

# Broom Valley Community School



We dare to dream big

**Procedure  
Maths Policy**

**December 2016**

<b>Policy</b>			
<b>Review Frequency</b>		<b>Review Date</b>	
<b>GB Committee Responsible</b>		<b>Staff Responsible</b>	<b>Anna Harper</b>
<b>GB Ratification Date</b>		<b>Website</b>	

Our school is following the Mathematics Mastery approach in years one to six. The first cohort following the Mathematics Mastery programme to complete KS1 assessments will be in 2017-18; and for KS2 in 2019-2020.

#### **What might you typically see in the lessons?**

Through internal CPD, lesson observations and feedback, we aim to increase opportunities for our pupils to:

- Think and reason – Teachers use a range of questioning and assessment strategies to challenge their pupils' understanding. Also, regular problem-solving sessions offer the children opportunities to tackle unfamiliar problems and explain their thinking explicitly;
- Apply skills fluently and efficiently, arriving at accurate answers – Teachers ensure whole-class instruction is clear, direct and explicit, exposing all pupils to the methods, knowledge and skills they need to acquire in order to progress. Plenty of opportunities are given to both practice methods and judge when and where they can be appropriately used;
- Use resources to aid their understanding – This strategy echoes the mastery approach. All pupils are shown why their methods work, building a conceptual understanding by moving through the concrete-pictorial-abstract model of Bruner. This means that pupils all have opportunities to use concrete or pictorial models to support or challenge them.

Our aim is to ensure that all pupils:

- become fluent in the fundamentals of mathematics, through varied and frequent practice with increasingly complex problems over time. Pupils will develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, and a sense of enjoyment and curiosity about the subject. *Curriculum 2014*

## **PURPOSES**

The aims of mathematics are closely related to the general aims of Primary Education.

Children will acquire skills of both language and number and will experience a variety of methods of learning. They will learn to think logically, discover, explore and in doing so, will begin to make sense of the world in which they live. To ensure this, they will acquire a range of mathematical experience, relevant mathematical language and skills to be able to solve mathematical problems with confidence. We strive to develop strategies which allow inclusion by all in Maths lessons. We aim to ensure that each child, no matter the ability or difficulties, will develop:

- a positive attitude to mathematics as an interesting and attractive subject.

- an ability to think clearly and logically in mathematics with confidence, independence of thought and flexibility of mind.
- an awareness of the uses of mathematics in the world beyond the classroom
- an understanding that mathematics will frequently help them to solve problems they meet in everyday life
- an appreciation of the nature of numbers and of space, and therefore an awareness of the basic structure of mathematics
- self-motivation and aspiration to persevere and succeed
- a perception that Maths is fun and enjoyable

These aims will be met by increasing confidence in mathematics through a process of enquiry and experiment. The aims will be evident in the children's ability to express ideas fluently, to talk about the subject with assurance and to use the language of mathematics confidently and in the appropriate context.

### **CROSS-CURRICULAR MATHEMATICS OPPORTUNITIES**

Teachers will seek to take advantage of opportunities to make cross-curricular links. They will plan for pupils to practise and apply the skills, knowledge and understanding acquired through mathematics lessons to other areas of the curriculum. The learning objectives within books show where the cross-curricular links and references are.

### **ASSESSMENT**

Formative Assessment (Assessment for Learning)

- Brief 'pre-learning' tasks are given to the children, where appropriate, thus enabling teachers to provide pre-teaching to close the gap;
- High order questioning is used to identify misconceptions and deepen children's understanding;
- Feedback, written and verbal, gives children a clear indication of how to improve;

- Children may complete exit slips or denote their depth of understanding with a traffic light (self-assessment);
- Children will work collaboratively to identify areas for improvement/address misconceptions (peer assessment).

#### Summative Assessment

- Termly tests in reading and mathematics will be undertaken across school.

Refer to the Closing the Gap: Feedback Policy and Assessment Policy