

# King George V Primary School



## Maths policy February 2016.

### Aims

- To teach mathematics in line with the New Mathematics Curriculum document 2014.
- To develop a progressive understanding of the mathematical skills and concepts
- To develop the correct use of mathematical vocabulary and language
- To promote the understanding and application of mathematics within real life contexts
- To develop pupils' understanding of mathematics through practical tasks, problem-solving and investigation
- To develop the ability to think independently and to persevere when faced with challenges, showing a confidence of success.
- To promote mathematics as an enjoyable activity, conferring a sense of self-esteem and achievement
- To promote an understanding of mathematics within all aspects of the primary curriculum

### Expectations

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

#### Key stage 1 (years 1 and 2)

By the end of Key stage 1 Pupils should have developed confidence and mental fluency with whole numbers, counting and place value. Pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money. Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.

#### Lower key stage 2 (years 3 and 4)

By the end of lower key stage 2 Pupils should have developed confidence and mental fluency with whole numbers, counting and place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.

Pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties.

By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table.

Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

Upper key stage 2 (years 5 and 6)

Ensure that pupils extend their understanding of the number system and place value to include larger integer. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.

Pupils should develop their ability to solve wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. Pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties.

By the end of year 6, pupils should be fluent in written methods for all 4 operations, including long multiplication and division, and in working with fractions, decimals and percentages.

Pupils should read, spell and pronounce mathematical vocabulary correctly.

**Day to Day quality mathematics teaching and learning should include:**

Planned sessions which engage, excite and enthuse learners.

Opportunities to gain skills in a range of areas of mathematics.

New learning and success criteria being shared with the children at the beginning and reviewed at the end of every lesson.

Differentiated lessons which meet the needs of all pupils within the class.

Opportunities for children to work both collaboratively and independently.

Mathematical vocabulary being embedded into every session.

Opportunities for children to evaluate their own work and that of other pupils through self and peer - assessment.

Assessment for learning based on observations, key questioning and discussion, used to inform lesson planning and used to evaluate attainment at the end of each unit of work.

**Inclusion**

Planning takes into account the interests of all pupils. They self-assess to reflect on their learning. Pupils work individually, in pairs, in groups and as part of teacher-led activities. Support staff work as directed by the teacher. All pupils, including those with special educational needs, undertake the full range of activities. Activities are adapted with extension opportunities for more able learners and support strategies to cater for all abilities in line with the 2014 SEND Code of Practice.

### **Assessment, Recording and reporting**

Teachers arrive at their judgements by using a variety of tools. Assessment for learning leads the way.

Summative assessment is carried out each term using our school Key performance indicators for each year group expectations.

All assessment is submitted to the assessment coordinator using the school's assessment tracker (SIMS). From here, target groups and target individuals for each class will be set and worked with over the next half term to support, consolidate, accelerate and challenge.

The children will be informed of their next steps for learning and supported to make progress towards them. Children are also involved in setting their own next steps to success and are encouraged to review their progress towards these through self, peer and teacher assessment.

### **Staff development**

Teachers are expected to keep up to date with subject knowledge and use current materials that are available in school or online.

Training needs are identified as a result of whole school monitoring and evaluation, performance management and through induction programmes. These will be reflected in the school development plan.

The maths lead will arrange for relevant advice and information, such as feedback from courses and newsletters, to be disseminated.

Where required, the maths lead will deliver or organise school based training.

### **Governing body**

At King George V primary School we have an identified governor for Numeracy. The Head Teacher regularly reports back to the governing body regarding mathematics within school.

### **Review**

This policy will be reviewed July 2016