concepts.

- Children who complete this are provided with further problems, which they complete in their own maths book in order to broaden their knowledge.
- White Rose lesson videos are used during planning stage to introduce/revisit key terminology prior to teaching and learning units for all teaching staff. Children's explanations and their proficiency in articulating mathematical reasoning, with the precise use of mathematical vocabulary, are supported through the school's oracy focus and use of stem sentences and high-level questioning.

Marking

Marking of children's work is essential to ensure they make further progress. All work is 'live marked' in line with the school's marking policy. Children are encouraged to self and peer assess their work and given time to respond to verbal feedback during the lesson and make corrections.

Assessment

Teachers make regular assessments of each child's progress. A record of each child's attainment against the key objectives for the appropriate year group are recorded systematically. White Rose end of unit assessments and termly NFER assessments are carried out and the outcomes are used to monitor each child's attainment and progress to inform future planning, highlighting intervention needs. This information is recorded, and progress and attainment are updated on the school's tracking system.

Children's class work is assessed frequently through.

- live marking and verbal feedback
- analysing errors and editing
- questioning and problem solving
- discussion and reasoning
- White Rose end of unit assessments
- NFER termly assessments
- Past end of key stage assessments

Assessment is used to inform sequential planning and teaching. Lessons are adapted readily and short-term planning is evaluated by the teacher and support staff. These materials are to be used alongside judgements from class work to form a teacher assessment for each child.

IMPACT

At Grindleton C.E Primary School, all of our children gain a passion and deep understanding of mathematics and how it links to everyday life.

We are confident, enthusiastic and determined mathematicians who can recall prior learning to further aid our current learning. We are able to use key mathematical vocabulary accurately and appropriately. We are able to reason mathematically and use our rapid recall of mental maths skills to support our learning. We ask questions to support our journey as mathematicians and we all work in an environment that promotes a love of maths and key life skills.

Equal Opportunities

Grindleton C.E. Primary School is committed to ensuring the active participation and progress of all children in their learning. All children will be given equal opportunities to achieve their best possible standard, whatever their current attainment and irrespective of gender, ethnic, social or cultural background, home language or any other aspect that could affect their participation or the progress of which they are capable.

Inclusion

At Grindleton C.E. Primary School, we aim to:

- Provide for all children so that they achieve as highly as they can in maths according to their individual abilities.
- Identify which pupils or groups of pupils are under-achieving and take steps to improve their attainment (adaptive teaching).
- Identify able and gifted children and provide suitable learning challenges.

Role of a Subject Leader

- The role of the Subject Leader is to provide professional leadership and management in Mathematics in order to secure high quality teaching, effective use of resources and high standards of learning and achievement for all pupils.
- They will achieve this by affecting the following key areas: strategic direction and development; learning and teaching (including planning and marking and presentation); leading and managing staff; and efficient and effective use of resources.
- The Subject Leader will train and coach staff on Mathematical pedagogy within the school and keep up to date with developments from a county and national level.
- The Subject Leader has regular discussions with the Head Teacher and other members of staff about learning and teaching in Mathematics and provides data and a subject overview of the strengths and weaknesses of Mathematics within Grindleton C.E. Primary School on a termly basis.
- During the academic year the Subject Leader has specific allocated time for subject evaluation and monitoring tasks.

The Governing Body

A designated link governor will liaise with the Mathematics Subject Leader to find out about:

- The school's systems for planning work, supporting staff and monitoring progress
- The allocation, use and adequacy of resources
- How the standards of achievement are changing over time.
- Visit School and talk to pupils about their experiences of Mathematics
- Take part in lesson observations or planned maths activities in school
- Promote and support the positive involvement of parents in Mathematics
- Attend training and other events relating to the Mathematics curriculum
- To be understanding and supportive of our aims in the learning and teaching of Mathematics and to review this policy annually.