



Caring for Everyone, Learning Together,
Achievement for All

Maths at Beetham CE Primary School

Intent

There are 3 levels of learning:

- **Shallow learning:** surface, temporary, often lost
- **Deep learning:** it sticks, can be recalled and used
- **Deepest learning:** can be transferred and applied in different contexts

The deep and deepest levels are what we are aiming for by teaching maths to enable pupils to achieve mastery of the subject.

At Beetham C of E Primary School we intend to deliver a curriculum which enables pupils to:

- Make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.
- Have access to a high quality maths curriculum that is both challenging and enjoyable. It will provide a variety of mathematical opportunities, which will enable pupils to make the connections needed to enjoy greater depth in learning.
- Believe in themselves as confident, independent mathematicians who will develop resilience and perseverance when faced with mathematical challenges.
- Develop conceptual understanding and will be able to recall and apply knowledge rapidly and accurately.
- Recognise that mathematics underpins much of daily life and is therefore important for aspirations and striving to achieve our potential.
- Reason mathematically for instance following a line of enquiry, developing an argument, by using mathematical language.
- Achieve in line with the National Curriculum expectations.
- Apply mathematical knowledge to other subject areas such as science.
- Develop a love of mathematics.

Implementation

Our implementation is developed through secure understanding of the curriculum and subject area.

Planning

Long term:

National Curriculum & EYFS

Medium term:

Termly objectives are taken from Hamilton Trust Short Block Units & White Rose planning

Short term:

- Daily lessons include a clear lesson intention
- Daily lessons are taught in 3 parts: starter (to support retrieval practice & develop long term memory), main teaching point & plenary
- Short term planning is mainly supported by the use of Hamilton Trust Short Block Units & White Rose materials. Teachers may use other resources such as Numicon, NRICH, NCETM, Classroom Secrets as and when they feel that it is appropriate for their cohort.
- Lessons provide opportunities for fluency, reasoning and problem solving.

There is a Calculation Policy in school to ensure a consistent approach to teaching the four operations over time.

- Pupils who grasp concepts rapidly will be challenged through being offered rich and sophisticated problems before acceleration through new content.
- Pupils who are not sufficiently fluent with earlier material will consolidate their understanding before moving on.
- Pupils will be a part of creative and engaging lessons that will enable them to explore mathematics to develop mastery of the subject.
- Pupils will have the opportunity to develop their knowledge and understanding of mathematical concepts through using objects, pictures, words and numbers to help children explore ideas, enrich their learning experience and deepen understanding.

Concrete - children have the opportunity to use concrete objects and manipulatives to help them understand and explain what they are doing.

Pictorial - children then build on this concrete approach by using pictorial representations, which can then be used to reason and solve problems.

Abstract - With the foundations firmly laid, children can move to an abstract approach using numbers and key concepts with confidence.

Teaching - linked to teaching standards

All teachers:

1. 'Know where their children are' through the use of concise summative assessment, prior learning, assessment, maths talk
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 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.

Assessment and Feedback

- Assessment informs the teaching and learning sequence and children work on the objectives they are assessed as being at with support available.
- 'In the moment' feedback is given on children's learning where possible otherwise written feedback is given as outlined in the Marking Policy.
- Formative assessment within every lesson helps teachers to identify the children who need support to achieve the intended outcome and those who are ready for greater stretch and challenge through planned questioning or additional activities.
- Initial assessments are made at the beginning of the school year - EYFS Baseline Assessment, Year 1 teacher written assessment, Year 2-6 NFER. (NFER provides gap analysis and is fed into future planning.)
- Every half term KS1 & 2 teachers make an assessment of pupil's progress and add this information to a whole school tracking system. EYFS assess as part of their on-going practice and observation including the use of Tapestry; this informs children's next steps. Assessment is also made against Development Matters on a termly basis.
- End of year assessments involve Year 1 -6 NFER, SATs and EYFS Profile.
- Results are reported to parents in the end of year report.
- Moderation and key data sharing is analysed in staff meetings to inform progress and future actions.

Impact

- Pupils demonstrate a quick recall of facts and procedures, including recollection of times tables.
- Pupils show confidence in believing that they will achieve and have pride in their work.
- Each pupil achieves the objectives in the expected standard for their year group.
- Pupils have the flexibility and fluidity to move between different contexts and representations of mathematics.
- Pupils have the ability to recognise relationships and make connections in mathematics.
- A mathematical concept or skill has been *mastered* when a pupil can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations.
- Pupils are reasoning with increased confidence and accuracy.
- Statistical impact - school tracker, Development Matters, Tapestry, EYFS Profile , SATs results, NFER results, comparisons with county and national levels.