

Mathematics Policy – Hutton Rudby Primary

At Hutton Rudby Primary we believe that Maths should be progressive, thorough and stimulating. Teachers strive to provide high quality teaching which is engaging, interactive and built on prior learning. Lessons are brought to life with hands on maths equipment, with ICT and a cross curricula approach, where suitable. Mathematics is made relevant and motivational by placing it within real life contexts. This equips children with the necessary skills for later life, as well as the reasoning and thinking skills associated with solving numeracy problems. Teachers and support staff are actively engaged in helping children to acquire and develop mathematical language, skills, knowledge and understanding across the Maths curriculum. Children are encouraged to make an active contribution towards their own learning by developing the skills of independence, enquiry and reasoned problem solving.

Curriculum Structure

Maths is a core subject with discrete skills and capabilities to be developed. Skills are also transferrable across the curriculum and this is recognised in the planning, teaching and assessment of Numeracy. In EYFS, teaching and progression in Numeracy is within the area of Number and Shape, Space and Measure. This is planned, delivered and assessed according to the Early Learning Goals.

In Key Stage One the principle focus is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations. Practical resources should be used before moving onto the abstract concepts. At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort shapes and use related vocabulary. Teaching should feature a range of measures to describe and compare different quantities such as lengths, mass, capacity, time and money.

Key Stage 1 Areas

Year 1

Number

- *Numbers and place value*
- *Addition and subtraction*
- *Multiplication and division*

Measurement

Geometry

- Property of shape
- Position and direction

Year 2

❖ **Number**

- *Numbers and place value*
- *Addition and subtraction*
- *Multiplication and division*
- *fractions*

❖ **Measurement**

❖ **Geometry**

- Property of shape
- Position and direction

❖ **Statistics**

Lower Key Stage 2- Year 3 and 4

The principal focus in lower Key Stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This will underpin and develop efficient written and mental methods.

At this stage, pupils should aim to solve problems and apply their learning. Teaching should ensure that mathematical vocabulary is explicitly taught and that children have chance to use this to explain their reasoning. Teachers ensure that children use equipment, such as measuring equipment and make connections between measure and number. During Year 3 and 4, multiplication tables are given great importance and are then used in a variety of concepts.

Year 3

❖ **Number**

- *Number and Place Value*
- *Addition and subtraction*
- *Multiplication and division*
- *Fractions*

❖ **Measurement**

❖ **Geometry**

- Properties of shapes

❖ **Statistics**

Year 4

❖ **Number**

- *Number and Place Value*
- *Addition and subtraction*
- *Multiplication and division*
- *Fractions including decimals*

❖ **Measurement**

- Properties of shapes

❖ **Geometry**

- *Properties of shapes*
- *Position and direction*

❖ **Statistics**

Year 5 and 6

The principal focus in Year 5-6 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that children make between multiplication and division with fractions, decimals and percentages. At this stage, pupils should develop the ability to solve a wider range of problems, including increasingly complex problems of shape and arithmetic. Such problems will demand an efficient grasp of written and mental methods of calculation. With this base in number, children are to be introduced to the language of algebra as a means of solving a variety of problems. Teaching in geometry and measures should consolidate, extend and compliment knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe such shapes.

Year 5

❖ **Number**

- *Number and Place Value*
- *Addition and subtraction*
- *Multiplication and division*
- *Fractions including decimals and percentages*

❖ **Measurement**

- Properties of shapes

❖ **Geometry**

- *Properties of shapes*
- *Position and direction*

❖ **Statistics**

Year 6

❖ **Number**

- *Addition, subtraction, multiplication and division*
- *Fractions including decimals and percentages*
- *Ratio and Proportion*
- *Algebra*

❖ **Measurement**

❖ **Geometry**

- *Properties of shapes*
- *Position and direction*

❖ **Statistics**

Organisation and Timings

Across school, teachers deliver a daily Mathematics lesson that often lasts sixty minutes. Work is differentiated according to the needs of individuals and groups. The curriculum caters for those with Special Educational Needs, to the more able pupils. Teachers, as of September 2014, are now all following the new National Curriculum for Mathematics with its new approach and areas, as outlined above.

Approaches to Teaching and Learning

When delivering lessons, teachers employ a range of strategies and use professional judgement to decide on the most appropriate teaching and learning style for the class, groups or individuals. All teachers will engage in a daily counting sessions that aims to improve number skills. For example, this could be counting to ten in Reception Class, to counting in decimals in Year 6.

Teaching strategies may include:

- Whole class quality first teaching
- Paired or group work
- Individual enquiry
- Guided work with a teacher or Teaching Assistant
- Focused support work with a teacher or teaching assistant
- Practical work with apparatus to reinforce Number concepts.
- Clear demonstrations, modelling and explanations of how the Mathematics taught relates to everyday life
- Plenary sessions that address misconceptions, consolidate learning and move learning forward.

Inclusion

All children have equality of access to Mathematics provision, regardless of gender or ethnicity. Children all engage with and are taught by a qualified teacher that provides quality first teaching. Children are taught in year groups and in each lesson Mathematics is related to a common theme and is differentiated appropriately with reference to children's prior attainment. Children who have Special Educational Needs in Maths may receive additional support from a teacher or teaching assistant. All pupils will have an opportunity for guided group work with the teacher at different stages in the teaching cycle. Intervention and support groups are to be used as appropriate.

Resources

Each class is equipped with a range of maths resources and apparatus that is relevant to that particular year group. These are stored in accessible and clearly labelled drawers.

Home Learning

Home learning is much valued and encouraged as parents are seen as school learning partners. The learning platform (DB Primary) is utilised to consolidate, support and extend children's mathematical development. My Maths is also used to differentiate homework and make learning anytime, anywhere focused. Written homework is also valued and gives children chance to extend, consolidate and expand their learning. Teachers also teach children Key Instant Recall Facts (KIRFs) and expect these to be studied at home. Homework gives time to reinforce learning that has been taught in school by teachers.

Assessment

Assessment of children's progress in Numeracy is carried out in a variety of ways.

1. Prompt marking and feedback is given to children in accordance with the school marking policy.
2. Teachers uses assessment for learning to influence future planning and provision. This includes annotating planning and altering future teaching methods/approaches.
3. Planned formal assessments provide summative evidence at the end of each term and school year.
4. Teacher assessment is used to assess pupil progress. This can provide a more realistic and rounded view of a child's progress rather than a simple snapshot in a test. Teachers highlight against Year Group criteria using sampled assessment sheets. These are highlighted on a half termly basis.
5. Data is recorded in Target Tracker to allow Senior Leaders to analyse and track performance of individuals, groups and classes.

Parents are formally informed of their child's progress against national expectations three times a year. In Autumn and Spring term, parents attend a formal Parents' Evening with class teachers. In the summer, parents receive a written school report. Parents with queries are welcomed at any time during the school year.

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