



# Ball Green Primary School

## Mathematics Policy

### Philosophy

The new National Curriculum states that:

“Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history’s most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.”

At Ball Green Primary we see Maths very much as a multi-discipline, cross curricular, interconnected subject which should encourage creativity. As much revolves around the discussion about Maths between talk partners as it does the completion of calculations. We want the children to see Mathematics as being relevant to their world and applicable to everyday life as well as being something that they will need as they move on through their school life and ultimately to the world of employment. To that end, a high-quality, inter-related and creative Maths experience should be one that develops the children’s ability to think mathematically and one which allows them to apply the tools to which they have been exposed in a variety of ways.

Following the introduction of the new National Curriculum in 2014 the emphasis has been to ensure that all children:

- Become **FLUENT**
- **REASON** and **EXPLAIN** mathematically
- Can **SOLVE PROBLEMS**

This means that children need to be regularly exposed to opportunities involving increasingly complex problem solving which allows them to apply their Maths knowledge. In doing so they should be encouraged to develop an argument and line of enquiry which they can prove and justify using mathematical vocabulary. This includes the ability to break down problems, both routine and non-routine, into a series of steps.

**Every child. Every chance. Every day.**

*Article 28: Every child has the right to an education.*

*Article 29: Ball Green Primary School has a responsibility to develop every child’s personality, talents and abilities to the full.*



# Ball Green Primary School

## Mathematics Policy

### Aims and Objectives

We want to teach Maths in a way that:

- Delivers Maths in line with new National Curriculum guidelines
- Ensures the delivery of Maths is filled with cross curricular opportunities
- Creates a lively, exciting and stimulating environment in which the children can learn Maths
- Promotes the concept that acquiring Maths knowledge and skills provides the foundation for understanding the world around the children
- Develops mental strategies
- Encourages children to use mathematical vocabulary to reason and explain
- Challenges children to stretch themselves and take risks in their learning
- Ensures children in Key Stage 1 are secure in their understanding of number and number relationships
- Ensures that all children regardless of race, gender, class, culture or disability have equal opportunities to develop their full potential in all areas of the mathematics curriculum
- Provides children with the opportunity to develop their investigative, inquisitive and practical skills through the use of designated interactive mathematics displays in each classroom
- Provides opportunities for children to develop the practical skills and understanding of concepts, facts and operations as outlined in the 2014 National Curriculum
- Develops children's mental arithmetic skills and flexible mental methods
- Encourages children to work independently and collaboratively and to be able to select appropriate equipment and methods for the task set
- Develops the creativity and flexibility of mind to investigate and problem solve through trial and improvement methods, reasoning, making and testing hypotheses and proving and disproving
- Develops personal qualities of commitment and persistence '(I CAN DO IT' attitude) in tackling problems
- Encourages the use of mathematical language in order to discuss, explain and express ideas and to interpret results through a variety of practical and investigative activities
- To help all children to experience pleasure, success and enjoyment in mathematical experiences in order to develop a confident and positive attitude towards Math

**Every child. Every chance. Every day.**

*Article 28: Every child has the right to an education.*

*Article 29: Ball Green Primary School has a responsibility to develop every child's personality, talents and abilities to the full.*



# Ball Green Primary School

## Mathematics Policy

### Guidelines:

Maths taught in our school is in accordance with the objectives set in the National Curriculum 2014 for KS1 and KS2 and the requirements of the Early Years Foundation Stage Guidance 2012.

Maths is taught as a discrete subject and opportunities for application are maximized through a topic approach to learning.

Lessons in KS1 and KS2 are structured following the planning tool on Active Learn Primary website (Pearson) and teachers' professional judgement.

### Foundation Stage

Nursery – children are taught skills as a whole class and within groups, opportunity to embed and apply is done through a continuous provision of activities. Activities are delivered to meet the objectives of the Early Years Foundation Stage Curriculum 2012. Assessment of children is carried out through a range of methods including observation and specific assessment activities. Assessments are then used to inform each individual child's progress and identify any gaps in learning.

Reception – Maths is taught daily as a whole class and/or in small groups. Opportunities to embed and apply skills are done through group activities and the continuous provision of activities.

### Key Stage One & Two

A wide range of teaching styles plus a wide variety of resources are used in the delivery of the curriculum. Concepts are introduced through practical investigation and activities with an emphasis on 'hands on'. Regular practice is used to reinforce understanding but it is through problem solving and investigational work that children have the opportunity to use and apply this knowledge and demonstrate what they know and understand.

Within the class the children may be grouped in various ways for different activities (ability, mixed ability, peer learning etc). Opportunities are provided for all children to work as a whole class, in small groups and individually for a variety of appropriate activities, differentiated to meet all abilities and needs. Different pupil groupings are used to promote discussion and mathematical language.

**Every child. Every chance. Every day.**

*Article 28: Every child has the right to an education.*

*Article 29: Ball Green Primary School has a responsibility to develop every child's personality, talents and abilities to the full.*



# Ball Green Primary School

## Mathematics Policy

### Inclusion

It is our aim to provide a broad and balanced curriculum for all pupils and to give every pupil the opportunity to experience success and to achieve their potential.

Children with Additional Education Needs in Maths through early identification are monitored by the class teacher who devises a Pupil Passport in liaison with the Inclusion Manager. Parents and outside agencies are involved for guidance and support. Teaching staff provide support, individually and in small groups and specific interventions are delivered when necessary in order for pupils to make accelerated progress. Work is differentiated to enable pupils to move forward at their own pace.

We develop and encourage the talents and skills of more able children. Teachers plan activities for the more able and talented pupils which teach/consolidate the higher order skills in Maths as well as logical reasoning and problem solving. These provide additional challenge in lessons.

### Schemes of work

Ball Green Primary School strives to teach children in a stimulating and creative way in Mathematics. Links to the topic based approach to learning are made where appropriate as is the opportunity to apply and transfer skills.

The school utilises the White Rose Mathematics Mastery 2.0, which provides planning based on the 2014 National Curriculum as well as differentiated resources and assessments.

Calculation Policies for the four operations (addition, subtraction, multiplication and division) have been written and are implemented to aid progression throughout the whole school.

### Homework

Homework is set appropriate to the needs of individual pupils, to consolidate or extend learning that has taken place during school time.

### Assessment

Assertive mentoring formative assessment sheets are used as an integral part of the lesson to set targets, identify gaps in learning and celebrate achievements. These sheets also inform teacher assessment on a half termly basis, providing pupils with a sub stage.

In Foundation Stage assessment is recorded in each child's Assessment Profile.

### Summative Assessment:

At the end of Key Stage 1 and 2 pupils carry out statutory assessments in Maths indicating individual progress.

**Every child. Every chance. Every day.**

*Article 28: Every child has the right to an education.*

*Article 29: Ball Green Primary School has a responsibility to develop every child's personality, talents and abilities to the full.*



# Ball Green Primary School

## Mathematics Policy

### Feedback

A 'Responsive Teaching & Feedback' policy is used to ensure that pupils are given opportunity to consolidate learning, address misconceptions and move onto their next steps in learning.

### Targets

Pupils Individual Targets are set in discussion with the children and are shared with parents. These are discussed and identified with pupils on a regular basis.

### Monitoring

The Maths Lead and Senior Leadership team are responsible for the monitoring of maths and the standards achieved by pupils.

Monitoring takes the form of:

- Lesson observations
- Resource scrutiny
- Book scans
- Data analysis
- Discussion with pupils and class teachers

### Resources

A range of resources are used in the teaching and learning of Maths. These are constantly updated as new materials become available. In the classroom practical apparatus is used to support learning and is accessible to children. Pupils are encouraged to independently select the materials and resources to support their own learning.

**Every child. Every chance. Every day.**

*Article 28: Every child has the right to an education.*

*Article 29: Ball Green Primary School has a responsibility to develop every child's personality, talents and abilities to the full.*