Durham Gilesgate Primary School

Maths

Intent

"If you can't explain it simply, you don't understand it well enough." (Albert Einstein)

At Gilesgate Primary School we strive to ensure that our mathematics curriculum is enjoyable, challenging and accessible to all

we intend to ensure that all children:

- Become fluent in the fundamentals of Mathematics and have the resilience and perseverance required to tackle problems and take risks.
- Are able to reason mathematically.
- Can solve problems by applying their Mathematics in a range of situations across the curriculum in order that they can make connections in learning and master the curriculum which they have been exposed to.
- Develop a sense of enjoyment and curiosity about the subject.

At our school, these skills are embedded within Maths lessons and developed consistently over time. We are committed to ensuring that children are able to recognise the importance of Maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of different contexts. We want all children to enjoy Mathematics and to experience success in the subject, with the ability to reason mathematically. We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and power of Mathematics.

Implementation

At Gilesgate Primary School we are passionate about developing mathematical mastery. Our implementation is developed through secure understanding of the curriculum and subject area. We have a supportive ethos and our approaches support the children in developing their collaborative and independent skills, as well as empathy and the need to recognise the achievement of others. Children can underperform in Mathematics because they think they can't do it or are not naturally good at it. This is supported by a cultural acceptance that it is OK to say "I'm not good at maths." Our teaching addresses these preconceptions by ensuring that all children experience appropriate challenge and success in Mathematics by developing a '*growth mind-set,* which is one of our curriculum drivers. Regular and ongoing assessment informs teaching, as well as intervention, to support and enable the success of each child

Planning

Our planning in maths is structured in the following way-

1. Long term plans: These are in formed by The National Curriculum and Development Matters in the EYFS Doc.
2. Medium term: In our school our plans are informed by the White Rose Yearly overview, up-dated and altered in response to data and in house monitoring of teaching & learning.
3. Short term: Our daily lessons are supported by the use of the White Rose Maths Hub materials, the Numicon approach and Power maths interactive resources.

Teaching 'Quality first teaching' linked to teaching standards:

The implementation of our intent can only be achieved through high quality teaching; all teachers:

1. 'Know where their children are' through the use of concise summative assessment, prior learning, assessment for learning and ongoing 'maths talk' in class.
2. 'Understand where their children need to be' through a secure understanding of year group expectations and/or pre key stage expectations and incisive, ongoing, formative assessment.
3. 'Know how they are going to get them there' through the use of a range of strategies and resources to promote independence, mastery and high expectations of ALL.
4. Effectively deploy adults, specifically during introductions, plenaries & catch-up sessions.
5. Plan for progression during and between lessons keeping in mind the 5 big ideas for mathematical mastery.

Learning 'Quality first learning'

We work as a team to ensure all of our children:

1. Have a clear understanding of the high expectations set for them and have high expectations of themselves. We make use of our learning zones to ensure that children in our classrooms both expect and enjoy a challenge. Maths lessons will have 'Purple Learning Challenges' available. The children are expected to access these challenges when they have demonstrated mastery within the content being taught. These challenges provide opportunity for 'depth' of learning rather than acceleration into new content.
2. Are confident in their mathematical learning and are able to reason, justify and

We make use of the Numicon approach and Numicon resources as well as Power maths online across the whole school in order to ensure some consistency between year groups in the representations and structures which children are exposed to. These representations and structures also include tens frames, part whole models and dienes apparatus. This consistent approach ensures that children can readily move between concrete, pictorial and abstract representations of their mathematics and showcases the different conceptual ideas that underpin a mathematical concept. Procedural variation is also built into daily maths lessons where appropriate in order to provide opportunity for exploration of patterns and relationships as well as discussions around the mathematics they observe. This will develop their ability to "…*reason* mathematically by *following a line of enquiry*, *conjecturing* relationships and

generalisations, and *developing an argument, justification or proof using mathematical language.*"

Assessment

To aid our assessment of children we use:-

1. Summative/ diagnostic – PowerMaths half termly assessments Year 1 – 6.
2. Formative / ongoing – See Marking, Assessment & Feedback policy
3. Prior & Post learning – informs future planning, demonstrates progress in books, celebrates effort and achievement.

Impact

We aim for and expect that the majority of children will achieve well in maths and that they are ready for each successive stage in education and ultimately the move to Key Stage Three. We recognise that some children may not achieve at the age expected standard but we will expect that they will have made good progress from their starting point. We also recognise that some other children will exceed age related standards and we will have deepened learning for these children.

Children's knowledge in maths will build progressively over time because the curriculum is our progression model for maths. Both teachers and parents will be able to see this in children's maths books and we will be able to see children using maths to record and solve problems in other subjects such as science, geography and design technology.

By talking with children, we will be able to gauge their understanding and application of problem solving and reasoning skills and their ability to make links between subject knowledge learned over time.