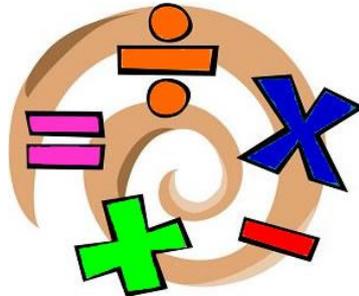# St. Andrew's C E Primary and Nursery School

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 2, alongside some suggested activities which you could do to help your child towards these expectations.

The Year 2 Learner

Working mathematically

By the end of year 2, children will solve problems with one or a small number of simple steps. Children will discuss their understanding and begin to explain their thinking using appropriate mathematical vocabulary, hands-on resources and different ways of recording. They will ask simple questions relevant to the problem and begin to suggest ways of solving them.

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

- Using a variety of maths vocabulary e.g.

  + plus, add, addition, adding, counting on

  - minus, takeaway subtract, counting back

  x multiply, multiplication, times, groups of, sets of

  ÷ divide, division, sharing, equal groups of

- Finding patterns e.g. I notice that all the numbers in the 5s pattern equal 0 or 5 so 4 x 5 can't equal 21.

- Working systematically – can they sort playing cards into groups systematically? E.g. first by colour and then by suit.

- Understanding that numbers can be represented in many ways including objects (e.g. beads), money, measurement and time.

- Recognising what operations need to be used to solve problems e.g. if it's a + - x or ÷ question.

- Showing how to solve a problem in more than one way. E.g. 20 - ? = 17, you could count on 3 from 17 to 20 or calculate 20 – 17 = 3 or just use fluent number bond knowledge to recognise answer without calculation.

Number

- **Counting and understanding numbers**

Children will develop their understanding of place value of numbers to at least 100 and apply this when ordering, comparing, estimating and rounding. Children begin to understand zero as a place holder as this is the foundation for manipulating larger numbers in subsequent years. Children will count fluently forwards and backwards up to and beyond 100 in multiples of 2, 3, 5 and 10 from any number. They will use hands-on resources to help them understand and apply their knowledge of place value in two digit numbers, representing the numbers in a variety of different ways.

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

- Counting games – count in 2s,5s,10s backwards and forwards. You could do this walking up and down stairs, dropping pennies into a jar and counting each time one lands or getting a handful of dry pasta and counting these using the number pattern.

- Give me 10 more than, ten less than, 5 less than, 2 more than/less than…. Find numbers on cereal boxes, magazines, shops and ask the children to find 2, 5 or 10 more than or less than that number.

- On a 100 number square cover up one number and say what numbers surround it.

- Cut up a number square and piece it back together like a jigsaw.

- Give part of a number square and ask children to fill in the rest.

- Find 2 digit numbers in the environment. How many tens and ones are in the number? How could they write this as an addition sentence? e.g. 3 tens + 4 more

- Can you give them a magazine and ask them to find a number with 5 tens or 6 ones?

- Play http://www.bbc.co.uk/schools/starship/maths/placethepenguin.shtml

- **Calculating**

Children learn that addition and multiplication number sentences can be re-ordered and the answer remains the same (commutativity) such as 9+5+1= 5+1+9. They learn that this is not the case with subtraction and division. They solve a variety of problems using mental and written calculations for +, -, x, ÷ in practical contexts. These methods will include partitioning which is where the number is broken up into more manageable parts (e.g. 64 = 60 + 4 or 50 + 14), re-ordering (e.g. moving the larger number to the beginning of the number sentence when adding several small numbers) and using a number line. Children will know the 2, 5 and 10 times tables, as well as the matching division facts (4 x 5 = 20, 20 ÷ 5 = 4) and can recall them quickly and accurately. They apply their knowledge of addition and subtraction facts to 20 and can use these to work out facts up to 100.

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

- Write balancing number sentences e.g. 4 + 5 + 6 = 3 + 6 + 6.

- Missing number problems e.g. 3 + ? = 14

- Display questions in different orders e.g. ? = 2 + 7

- The answer is '*a number*' what is the question?

- Number bonds: 2 numbers added together to make 10, 20 and 100. Bring it into different contexts e.g. that sweet is 10p but I only have 6p, how much more do I need?

- Practise 2, 5 and 10 times tables and division facts so if 3 x 5 = 15 then 15 ÷ 5 = 3

- Practise 3s pattern – fill in missing numbers on a 3s pattern sequence.

- Play: https://www.topmarks.co.uk/maths-games/hit-the-button

- Display x sentences as "arrays" using play dough or beads.

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- Find a lego piece – what number sentence does this represent?
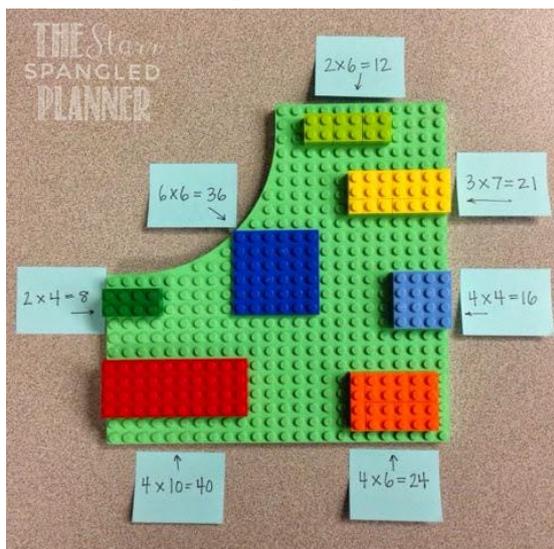
- **Fractions including decimals**

Throughout year 2, children will develop their understanding of fractions and the link to division. They explore this concept using pictures, images and hands-on resources. They will solve problems involving fractions (e.g. find 1/3 of the hexagon or ¼ of the marbles) and record what they have done. They will count regularly and fluently in fractions such as ½ and ¼ forwards and backwards and, through positioning them on a number line, understand that some have the same value (equivalent) e.g. ½ = 2/4.

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

Ensure children understand each part needs to be equal with the below:

- Divide whole pieces of food such as cake or pizza into fractions. At breakfast ask your child if they would like their toast cut into halves or quarters. How much have they eaten?

- Share amounts of objects e.g. Can you find ½ of the raisins in that box? The book has 16 pages – what page would you be on if you were ¼ of the way through?

- Finding fractions of shapes – folding shapes into halves and quarters and labelling them correctly.

- Link finding fractions of amounts to division e.g. ¼ of 20 = 20 ÷ 4.

- Compare fractions to find equivalent fractions e.g. I've eaten 2/4 and you have eaten ½ - who has had more? Or have we eaten the same?

- Counting in fractions e.g. chop grapes in half and count up i.e.1/2, 1, 1 ½, 2, 2 ½….

- When confident link to time e.g. how far has the minute hand travelled around the clock ¼ or ½?

- https://nrich.maths.org/8939

Measurement

Children will estimate, choose, use and compare a variety of measurements for length, mass, temperature, capacity, time and money. By the end of year 2, they will use measuring apparatus such as rulers accurately. They will use their knowledge of measurement to solve problems (e.g. how many ways to make 50p). They extend their understanding of time to tell and write it on an analogue clock to 5 minute intervals, including quarter past / to the hour. They will know key time related facts (minutes in an hour, hours in a day) and relate this to their everyday life.

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

- Give your children opportunity to use small amounts of money (coins) to buy objects. Can they find different ways of making up small amounts using different coins? E.g. show me how to make 10p in 4 different ways.

- Telling the time – keep practising 5 minute intervals. Regularly ask "What time is it?" using an analogue clock. Keep talking about the different hands and what information they tell you.

- Link times to activities e.g. "We are going to Granny's house at half three – let me know when that happens."

- Timing of actions.   How quickly can you build a tower of 20 blocks?

- Measuring liquids in jugs and reading scales in jumps of 2, 5 and 10.

- Estimating lengths in m and cm - how long do you think that table is? Can you measure it now? How close were you?

Geometry

Children will identify, describe, compare and sort common 2-D and 3-D shapes according to their properties (sides, vertices, edges, faces) and apply this knowledge to solve simple problems. They develop their understanding by finding examples of 3-D shapes in the real world and exploring the 2-D shapes that can be found on them (e.g. a circle is one of the faces on a cylinder). Children begin to describe position, direction and movement in a range of different situations, including understanding rotation (turning through right angles clockwise and anti-clockwise). They use their knowledge of shape in patterns and sequences.

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

- Recognising 2D and 3D shapes in the environment, small and large e,g. what shape is that cereal box?

- Talk about the shapes and quantity of faces on 3D shapes. E.g. What shape are the faces on the cereal box? How many vertices (corners) are there? How many edges?

- Recognising pictures of 3D shapes. Cut out different 3D shapes from a catalogue.

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

- Recognising 2D and 3D shapes in the environment, small and large e,g. what shape is that cereal box, football? What about that building?

- Talk about the shapes and quantity of faces on 3D shapes. E.g. What shape are the faces on the cereal box? How many vertices (corners) are there? How many edges?

- Recognising flat pictures of 3D shapes. Cut out different 3D shapes from a catalogue and identify them.

- Compare different shapes – what is the same and what is different? Which has more vertices, a cube or a square based pyramid?

- Think about what a shape would look like if it was rotated. E.g. I'm drawing a triangle – what would it look like if it was rotated ¼ clockwise?

- Finding a line of symmetry in a shape using a mirror.

- Discuss regular and irregular shapes. A hexagon is still a hexagon so long as it has 6 sides and corners. Can they spot any around in the environment?

Statistics

Children sort and compare information, communicating findings by asking and answering questions. They will draw simple pictograms, tally charts and tables.

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

- Encourage use of tally charts to count different colours of Lego bricks in a box. Can they create a survey to find out friends/family favourite drink or colour?

- Record the tally chart in a bar chart and compare. Which is the most popular colour? The least? How many more or less when comparing 2 colours?

- https://www.topmarks.co.uk/Flash.aspx?f=barchartv2

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