

## **Maths at St Nicholas Primary School**

At St Nicholas Primary School, the Mathematics curriculum aims to ensure that children develop a deep, long-term, secure and adaptable understanding of Maths. Children will be provided with opportunities to learn mathematical concepts using concrete resources and pictorial representations before moving onto the abstract concept. Our curriculum ensures that children become fluent in their understanding of number facts, whilst enabling them to apply their understanding to real life contexts. Children will be challenged to investigate and spot patterns with numbers, with plenty of opportunities to reason and solve problems.

### **Early Years Foundation Stage (EYFS)**

In the EYFS, children will be introduced to numbers and counting, and will start to use basic mathematical language. They will learn numbers to 10 and begin to recall basic number bonds. An interest in maths and problem solving will be encouraged through maths games and fun activities. The majority of learning will come from exploring and talking about maths in the world around them.

### **Key Stage 1**

In Year 1, children will start to build confidence working with numbers, through developing their counting and calculation skills. They will also gain an understanding of halves and quarters, start to measure and tell the time, and learn about some 2D and 3D shapes. Children will be taught to count forwards and backwards to 100, add and subtract numbers to 20, and be introduced to the idea of multiplying and dividing. They will be encouraged to use objects to help them solve simple problems in a practical way.

In Year 2, children will continue to develop their counting and calculation skills, learning different ways to multiply and divide. They will also extend their understanding of fractions. They will measure length, weight, volume, temperature, time and money, discover more about 2D and 3D shapes, and begin to learn about statistics. They'll count in steps of 2, 3, 5 and 10 and learn number bonds to 20. They'll partition numbers into 10s and 1s to add and subtract one-digit and two-digit numbers. They will be taught the 2, 5 and 10 times tables.

### **Key Stage 2**

In Year 3, children will continue to develop their understanding of numbers and start to calculate using formal written methods. They will learn a lot more about fractions, including tenths. Children will find perimeters of 2D shapes, use the 24-hour clock, recognise angles, and start to use bar charts. They'll count in steps of 4, 8, 50 and 100 and order numbers to 1000. Children will begin to partition numbers into 100s, 10s and 1s, add and subtract three-digit numbers, and multiply two-digit by one-digit numbers. They will be taught the 3, 4, 6 and 8 times tables and begin to add and subtract fractions.

In Year 4, children will develop their mental and written calculation skills using larger positive numbers and fractions. They will meet negative and decimal numbers, as well as some Roman numerals. Children will convert between units of measurement, find perimeters and areas, and learn more about angles and symmetry. They will plot shapes on coordinate grids and start to use time line graphs. Children will count in steps of 7, 9, 25 and 1000, add and subtract four-digit numbers and multiply three-digit by one-digit numbers using a formal written method. They will know all the

times tables up to  $12 \times 12$  and be able to divide by 10 and 100. They'll round numbers to the nearest 10, 100 and 1000.

In Year 5, Children will continue to practise mental and written calculation methods and use all the operations to solve problems. They will meet prime, square and cube numbers, and work with factors and multiples. They will calculate perimeters and areas, draw and measure angles, convert between units of time and learn some imperial measures. They will reflect and translate shapes on coordinate grids and interpret line graphs and timetables. Children will be taught long multiplication and multiply four-digit by two-digit numbers, then short division for dividing four-digit by one-digit numbers. They'll begin to multiply fractions, learn more about decimals and be introduced to percentages. By the end of year 5, children will be able to count in powers of 10 and round numbers up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000.

In Year 6, your child will apply the maths they already know alongside developing new skills to help solve more complex problems. They will work with numbers up to 10 million and begin to learn about algebra and ratio. They will convert measurements, calculate volumes and learn about circles. They will draw and interpret pie charts and find averages. Children will be taught long division for dividing four-digit by two-digit numbers using a formal written method. By the end of year 6, children will be able to use brackets in calculations and explain remainders. They'll learn to multiply and divide with fractions and decimals, and calculate percentages.

## How can I support my child with Maths?

You don't need to be an expert to support your child with maths! Here are some simple but effective ways to help your child develop their mathematical skills:

### Use the language of mathematics

Encourage your child to use mathematical language when talking about calculations, such as *add, altogether, more, plus, total, sum* for addition and *take away, subtract, minus, less, fewer, difference* for subtraction. For example,  $7 - 3 = 4$  can be read as 'the difference between 7 and 3 is 4'.

### Go shopping

Shopping provides great opportunities to practise skills. When buying items, ask your child to round prices to the nearest pound before adding mentally. Challenge your child to check shopping totals using subtraction. Encourage them to estimate, for example: I have £15. We need chicken for £4.50, vegetables costing £4.75, and the bus is £3.50. Will I have enough?

### Explore different methods

When calculating, ask your child to explain each stage of their sum and why they chose that method. They might partition numbers into hundreds, tens, and ones, draw pictures to represent how they have calculated, use number lines, use objects, or try written methods. Encourage them to check with a different strategy.

### Practise times tables

Sing, chant or play games to help your child to memorise times tables. Give points for each fact they know. Use real-life opportunities to practise. For example, when you're in the supermarket ask your child: 'How many packets will we have if we buy 3 multipacks with 6 packets in each?'

### Play guessing games

Imagine a 2D or 3D shape. Can your child guess your shape by asking questions about its properties? Can they draw or make it from modelling dough just from your description? Can they identify shapes by touch alone?

### **Bake together**

Help your child to measure ingredients when you are cooking. Identify the capacity/volume or mass/weight of ingredients, either using scales or less formal methods such as cups. Another great idea is to look at recipes in both metric and imperial units. Older children may be able to convert between them.

### **Check the time**

Look for analogue clocks and digital clocks when out and about. Practise reading times and converting them to 12-hour or 24-hour times. You could also use timetables to solve problems – for example, finding when the next bus will arrive or how long a train journey will take.

## **Useful websites**

The BBC Bitesize website has lots of videos and games that the children can play to develop their understanding of mathematics. Follow the link below and select the appropriate Key Stage for your child.

<https://www.bbc.co.uk/bitesize/primary>

The my mini maths website is great for key stage 2 children who are looking for extra practise at arithmetic questions. There are YouTube videos showing the children how to complete calculations using formal written methods.

<https://myminimaths.co.uk/>

The maths playground website has a vast number of interactive games that the children can play online to further support their understanding in maths.

<https://www.mathplayground.com/>

The Oxford Owl website is home to a large range of printable worksheets and videos that can be used to support your child with their maths learning.

<https://home.oxfordowl.co.uk/kids-activities/fun-maths-games-and-activities/>

The Topmarks website has a number of interactive games to support children with their learning.

<https://www.topmarks.co.uk/>

Times Tables Rock Stars is a great website to practise instant recall of number facts. The children earn coins that they can use to build up their own rock star creation. All children in years 2-6 have their own Times Tables Rock Stars logins.

<https://trockstars.com/>