



Barcroft Primary School Mathematics Policy

INTRODUCTION

It is our aim at Barcroft Primary school to provide children with the processes and knowledge to become competent Mathematicians and skilful and creative problem solvers. At Barcroft Primary School we believe that Mathematics should be linked to the Real World where possible, as Mathematics is a tool for everyday life. As a result, it is vital for pupils to understand the importance of Maths within the Real World and identify this within their lessons. Mathematics is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems.

It is our aim to develop:

- A positive, resilient 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.
- Initiative and an ability to work both independently and in cooperation with others.
- An ability to use and apply mathematics across the curriculum and in real life situations.
- An understanding of mathematics through a process of enquiry and experiment.

TEACHING AND LEARNING

Through careful planning and preparation, as well as clear policies and regular professional development from a range of sources, we aim to ensure that throughout the school children are given opportunities to:

- Become skilful and creative problem solvers.
- Reason effectively.
- Use visual images to aid their Mathematical Understanding.
- Participate in practical activities and Mathematical games, within the classroom and outdoors.
- Be taught Mathematical skills into real life contexts and through cross curricular and creative topics.
- Work with computers as a Mathematical tool.
- Participate in a range of challenges relating to the Mastery Approach of Mathematics.

Our staff at Barcroft Primary School, consistently have high expectations of all children, irrespective of ability, and encourage them to be successful and achieve their full potential. We use the main principle of the concrete-pictorial-abstract (CPA) approach [Make it, Draw it, Write it] which allows children to have a true understanding of a mathematical concept.

CROSS-CURRICULAR MATHEMATICS

Our carefully designed creative curriculum is based on the Barcroft child's needs and interests and each creative curriculum includes a wide range of Mathematics Skills and Objectives. Staff work hard to ensure that Mathematical links are taught and are evident within the Creative Curriculum. This provides the pupils with a valuable opportunity to incorporate Mathematical Links outside the Maths lesson, consequently promoting their understanding of Mathematics being a tool for everyday life.

TEACHERS' PLANNING

The approach to the teaching of mathematics within the school is based on:

- **A mathematics lesson every day**
- **A clear focus on direct, instructional teaching and interactive oral work with both the whole class and smaller ability groups.**

At Barcroft Primary School, Mathematics is taught following the suggested timetabling from White Rose but we do not solely use this as a scheme of work. Lessons are planned using the National Curriculum 2014 strands and objectives. An agreed Calculation policy is used throughout the school to ensure the continuing, and gradual, development of number skills (see appendix 1).

Each class teacher organises a daily lesson for Mathematics of an age appropriate length and planning begins from thorough understanding of children's needs, gained through effective assessment and tracking. Planning is linked with high expectations and ambition for all children to achieve and also allowing each child to attempt a challenge through Mastery.

Within short term planning, a clear Learning Objective and success criteria is evident as well as Mathematical language and questioning which will be used within each Lesson. This promotes and provides our pupils with the opportunity to develop their Oracy and Mathematical Language skills. We also encourage a C.P.A (Concrete, Pictorial, Abstract) Approach to Mathematics which allows the children to use concrete objects, pictorial representations and abstract within their work. Teachers also ensure that Arithmetic skills are taught once a week and Problem Solving skills are taught once a week, allowing our children to become independent and creative learners.

From January 2019 Planning will be in the form of powerpoints. Powerpoints will have the following non negotiables:

- Squared background
- Clear L.O and Success Criteria
- Warm up slides to encourage fluency
- Questions for fluency to assess existing knowledge before the main teaching begins
- Main Teaching slides to show the teaching
- Differentiated activities slides
- Mastery slide

DIFFERENTIATION

At Barcroft Primary School, we understand that all children learn in different ways. Therefore, we ensure that differentiation is incorporated into all mathematics lessons and can be completed in various ways:

- Common Tasks which are open ended activities/investigations where differentiation is by outcome.
- Resourcing which provides a variety of resources depending on abilities eg. counters, cubes, 100 squares, number lines, mirrors.
- Grouping according to ability so that the groups can be given different tasks when appropriate. Activities are based on the same theme and usually at no more than three levels.
- When additional support staff are available to support groups or individual children they may withdraw small groups to use intervention materials or to challenge the more able pupils.

SPECIAL EDUCATIONAL NEEDS

It is vital to take into account the teaching and learning of all children, specifically children with SEN. These children are taught within the daily mathematics lesson, however we ensure additional support is provided to ensure these children progress and achieve to their full potential (please see the section on differentiation).

Within the daily Mathematics lesson, all teachers provide a range of activities to support children who not only need additional support in Mathematics, but also activities that provide appropriate challenges for children who are high achievers in Mathematics.

EQUAL OPPORTUNITIES

We ensure that all children are provided with equal access and opportunities to the Mathematics curriculum, irrespective of particular circumstances such as race, background, gender and capability. In the daily mathematics lesson we support children in a variety of ways. This includes:

- Repeating Instructions
- Using our Oracy skills and speaking clearly.
- Emphasising Key words and ensuring these are on display.
- Using a range of practical and picture cues.
- Encouraging children to join in with counting, chanting, games and rhymes relating to Mathematics.

PUPILS' RECORDS OF THEIR WORK

At Barcroft Primary School, we understand the importance of recording aspects of mathematical investigations. Children are taught a variety of methods for recording their work and they are encouraged and helped to use the most appropriate and convenient method of recording. We encourage a C.P.A (Concrete, Pictorial, Abstract) Approach to Mathematics which allows the children to use concrete objects, pictorial representations and abstract within their work.

Exercise Books for Recording

It is school policy that the following pattern is used:

- EYFS: A learning journal is used for recording all work
- KS1: 2cm squared books
- KS2: 1 cm squared books.

The children at Barcroft Primary School take pride in their work and are encouraged to work neatly when recording their work. When using squares, one square is used for each digit.

MARKING

The quality of marking is crucial to ensure progress for each child within Mathematics. A simple 'X' is of little assistance to a child unless accompanied by an indication of where the error occurred, together with an explanation of what went wrong, through next steps and questioning that results in a child led understanding of any misconceptions in the work.

Marking should be both diagnostic and summative. The school marking policy sets out the standard of marking expected of all staff. When appropriate the children themselves can mark exercises which involve routine practice with support and guidance from the teacher.

ASSESSMENT AND RECORD KEEPING

Assessment for learning should occur throughout the entire Mathematics lessons as this enables staff to adapt their teaching and input to meet the children's needs. This feedback should then be incisive and

regular to promote progression. Children should also regularly use self and peer assessment to assess against the learning objective and success criteria. The children's targets are evident in the back of the Maths Book and therefore these are regularly marked off using teacher judgement and evidence from the children's work. Assessment opportunities also provide children with an opportunity to learn from their misconceptions and develop depth of understanding through the use of Mastery activities.

Formal Assessment

Teachers use White Rose Assessments to assess the pupils and use the evidence from this, alongside their teacher judgement to monitor progress. Half Termly assessments take place in each class and as a result, these formal assessments are recorded on individual pupil trackers and class profiles.

REPORTING TO PARENTS

Parents at Barcroft Primary School are provided with an opportunity to discuss their child's progress at parents evening and also at Maths Parent Workshops, however we also promote our 'open door' policy which enables parents to address concerns throughout the year. Parents are also provided with a report which is completed before the end of the summer term. Barcroft Primary School also regularly update their website and therefore parents are kept up to date regarding Maths with useful links to website to support their child.

MONITORING AND EVALUATION

The Senior Leadership Team and Mathematics Leader meet to monitor and evaluate the quality and standards of Mathematics throughout the school. This includes analysing Maths book and also completed Mathematics Learning Walks across the School. Opportunities for teachers to review the scheme, policy and published materials are given on a regular basis during staff meetings. Governors are welcome in to school to observe Mathematics lessons and Governors also meet with Mathematics Leader regularly to be informed of updates.

PRACTICAL RESOURCES

Each class at Barcroft Primary School has a range of high quality Mathematics resources which are displayed and easily accessible by the pupils at all times. These resources have been carefully selected to enhance the Teaching and Learning of Mathematics throughout the School. Displays around the School and within the classroom promote Mathematical language and vocabulary which is relevant to each lesson. High Quality examples of children's maths work should also be displayed to encourage a positive attitude and enthusiasm towards Mathematics. Each classroom also includes a 'Maths Career Focused Display', illustrating to the children that Maths is an essential everyday skill which is used in a range of different careers.

HOMEWORK

It is our school policy to provide parents and carers with opportunities to work with their children at home. A vital skill which allows parents to be present in supporting their children with their education. Maths homework should be differentiated and provided to children by ensuring it suits their needs. A homework book will be used for homework tasks set, however this will vary between maths, English and topic. Mathematics homework should link with the Mathematics Topic taught in the classroom.

ROLE OF THE CO-ORDINATOR

- To take the lead in policy development
- To support colleagues.
- To monitor progress in Mathematics – eg leading staff CPD, scrutiny of work, analysis of formal assessment data.
- To take responsibility for the choice, purchase and organisation of central resources for Mathematics, in consultation with colleagues.

- To liaise with other members of staff to form a coherent and progressive scheme of work which ensures both experience of, and capability in, Mathematics.
- To be familiar with current thinking concerning the teaching of Mathematics, and to disseminate information to colleagues.
- The co-ordinator will be responsible to the Headteacher and will liaise with the named link Governors.

Policy agreed:

Policy review: