

GREWELTHORPE & FOUNTAINS FEDERATION MATHEMATICS POLICY

VISION

To provide a rich a varied learning community where all children reach their potential.

RATIONALE

We aim to give Mathematics a high priority and it is given appropriate time allocation. We teach to the National Primary Curriculum. There is a daily period of dedicated numeracy teaching for all pupils. There are many opportunities for relevant numeracy teaching and learning and cross-curricular opportunities are exploited.

Mathematics is a powerful means of communication. It is used to provide the means by which we can convey thoughts and ideas. Information and concepts can be presented by the use of numbers, letters, drawings, charts and diagrams.

By using examples and applying logic, generalised principles can be deduced. This requires the need to check and make hypotheses. Mathematics can, therefore, be a useful tool to communicate information required in other subjects, in every day life and the world of work.

Mathematics has a fascination of its own for some people. The discovery of the infinite range of mathematically generated ideas gives pleasure to many children and adults.

Appreciating mathematical principles expressed in art, literature, music and the way things work adds another dimension to interpreting the world in which we live.

AIMS IN MATHEMATICS

We aim to provide a rich and stimulating learning environment where children's mathematical skills are developed and applied within real life contexts and across the curriculum.

- A positive attitude towards mathematics and an awareness of the fascination of mathematics;
- 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;
- To develop children's skills in mental calculation by ensuring they have a repertoire of strategies to draw upon
- 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.
- Have a suitable technical vocabulary to articulate their responses.

STATUTORY REQUIREMENTS & PROGRESSION

In the Foundation Stage children's learning opportunities are guided by the Early Years Foundation Stage. Two key areas are used to facilitate, observe and assess learning;

- *Numbers*
- *Shape, space and measures*

At Key Stage One (Years 1 and 2), children build on the EYFS goals and develop their knowledge and understanding of mathematics through practical activity, exploration and discussion. They learn to count, read, write and order numbers to 100 and beyond. They develop a range of mental calculation skills and use these confidently in different settings. They learn about shape and space through practical activity which builds on their understanding of their immediate environment. They begin to grasp mathematical language, using to talk about their methods and explain their reasoning when solving problems.

At Key Stage Two (Years 3-6), children use the number system more confidently. They move from *counting* reliably to *calculating* fluently with all four number operations. They try to tackle a problem with mental methods before using any other approach. Pupils explore features of shape and space and develop their measuring skills in a range of contexts. They discuss and present their methods and reasoning using a wider range of mathematical language and charts.

POLICY INTO PRACTICE

There are five allocated mathematics hours per week in each class, which are identified on the timetable. Additional time is allocated by way of cross-curricular links.

Teaching Approaches

Our teaching is designed to be discursive, interactive, well-paced, confident, ambitious, supportive & inclusive. This is evidenced through:

- Scaffolded and appropriately differentiated activities that enable pupils to experience success in their learning and give them the confidence to progress independently.
- Learning walls that act as prompts giving key strategies, concepts and vocabulary.
- The encouragement of collaborative learning through work in pairs, small and large groups.
- Adults in class supporting individuals and groups of children both on a needs basis and on a rotational basis.

- The promotion of independent learning through differentiated, and where appropriate, open-ended tasks that include skills practice and the application of such skills in a range of problem-solving contexts.

CROSS-CURRICULAR LINKS

Mathematics is cross-curricular in nature. Mathematics contributes to many subjects within the primary curriculum and opportunities will be sought to draw mathematical experience out of a wide range of activities. This will allow children increasingly to use and apply mathematics in real contexts.

KEY SKILLS

In addition, key skills underpin the teaching of mathematics and are both developed within integral and discrete learning and teaching opportunities:

- Communication
- Application of Number
- Information and Communication Technology.
- Working with Others
- Improving own Learning and Performance
- Problem Solving

PLANNING

We plan for progression and continuity in Mathematics by:

- Following the Revised Primary Framework for Mathematics which outlines the concepts, competencies and knowledge to be developed in each year group.
- Producing weekly mathematics plans (following the agreed format of the school) which detail progression across each week. These identify the learning intentions and differentiated outcomes as a result of group/independent activities together with success criteria, and key questions that promote higher order thinking and assist in the formative assessment process.
- Ensuring we plan for mastery maths.
- Monitoring of plans takes place by the subject leader.

ASSESSMENT AND TARGET SETTING

Assessment is an integral part of the planning, learning and evaluation cycle. We gather evidence for assessment through planned opportunities for observation, pupil consultation, specific assessment for learning strategies, including focussed questioning. This evidence helps to inform the teacher at what level the individual child is working at and is annotated in planning throughout the year where appropriate and recorded in the children's target books. Both formative and summative assessments inform planning and target setting for individuals and groups

ASSESSMENT FOR LEARNING

Assessment for learning, leading to personalised learning, is embedded in the teaching and learning of Maths. Planning involves learners taking into account previous knowledge, skills and understanding. Learning is facilitated in a variety of ways that takes into account learning preferences.

Learning intentions are shared in each lesson, together with reference to learning to learn skills where appropriate. Product success criteria is given or generated within lessons as an aide memoir for learners as a tool to facilitate pupil/peer and teacher evaluation and feedback.

Teachers use higher order question skills (such as Bloom's Taxonomy) to enhance thinking skills.

Children have regular opportunity to reflect on their learning during and at the end of lessons both to celebrate achievement and consider their next steps and targets for improvement.

INCLUSION

We aim to provide a culture that reflects our distinctive Christian ethos; a culture that ensures an ethos and environment which is a safe, welcoming place. Christian values are practised that centre on the uniqueness of individuals, their worth, potential and the need for inclusion in an accepting cohesive Christian community. Contexts for learning seek to represent the breadth and diversity of the world we live in. Learning and teaching approaches recognise and make provision for a range of learning styles.

Within the daily mathematics lesson teachers aim to provide activities to support children who find mathematics difficult. Children with SEN are taught within the daily mathematics lesson and are encouraged to take part when and where possible. Additional guided groups are used to give children additional support as required outside maths lessons.

We aim to provide for all children so that they achieve as highly as they can in Maths according to their individual abilities. We will identify which pupils or groups of pupils are under-achieving and take steps to improve their attainment. Gifted children will be identified and suitable learning challenges provided.

EQUAL OPPORTUNITIES

All children are provided with equal access to the Maths curriculum. We aim to provide suitable learning opportunities regardless of gender, ethnicity or home background. Materials used reflect the rich diversity of the world, its people and cultures.

MARKING

Our marking is analytical and informative to teacher, pupil and parent and aims to celebrate success whilst taking the child forward in terms of their learning. Marking is

a central tool of assessment. Self marking and reflection is strongly encouraged and provide a useful assessment tool.

ROLE OF SUBJECT LEADERS

The Subject Leaders for Maths are Jacqui Palmer at Grewelthorpe and Georgina Wray at Fountains. The Subject Leaders provide expertise in developing staff through INSET and research.

The Subject Leaders should be responsible for improving the standards of teaching and learning in Mathematics through:

Monitoring and evaluating Mathematics:-

- pupil progress
- provision of Mathematics (including Intervention and Support programmes)
- the quality of the Learning Environment;
- the deployment and provision of support staff
- Taking the lead in policy development
- Auditing and supporting colleagues in their CPD
- Purchasing and organising resources
- Keeping up to date with recent developments in Mathematics with particular knowledge of the new curriculum.

STAFF DEVELOPMENT AND TRAINING

Staff development and training is provided in the following ways:

- Needs audit and planning for professional development.
- Federation based INSET led by Subject Leaders or outside agencies. (Delivery of distance training materials is included in this.)
- Liaison with inspectorate and advisory service.
- Working alongside other teachers or visiting other classrooms as an observer. (e.g. Sharing good practice. Supporting NQTs.)

PARENTAL INVOLVEMENT

Parents are encouraged to help children complete their 'learn by heart' work each week and to find opportunities in daily life to use maths skills (e.g. shopping)

Parent/teacher consultations inform and update parents and the end of year report is sent to parents in the summer term. Open evenings are held from time to time to provide parents with information on curriculum developments, school initiatives and to provide a general forum of interest.

Grewelthorpe & Fountains CE Primary Schools Federation

Policy:	Maths Policy
Signed Chair of Governors:	
Date Signed:	
Governors Meeting Ratified:	12th June 2018
Review Date:	Summer 2019
Review schedule	Annually