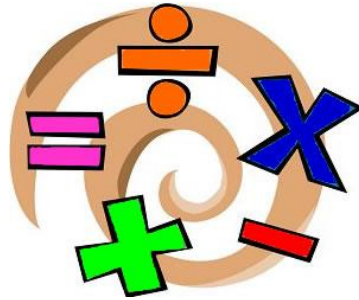




## St. Andrew's C E Primary and Nursery School



### Supporting your child's progression in Maths A Guide for Parents

Evidence has shown that, as with reading and writing, the more involved parents/carers are in supporting their child's learning in this area, the more rapid progress they make. However, you do not need extensive mathematical knowledge to support your child/ren's learning and the support need not be repetitive sheets and booklets. It can and should be fun.

The following guide explains what your child is expected to know and understand at the end of Year 5, alongside some suggested activities which you could do to help your child towards these expectations.

## The Year 5 Learner

### Working mathematically

By the end of year 5, children will apply their mathematical experiences to explore ideas and raise relevant questions, constructing complex explanations and reasoned arguments. They will be able to solve a wide variety of complex problems which require sustained concentration and demand efficient written and mental methods of calculations. These will include problems relating to fractions, scaling (times as many), converting between units of measure and employ all four operations (+, -,  $\times$ ,  $\div$ ).

Ideas to help your child achieve these expectations by the end of the school year.

- Please see the ideas in the sections below. These activities will provide your child with a range of opportunities to work mathematically. These are additional ideas, which would be beneficial alongside their weekly Maths homework.

### Number

- **Counting and understanding numbers**

Children extend and apply their knowledge of place value for numbers up to one million, rounding, estimating and comparing them (including decimals and negative numbers) in a variety of situations. They are introduced to powers of ten and are able to count forwards or backwards from any number (for example, -50, -5... 5, 50, 500, 5000...). Through investigations, they will discover special numbers including factors, primes, square and cube numbers.

Ideas to help your child achieve these expectations by the end of the school year.

- Practise counting forwards and backwards from different numbers and in different intervals e.g. forward and backwards in 25s etc.
- Look for opportunities to discuss large numbers e.g. house prices, distances of planets from the sun, stadium capacities etc.
- Discuss positive and negative numbers where opportunities arise e.g. temperature on thermometers or when watching the weather.

- **Calculating**

Children will be fluent in a wide range of mental calculation strategies for all operations and will select the most appropriate method dependent on the calculation. They apply their knowledge of place value fluently to multiply and divide numbers (including decimals) by 10, 100 and 1000. When mental methods are not appropriate, they use formal written methods of addition and subtraction accurately. They continue to develop their understanding of the formal methods through hands-on resources and use their known facts within long multiplication (up to 4 digit numbers by 2 digit numbers e.g.  $2345 \times 68$ ) and short division (up to 4 digit numbers

by 1 digit number e.g.  $2345 \div 7$ ) which may result in remainders. They solve multi-step problems in meaningful contexts and decide which operations to use.

Ideas to help your child achieve these expectations by the end of the school year.

- Regularly practise mental and formal written methods for addition, subtraction, multiplication and division (opportunities will be given for this through written homework).

- **Fractions including decimals and percentages**

Children secure their strong understanding that fractions express a proportion of amounts and quantities (such as measurements), shapes and other visual representations. Children extend their knowledge and understanding of the connections between fractions and decimals to also include percentages. They will be able to derive simple equivalences (e.g.  $67\% = 67/100 = 0.67$ ) and recall percentage and decimal equivalents for  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ ,  $\frac{2}{5}$ ,  $\frac{4}{5}$  and fractions with a denominator of a multiple of 10 or 25 (e.g.  $25\% = 25/100$ ).

They order, add and subtract fractions, including mixed numbers and those whose denominators are multiples of the same number, for example  $\frac{3}{10} + \frac{1}{5} = \frac{3}{10} + \frac{2}{10} = \frac{5}{10} = \frac{1}{2}$ .

Using apparatus, images and models, they multiply proper fractions and mixed numbers by whole numbers. Children continue to develop their understanding of fractions as numbers, measures and operators by finding fractions of numbers and quantities in real life situations.

Ideas to help your child achieve these expectations by the end of the school year.

- Help your child to learn their multiplication tables up to  $12 \times 12$  (this will feed into many areas of Maths e.g. finding the common denominator in fractions). Resources such as the 'Times Table Rock Stars' website and the 'BBC Sport Super Movers' website (containing times table songs) can be useful in supporting this.
- Discuss fractions in real life situations as opportunities arise e.g. pizzas, cakes etc. Discuss how these might be expressed as decimals and fractions.

## Measurement

Through a wide variety of practical experiences and hands-on resources, children extend their understanding of measurement. They convert larger to smaller related units of measure and vice-versa including length, capacity, weight, time and money. Children will convert between imperial (such as inches, pints, miles) and metric units (such as centimetres, litres, kilometres). Children will measure, calculate and solve problems involving perimeter of straight-sided, right-angled shapes (rectilinear) and learn to express this algebraically such as,  $4 + 2b = 20$ . They find and measure the area of these shapes with increasing accuracy. They begin to estimate volume.

Ideas to help your child achieve these expectations by the end of the school year.

- Allow your child to handle coins and notes when spending money. They could calculate change and consider what percentage discounts might look like in reality.
- Encourage your child to be involved in reading scales e.g. when baking.
- Look for and discuss real life examples of perimeter and area e.g. fences & carpets.
- Encourage your child to tell the time in different ways when opportunities arise eg. analogue clocks, digital watches, 24 hour clocks.
- Talk about distances on road signs when travelling & discuss how road signs might use different units of distance (e.g. metric when travelling abroad, imperial in the UK).

## Geometry

Children will measure, identify and draw angles in degrees, developing a strong understanding of acute, obtuse, reflex and right angles. They use this knowledge to find missing angles and lengths in a variety of situations, including at a point, on a straight line and within a shape. Children will move (translate), reflect shapes and describe their new positions. Language will be used with increasing sophistication to compare and classify shapes based on their properties and size. They will be able to visualise 3-D shapes from 2-D diagrams. They will use their understanding of shapes to solve problems.

Ideas to help your child achieve these expectations by the end of the school year.

- Discuss the 2-D shape names of objects around the house and of 3-D packaging.
- Discuss the properties of those shapes e.g. number of faces, edges and vertices.
- Discuss angles in sport (e.g. snooker, gymnastics & football) and also in objects such as clocks, wheels, dartboards etc.

## Statistics

Children will complete, read and solve comparison, sum and difference problems using information presented in graphs, charts and tables, including timetables. They begin to decide which representations of data are the most appropriate and are able to justify their reasons.

Ideas to help your child achieve these expectations by the end of the school year.

- Encourage discussion/interpretation of graphs and charts when opportunities arise e.g. in newspapers and magazines.
- Involve children in reading and understanding of bus & train timetables.