

We have devised this website page to assist in the understanding of how and what maths is taught at Brockenhurst Primary School.



### **Maths Vision for Brockenhurst CE Primary School**

At Brockenhurst Primary School we empower our children with a 'CAN DO' attitude.

We encourage children to develop their knowledge and understanding of mathematics and aim for all pupils to enjoy and achieve in mathematics and become confident mathematicians.

#### **We aim that all children:**

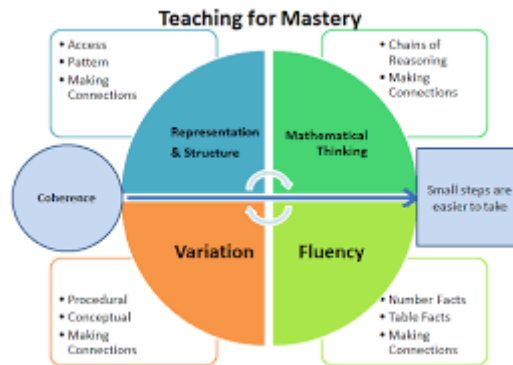
- Become fluent in the fundamentals of mathematics so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- Can solve problems by applying their mathematics to a variety of problems with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios.
- Can reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.

**Our beliefs:** We believe that through quality first teaching and intelligent practice, children learning together and immediate intervention that all children have the potential to 'go deeper' and broaden their understanding of mathematical concepts.



**Our definition of Mastery:** At Brockenhurst Primary School we believe that all pupils are capable of understanding and applying mathematics to achieve a secure and deep understanding of each Mathematical Concept.

Mastery is not just being able to memorise key facts and procedures and to answer test questions accurately and quickly. Mastery involves knowing why as well as knowing that and knowing how. It means being able to use one's knowledge appropriately, flexibly and creatively and to apply it in new and unfamiliar situations.



**Mastery teaching and learning:** In every Mathematics lesson you will see the following:

- ‘Quality first’ teaching; tailored to meet the needs of the learners in each class, (intervention to address gaps in learning where necessary),
- Pupils learning together
- Ping pong teaching to allow children to address errors early on (teacher model, then children undertake task, then task reviewed together as class.)
- Resilient learners with ‘We Can’ attitude to Mathematics, whatever their previous level of attainment,
- Teachers using high-quality questioning to explore children’s understanding and develop it further,
- Teachers making use of misconceptions to further understanding of key concepts,
- Children speaking in full mathematical sentences and explaining their ideas fully.
- Teachers using a variety of representations to explore key Mathematical concepts (concrete/pictorial/abstract) whatever the key stage.
- Development of fluency, reasoning and solving throughout the lesson.
- All Learners being given the opportunity to ‘go deeper’ in mathematical concepts through reasoning and problem solving.



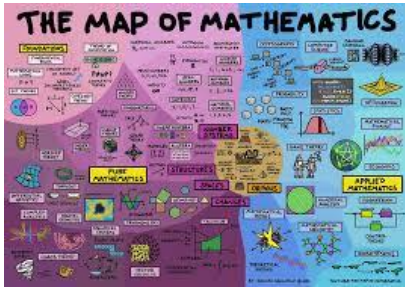
Department  
for Education

### The National Curriculum

The National Curriculum provides for specific mathematical concepts to be taught each year. The link below leads you to the Curriculum. The Curriculum is set out in year groups, being sub divided under the domains of:

- Place value
- Addition and subtraction
- Multiplication and division

- Fractions
- Measurement



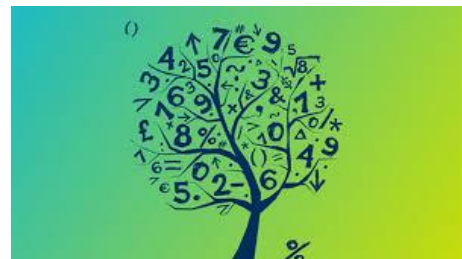
- Geometry – Shape/ Position and direction
- Statistics

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/335158/PRIMARY\\_national\\_curriculum\\_-\\_Mathematics\\_220714.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/335158/PRIMARY_national_curriculum_-_Mathematics_220714.pdf)

### Aims of the National Curriculum

The national curriculum for mathematics aims to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils 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



### Mastery

The Government, over the past few years have invested in the training of schools into this new approach to teaching maths (which is adapted from Shanghai.)

Further details of this approach can be found in the attached document.

<https://www.ncetm.org.uk/files/37086535/The+Essence+of+Maths+Teaching+for+Mastery+june+2016.pdf>

The emphasis on this approach is attainment for all and a focus on methods rather than on answers.

### Teaching progression

The methods that your child will use to calculate will depend on which year group they are in.

Attached are documents explaining the progression in the following areas:

- Addition and subtraction

- Multiplication and division
- Fractions

### **Maths fluency**

In order to assist children in learning essential numeracy skills that they will use throughout their lives we focus on the following numeracy skills at Brockenhurst in addition to National Curriculum

- **KS1**  
Number bonds to 10 and 20
- **KS1 and KS2**  
Times tables

### **Number bonds**

In KS1 children will be sent home with key number sentences (linked to a specific strategy) to learn. The children will then be tested in school on a 1:1 basis when they have mastered this strategy before moving on to the next strategy. Each child will progress at their own pace. The progression and reasoning behind this focus is set out in the attached document.



<https://www.ncetm.org.uk/resources/50006>

### **Times Tables**

Children in Year 4 are to be tested on their times tables knowledge. Government guidance on this is set out in the attached document.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/869846/2020\\_Information\\_for\\_parents\\_multiplication\\_tables\\_check.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/869846/2020_Information_for_parents_multiplication_tables_check.pdf)

Each year group has a responsibility to learn certain tables and attached is a document setting out the progression of this learning.

In order to assist your child at home we ask that you assist your child in learning the tables relevant to their year group. Children in KS2 have access at school and at home to Times Tables Rock Stars which allows them to practice their times tables fluency in a fun way.



<https://trockstars.com>

## Useful websites to support maths at home

### **Mathletics**

Your child have their own log in's and homework will be set weekly by teachers based on the child's learning at school over the previous week. The students can also undertake their own self directed tasks.



<http://community.mathletics.com/signin/#/student>

### **Hit the button**

A website that will assist in the testing of number bonds and multiplication tables



<https://www.topmarks.co.uk/maths-games/hit-the-button>

### **Top marks**

A website where you can search for online games under different domains based on the age of your child.



<https://www.topmarks.co.uk/Search.aspx?Subject=16>

### **Times tables**



<https://trockstars.com/login>

These websites also provides useful links and tips for helping your children to learn their tables

<https://www.mathsisfun.com/tables.html>

<https://www.oxfordowl.co.uk/for-home/advice-for-parents/times-tables-tips>

<https://www.theschoolrun.com/times-tables-the-best-ways-to-learn>

<https://www.topmarks.co.uk/maths-games/7-11-years/times-tables>