

BROOKFIELD SPECIAL SCHOOL

‘Caring, Sharing and Learning Together’



Mathematics and Numeracy Policy

POLICY

Introduction

The purpose of teaching Mathematics at Brookfield is to provide the pupils with a mathematical experience which is varied, enjoyable and interesting. It is appropriately balanced to the individual pupil's needs and abilities. The mathematical programme includes opportunities for the pupil to acquire mathematical skills and associated language. The pupil is encouraged to: think widely; participate in practical activities; explore and investigate mathematical concepts; work independently and co-operatively; use their mathematical knowledge appropriately.

Aims

- 1.1. To provide an environment in which pupils can enjoy mathematics.
- 1.2. To develop a positive attitude to mathematics as an interesting and attractive subject leading to personal achievement by the pupil.
- 1.3. To develop knowledge, skills and understanding of mathematical concepts and relationships.
- 1.4. To encourage the pupil to think logically at a level appropriate to their ability.
- 1.5. To develop and understanding mathematical language.
- 1.6. To consolidate for each pupil mathematical processes and abstract concepts through application, practice and perseverance.

- 1.7. To develop an appreciation of number pattern, place value and spatial relationships.
- 1.8. To promote the use of mental calculations, awareness of strategies and quick recall of facts.
- 1.9. To develop an awareness of practical application of mathematics to life outside the classroom, instilling in the pupil that mathematics can be valuable and practical for solving problems experienced in everyday life.
- 1.10. To develop within the pupil an understanding of all mathematical areas necessary of everyday living.

The objective of these aims is to develop the pupils within their ability level to a point where they are knowledgeable, confident and able to talk about the subject readily, using mathematical language.

2. Mathematics and Other Curriculum Areas

The potential for Maths to be linked to the whole school curriculum is considerable. The teaching staff at Brookfield will develop areas in which mathematical possibilities exist. This may be presented through cross-curricular work, direct subject lessons or extra-curricular activities. The overall aim is to develop an awareness of the relevance of mathematics to everyday situations. Mathematics and Numeracy will also form a major part of Structured Play and Activity Based Learning.

Opportunities for co-operative and collaborative work within Maths activities promote individual respect and worth and encourage tolerance for others. Our annual Maths Week supports this alongside focusing on and developing Numeracy.

All pupils are given opportunities to develop a range of skills necessary for them to be at ease with uICT and competent in its use in relation to Mathematics and Numeracy. IWB, iPads, apps, control technology and Apple TV are also incorporated in teaching.

3. Calculators

Calculators are used appropriately to meet the individual needs of the pupil and to enhance learning of basic maths skills. Pupils in KS2 will have opportunity to experience and use these as appropriate.

4. Visual and Interactive Programmes or Games

Relevant programmes and games are accessed via Google, YouTube, apps and computer programmes etc. and used to reinforce maths skills. These can be accessed through computers, iPads and the Interactive Whiteboard. They may be used to support both teaching and learning.

Practical games and activities will also be used to develop numerical skills and language and to consolidate learning, practical thinking and transfer of skills.

5. Area of Learning

- 5.1. Requirements for using Mathematics and Knowledge and Understanding of Number, Measures, Shape and Space and Handling Data form the basis of Mathematics and Numeracy taught at Brookfield. Requirements for Using Mathematics is incorporated in all areas. Handling Data is taught as appropriate but mainly through the other discrete areas.
- 5.2. Each area is written in levels, which provide progression and continuity for the individual pupil. Emphasis is placed on the importance of experiencing open-ended activities to enhance understanding of mathematical concepts. When lack of conceptual development hinders progress, rote learning may be used in conjunction with practical activities in the teaching of maths skills.

6. Mental Maths

Mental calculations are taught and reinforced to the pupil's individual level. Mental calculations are presented in a varied and imaginative way and children should be encouraged to apply maths skills to familiar experiences without the aid of concrete materials or written form.

7. Classroom Organisation

- 7.1. Planning and organisation of maths in each class is based upon a balanced approach to all areas. Number and mental maths usually form approx. three fifths of the allocated time and other areas such as measures, shape and space and handling data together form approx. two fifths. It is up to the teacher's discretion how this balance is reached.

Planning is completed through six weekly plans and structured play notes (see Teaching and Learning Policy). All teaching staff will deliver experiences catering for individual, partner, group and class teaching as appropriate.

Most Numeracy lessons are based on a 'taskboard' where individual needs can be taught most effectively and pupils are offered teaching, consolidation and independent experiences and activities. Mathematical teaching at Brookfield should be as practical and hands on as possible to support learning and may not always be taught within the classroom setting.

- 7.2. Teaching of Maths throughout the school includes:

- demonstration and explanation by the teacher
- whole class/small group/one-to-one teaching
- practical activities
- consolidation and practice of skills and processes
- investigative work
- evaluation of what has been learnt (AfL)

- 7.3. Details of planning and organisation are indicated in schemes and half term teaching notes. The schemes used are 'Ready, Set, Go' and SEELB Progression. Heinemann Maths and Rapid Maths may also be utilised. The Brookfield Maths Scheme is contained in the 'white' file and 'yellow boxes' contained in each teacher's room. A Q Skills teaching resource has been compiled in the aim to offer some ideas of the different areas of early mathematical development, the way mathematical skills may progress, relevant objectives to support progress and a small range of possible teaching activities to promote the development of these skills which can be used as starting point. Numicon is an adopted teaching aid for all pupils and is available in each room.

- 7.4 Numeracy core boards have been created alongside Speech and Language to help aid the understanding of mathematical language and ensure consistency throughout all Key Stages. Each teacher will use their own professional judgement on how the boards are used with each pupil due to their needs.

8. Differentiation

Differentiation is key in teaching maths to the children at Brookfield. Individual needs as indicated on each pupil's statement are addressed. Differentiated taskboards are used to organise the practical teaching needs of the whole class Progression, continuity and development suitable to the child's ability are expected. Usually 3-5 groups can be catered for effectively in this way. Differentiation is clearly noted in teacher's planning notes.

9. Resources

Brookfield resources are bought centrally and added to as necessary. All classrooms have appropriate resources to deliver the Numeracy Scheme. Each class is also equipped with Numicon and Numicon

teaching files to support learning. Additional resources are stored centrally and shared equally. The Numeracy Coordinator manages these resources and will sign them in and out.

Numicon

To support the teaching of number Brookfield uses Numicon. This allows for a kinaesthetic approach to teaching. Each class has been allocated an appropriate range of resources to support this.

Numeracy core boards have been created alongside speech to help aid the understanding of mathematical language and help ensure throughout each Key Stage. Each teacher will use their own professional judgement on how these are used with their pupils due to their needs.

10. Homework

Maths homework set is relevant to work already completed in school and may simply be the learning or experiencing of number facts. Other homework which is relevant to a topic, group or child may be set to support learning and starts when it is appropriate for the individual child.

11. Assessment

- 11.1. The principal measurement of pupil progress is teacher observation and assessment. Evaluations of teaching and the reaching of success criteria is recorded on teaching notes as appropriate. Published assessment tools are used in September, January and May of each year for the majority of pupils. Additional assessment may be completed if deemed necessary. All data is scrutinised by the teacher, SENCo, Coordinator and Principal. Board of Governors also review assessment data regularly. 'Ready, Set, Go' significant goals, MaLT and Q-Skills are used as appropriate.

- 11.2. A central resource of assessment materials is available for use throughout the school. CCEA tasks will be used as part of end of Key Stage Assessment.

12. Records and Reporting.

- 12.1. Records of progress will be maintained on IEPs, using the following agreed key:
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| I | indicates that the target has recently been introduced |
| C | indicates that the target needs to be continued |
| A | indicates that the target has been achieved |
- 12.2. The IEP is maintained the class teacher. IEP's are monitored regularly by the Principal.
- 12.4. Ongoing assessment evidence is retained by the classroom teacher/ SENCo in individual assessment files and on SIMS. Information is readily available.
- 12.5. As part of the statementing procedure a formal Annual Review is conducted each year in the final term. Mathematical levels and progress are discussed. A written yearly school report is sent to the parent(s) in late June.
- 12.6. The yearly formal procedure for reporting to parent(s) is:
- Parent interviews 1-1 September
 - Transfer interviews 1-1 January
 - Parent interviews/ Annual Review 1-1 March/April
 - Written Annual Report - June
- 12.7. An 'Open Door' policy operates with parents, encouraging them to participate fully in the education process - by arranged interview, letter, telephone. Teachers are encouraged to have and initiate contact with parents as they consider necessary.