Our approach to Mathematics at Whitegate End

Overview of what the subject entails

The language of mathematics is international. The basic skills of mathematics are vital for the life opportunities of all our children. Our aim is for all children to think mathematically, enabling them to reason, solve problems and assess risk in a range of contexts.

Why we teach Mathematics

The subject entails pupils across all year groups building on the basic skills of number and applying these across the mathematics curriculum.

We passionately believe that Mathematics unlocks many opportunities for children and a secure knowledge and skill base in the subject will have a significant impact on the life chances of our pupils. We want them to transition to the next stage of their education with the ability to solve and address the content expected of their age group and develop lifelong learning skills to help them beyond the education system.

Principles

At Whitegate End we follow the statutory National Curriculum for Mathematics. We enhance this by also teaching concepts that we feel will benefit our pupils in particular.

Within each element of Mathematics being taught, children are exposed to fluency (knowing key mathematical facts and methods), and the opportunity to apply what they have been taught in a wide range of contexts involving problem solving and reasoning. We also have a strong focus on vocabulary and believe a good understanding of key mathematical language will further enhance a pupil's ability to work within the subject.

Aims

We aim to ensure that all pupils have a toolkit that enables them to tackle a range of different mathematical problems with the ability to reason and explain answers clearly. We aim to combine this with ability to answer a range of arithmetic questions.

We expect all children in our school to reach age related expectations the only exceptions being a very small minority of children with specific professionally identified DSEN barriers to learning.

We enable each child to:

- Build on their previously learnt skills leading to a mastery level of ability.
- Challenge themselves to further improve their work.
- Take on constructive feedback from others to improve their work.
- Have an open 'can do' attitude when it comes to solving problems in Mathematics.
- Take risks and challenge themselves.

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Development of the knowledge/facts

Each year group has yearly objectives linked to the National Curriculum. Key knowledge, mathematical facts and consolidation of skills are visited each morning during a 'quick fire' Mathematics session.

Development of Skills

In EYFS children have lots of opportunities when working to work with number on a daily basis. From counting, working with money and focused teaching sessions children are exposed to the key areas of number, shape, space and measure from the Early Learning goals.

In Key Stage One we build on skills in conjunction with the White Rose Mathematics programme for learning given lots of opportunity for pupils to practice and perfect skills taught in EYFS. We also look at areas for development in each cohort and look to develop this, e.g. topics on time and money.

In Key Stage Two we continue to use the White Rose Mathematics scheme and challenge pupils with deeper reasoning and problem solving skills. We also endeavor to ensure all pupils know their times tables by the end of Y4. From 2020 this will be assessed in the Times table check

We also hold a whole school enterprise week during the summer term in which pupils research a product to create, market it, spend a budget and then sell it to the school community. The profit made is then given to the class so they can decide how to spend it.

How it is taught

At Whitegate End Primary School, we adopt a mastery approach to our curriculum which has been developed to ensure every child can achieve their full potential in mathematics. This ensures pupils fully understand what they are learning. We use the White Rose Mathematics scheme planning and resources but tailor our teaching to meet the emerging needs of our children relating it to real life.

We use adaptive teaching strategies within a single lesson to enable children to move deeper into an objective within a single session. Pre and Post assessments enable class teachers and other staff to closely track and monitor pupil's strengths and areas for development. If intervention is necessary pupils are exposed to pre teaching in advance of the lesson to give them a head start prior to teaching the full class.

Assessment of the subject and how this is used

In early years we assess pupils based on the Early learning goals and good level of development. Further levels of assessment include engaging alongside children during their

play in continuous provision, annotation of children's written work and recording key learning in their Learning Journeys.

In Key stages one and two each unit starts with a pre assessment carried out a minimum of 2 weeks before the unit is due to be taught. Teachers can then use this to inform their planning and provide pre teaching sessions to any children who would benefit with the extra support prior to a lesson. Teachers and all other staff assess pupils throughout the lesson and follow the school's marking and feedback policy to aid planning for the next lesson. Children will then complete a post assessment to further demonstrate their learning which will then be added to Target Tracker by the class teacher. This data will be regularly monitored by the Mathematics lead to ensure consistency, progression and identify any children who are a cause for concern.

Links to other areas of the curriculum

We feel that Mathematics should be developed throughout the school day and where applicable linked to the topic. Teachers ask Mathematics based questions throughout the school day and children are able to walk around school wearing 'ask me' badges to encourage other staff to ask them a question linked to their Mathematics learning. We encourage the skills taught in Mathematics to be used in order areas of the curriculum e.g. in geography and history.