Mathematics in Year 4
A guide for parents

By the end of Year 4, children will be expected to know all of their times tables up to 12 x 12 by heart. This means not only recalling them in order but also being able to answer any times table question at random, and also knowing the related division facts. For example, in knowing that 6 x 8 = 48, children can also know the related facts that 8 x 6 = 48 and that 48 ÷ 6 = 8 and 48 ÷ 8 = 6. This expertise will be particularly useful when solving larger problems and working with fractions.

Number and Place Value

- Count in multiples of 6, 7, 9, 25 and 1,000
- Count backwards, including using negative numbers
- Recognise the place value in numbers of four digits (1000s, 100s, 10s and 1s)
- Put larger numbers in order, including those greater than 1,000
- Round any number to the nearest 10, 100 or 1,000
- Read Roman numbers up to 100

Roman Numerals' Basics:

I = 1; V = 5; X = 10; L = 50; C = 100

Letters can be combined to make larger numbers. If a smaller value appears in front of a larger one then it is subtracted, e.g. IV (51) means 4. If the larger value appears first then they are added, e.g. VI (5+ 1) means 6.

Calculations

- Use the standard method of column addition and subtraction for values up to four digits
- Solve two-step problems involving addition and subtraction
- Know the multiplication and division facts up to 12 x 12 = 144
- Use knowledge of place value, and multiplication and division facts to solve larger calculations
- Use factor pairs to solve mental calculations, e.g. knowing that 9 x 7 is the same as 3 x 3 x 7
- Use the standard short multiplication method to multiply three-digit numbers by two- digit numbers

Fractions

- Use hundredths, including counting in hundredths
- Add and subtract fractions with the same denominator, e.g. $\frac{4}{7}+\frac{5}{7}$
- Find the decimal value of any number of tenths or hundredths, for example $\frac{7}{100}$ is 0.07
- Recognise the decimal equivalents of $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$
- Divide one- or two-digit numbers by 10 or 100 to give decimal answers
- Round decimals to the nearest whole number
- Compare the size of numbers with up to two decimal places

Measurements

- Convert between different measures, such as kilometres to metres or hours to minutes
- Calculate the perimeter of shapes made of squares and rectangles
- find the area of rectangular shapes by counting squares
- read, write and convert times between analogue and digital clocks including 24-hour clocks
- solve problems that involve converting amounts of time, including minutes, hours, days, weeks and months.

Shape

- Classify groups of shapes according to the properties, such as sides and angles
- identify acute and obtuse angles
- complete a simple symmetrical figure by drawing the reflected shape
- use coordinates to describe the position of something on a standard grid
- being to describe movements on a grid by using left/right and up/ down measures.

Graphs and Data

- Construct and understand simple graphs using discrete and continuous data.

Discrete date is data which is made up of separate values, such as eye colour or shoe size. Continuous data is that which appears on a range such as height or temperature.

Parent Tip

Playing traditional board games such as battleships or even chess and draughts is great for exploring coordinates and movements across the coordinate grid. You could also search for Roman numerals in the real world (clocks, buildings, TV credits) and try to read what they mean.

Lots and lots of times tables practice!

- playing online maths games (especially Times Table Rock Stars – repetition is key!)
- asking questions such as "What's 7 x 8?"
- climb stairs counting in multiples
- playing verbal times tables games
- listen to, learn and sing times tables songs
- Take it in turns to say different times tables in funny voices (i.e. say 2 x 3 = 6 in a lion's voice)

Numbots is a great app to encourage children to improve their mental calculation of all operations (+, -, x and ÷)

At Hempshill, we follow a mastery approach. This is where we aim to ensure all pupils have mastered key concepts before moving onto the next topic. We do this by breaking the learning into small steps allowing children the time to understand the concept and gain confidence.