



# Maths in KS1

# Mathematics in Year 2

- During Key Stage 1, there is a big focus on developing basic number skills.
- That means securing a good understanding of place value, and recognising number bonds. Practising these skills frequently will help children's mathematical thinking throughout school.
- Number bonds are essential to the understanding of maths. Children in Year 2 learn their number bonds to 20, that is being able to quickly recall the total of any two numbers up to 20, e.g.  $5 + 9 = 14$ , rather than having to count on to find the answer.
- At the end of Year 2, all children will sit the National Curriculum Tests for Key Stage 1. This will include a short arithmetic test of 15 questions, and a second paper of broader mathematics which will last around 35 minutes. .

# The Tree Analogy

- In order to understand the way children are now being taught it might be helpful to think of a tree analogy rather than a ladder of steps.
- The children gain the first level of understanding of a concept go up the trunk
- Next the children learn to apply those concepts which is moving out on to the branches. This is where the maths challenges, open ended problem solving, 'maths chats' and reasoning come into play.

# Number and Place Value

- Recognise place value in two-digit numbers, e.g. knowing that the 1 in 17 represents 10
- Read and write numbers up to 100 as words
- Count in 2s, 5s and 10s
- Compare and order numbers up to 100

# Calculations

- Recall number bonds up to 10 fluently, apply their knowledge of these for number bonds to 20
- Add and subtract numbers mentally and using objects, including two-digit numbers
- Show that adding two numbers can be done in any order, but subtracting cannot
- Learn the multiplication and division facts for the 2x, 5x and 10x tables
- Show that multiplying two numbers can be done in any order, but dividing cannot
- Solve problems using the  $\times$  and  $\div$  symbols

# Fractions

- Find  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{2}{4}$  and  $\frac{3}{4}$  of an object or set of objects
- Find the answer to simple fraction problems, such as finding  $\frac{1}{2}$  of 6

# Measurements

- Use standard units to measure length (centimetres and metres), mass (grams and kilograms), temperature (degrees Celsius) and capacity (millilitres and litres)
- Use the £ and p symbols for money amounts
- Combine numbers of coins to make a given value, for example to make 62 pence
- Tell the time to the nearest five minutes on an analogue clock
- Know the number of minutes in an hour and hours in a day

# Shape

- Identify the number of sides and a line of symmetry on 2-d shapes
- Identify the number of faces, edges and vertices on 3-d shapes
- Use mathematical language to describe position and direction, including rotations and turns



# Graphs and Data

- Construct and understand simple graphs such as bar charts and pictograms

# High Achievers!

If your child is achieving well, rather than moving on to the following year group's work we will encourage more in-depth and investigative work to allow a greater mastery and understanding of concepts and ideas.

# Maths at home

Parents can always take a lead role in practical maths. Encouraging your child to help with the purchasing of small items at the newsagent, or measuring themselves and others, is a great way to start exploring number relationships

# Year 2 – “Maths Input”

In Year 2 our focus is number, place value and calculations, with the teaching of time, shape, space and measure explored more practically.

# We want maths masters!

- Mastery of mathematics is something that we want pupils - all pupils - to acquire, or rather to continue acquiring throughout their school lives, and beyond.
- And mastering maths means acquiring a deep, long-term, secure and adaptable understanding of the subject. At any one point in a pupil's journey through school, achieving mastery is taken to mean acquiring a solid enough understanding of the maths that's been taught to enable him/her move on to more advanced material.

We want the children to become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that they develop conceptual understanding and an ability to recall and apply knowledge rapidly and accurately

and.....

**reason** mathematically by following a line of enquiry, looking for relationships and generalisations, developing an argument, justification or proof using mathematical language.

# Problem Solvers!

- We want children to 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.’ (National curriculum page 3)



