

## Measurement

- Measure using mm, cm and m
- Measure lines to the nearest cm
- Calculate the area of a shape by counting cm squares
- Estimate area of any shape using 1cm grid
- Read scales (kg and g)
- Measure volume (litres and millilitres)
- Measure volume by counting cubes
- Through practical investigation, realise that 100cm = 1m, 1000ml = 1 litre, 1000g = 1kg
- Use cm<sup>2</sup> to find the area of a shape
- Appreciate that area can be conserved when the shape changes

## Shape

- Recognise the 6 3D shapes- cube/cuboid/cone/cylinder/sphere/square based pyramid
- Develop understanding of tiling

## Angles and Symmetry

- Identify 90 degree angle
- Identify 1/4, 1/2 and full turns of circle
- Know compass points and directions
- Identify position of an object on a coordinate grid
- Identify and draw more than 1 line of symmetry
- Complete a symmetrical shape
- Sort angles into bigger/smaller than a right angle
- Appreciate that a shape or pattern may have more than one line of symmetry

## Information Handling

- Collate, organise, display and report on bar/line graphs and charts
- Interpret data

- Be familiar with terms such as chance, likely, probable, unlikely, certain/uncertain, possible/impossible and use these, with confidence, in context
- Recognise where a simple scale (e.g. 1:2) has been used
- Use a simple scale (e.g. 1:2) e.g. Rescaling simple shapes

*We would love to hear your views on our Mathematics and Numeracy Milestones. Please contact us at:*

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# St. Andrew's Primary School and Nursery Class

Numeracy and Mathematics  
Milestones



## Primary 4

The Milestones outlined in this booklet set the **minimum** expectations we have for the children in St. Andrew's within Numeracy and Mathematics for our nursery pre-school children.

It is our aim to ensure a smooth transition for our children into Primary 4 with a clear focus on clear and progressive learning pathways.

The Milestones are split into the following sections:

- Estimation & Rounding
- Number & Number Processes and Patterns & Relationships
- Fractions, Decimals and Percentages
- Money
- Time
- Measurement
- Shape
- Angles and Symmetry
- Information Handling

Under each heading there is detail about the specific learning children will experience.

## Estimation & Rounding

- Round 4 digit numbers to 10, 100 and 1000

## Number & Number Processes and Patterns & Relationships

- Be able to work with numbers to 10000
- Place value to 10000
- Order/ sequence numbers to 10000
- Write numbers up to 1000
- Add and notation of 3 digit numbers horizontally/vertically (with carrying)
- Subtraction and notation of 3 digit numbers horizontally/vertically
- Consolidate 2,3,4,5 and 10 times tables
- Learn 6,7,8 and 9 times tables
- Multiply 3 digit numbers (with carrying)

- Divide by 6,7,8 and 9 with remainders
- Be able to copy, continue and describe complex patterns involving more than one object, shape or colour
- Count in sequences of multiples e.g. 0, 3, 6 etc.
- Recite simple number patterns and sequences e.g. Counting forwards and backwards in 6's, 8's, 10's, 100's, 1000's odds and even
- Count in 1000's e.g. 3, 1003, 2003 etc
- Know the symbol for equals and understand that this signifies balance in a number sentence
- Know the symbols for not equal to, less than and greater than ( $<$ ,  $\leq$ ,  $\geq$ ,  $>$  and  $\neq$ ).
- Be able to compare, describe and show number relationships between numbers and operations, e.g.  $2 < 3$
- Use language associated with expressions and equations e.g. Equals, balance, digit, numeral, compare, greater, than, more than, less than, equal to, not equal to, sum, compare, unit, ten, hundred, place value, side, work out
- Be able to work with both standard and non-standard number sentences where a number is replaced by a symbol, symbol or letter e.g.  $170 + 20 = ?$  (standard)  $750 + ? = 950$  (non standard)
- Confidently demonstrate an understanding that addition and subtraction are inverse processes justifying responses
- Confidently demonstrate an understanding that multiplication and division are inverse processes justifying responses

## Fractions, Decimals and Percentages

- Be able to work with all fractions up to tenths
- Find a fraction of an amount given a pictorial representation and with a 2-step structured question as  $\frac{1}{4}$
- Through practical enquiry, find fractions which are equivalent, e.g. Folding, cutting, sharing, matching etc
- Understand the denominator reflects how many sections an object/number has been divided into and the numerator reflects how many sections are being referred to
- Understand that to find a  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$  or  $\frac{1}{10}$  of a number you divide by the denominator e.g. To find a  $\frac{1}{10}$  you divide by 10

- Use the language of fractions in describing and comparing things, e.g. I have eaten about one quarter of my bar of chocolate but you have eaten half of yours
- Understand re-forming the whole e.g. Increasing the number of parts so it exceeds the whole,  $\frac{5}{4}$
- Locate and place common fractions on a graduated number line
- Use their knowledge and understanding of "whole" to estimate the position of fractions on an empty number line
- Be able to count in fractions sequences e.g. 0,  $\frac{1}{10}$ ,  $\frac{2}{10}$ ,  $\frac{3}{10}$ ,  $\frac{4}{10}$ ,  $\frac{5}{10}$ ,  $\frac{6}{10}$
- Estimate the position of a mixed number on a number line
- Demonstrate an understanding of fractions written in word and mathematical form
- Describe and record simple equivalences orally and in writing, e.g. We found that one half is the same as two quarters put together. We can write one half = two quarters or  $\frac{1}{2} = \frac{2}{4}$ ,  $\frac{2}{10} = \frac{1}{5}$

## Money

- Consolidate adding and subtracting money up to £5
- Calculate money and change up to £20
- Add/subtract/multiply/divide with money
- Use rounding when appropriate, e.g.  $\pounds 3.99 + \pounds 2.49 = \pounds 4 + \pounds 2.49 - 1p = \pounds 6.48$ ;  $\pounds 10 - \pounds 5.99 = \pounds 10 - \pounds 6 + 1p = \pounds 4.01$

## Time

- Understand digital time
- Calculate simple time intervals
- Read timetables
- Begin to develop an understanding of the 24 hour clock
- Record and interpret information in calendars
- Understand units of time i.e. Minute, hour and day
- Use a stopwatch to time events
- Know that there are 60 minutes in one hour and 30 minutes in half an hour, 15 minutes in quarter of an hour
- Know that there are 60 minutes in one hour