- Find perimeter by measuring and adding
- Estimate capacity of objects using non standard units
- Be able to measure volume using ml and l
- Use cm cubes to measure volume
- Introduce kg and g and intervals going up in 5s and 10s

Shape

- Know faces of solid shapes meet to form edges and edges meet at corners/vertices
- Discuss properties of triangles, quadrilaterals and polygons
- Understand what a net is
- Understand the relationship between a 3d shape and its net
- Investigate/recognise different net shapes for cubes and cuboids
- Use a ruler and compass to accurately draw 2d shapes
- Create circle patterns using a compass
- Know difference between skeletal and solid models

Angles and Symmetry

- Understand terms- side, corner, angles, diagonals, circumference, equilateral and right angled, acute and obtuse
- Acquire a deeper understanding of coordinates and line symmetry
- 2D shape-translations
- Turn through 45, 90, 180, 270, 360 degrees
- Know scale drawing shows a drawing with accurate measurements either reduced of enlarged by a certain amount called the scale
- Draw a scale picture with the help of a grid, e.g. Enlarge the cat

Information Handling

- Appreciate that data can be presented in a wide range of ways, e.g. Pictograms, bar charts, pie charts, line graphs, tables etc.
- Interpret and draw conclusions from a range of data displays
- Compare and discuss different displays of the same data

- Understand that the method used to collect the information may affect the data gathered, the predictions made or conclusions drawn
- Demonstrate a knowledge of place value and rounding when interpreting data analysis questions
- Propose questions, explore different methods to collect and represent data.
- Use language associated with data and analysis e.g. Information, collect, scale, represent, analyse, tally, chart, frequency, frequency table, grouped
- Understand terms: frequency table, discrete, data, popular
- Identify a range of ways to collect, organise and display data e.g. Make links with tally marks and frequency tables
- Appreciate that the method chosen to display the data needs to fit the purpose of the task
- Use a variety of methods to gather data, e.g. Observations, surveys, questionnaires, experiments
- Draw conclusions from their findings and communicate them clearly, concisely and accurately

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 5

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 5 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 to nearest 10, 100, 1000 and 10000
- Use skills of estimation and rounding in real life contexts

Number & Number Processes and Patterns & Relationships

- Be able to work with numbers to 100000
- Place value to 100000
- Order/ sequence numbers to 100000
- Write numbers up to 100000
- Apply all 4 operations to numbers up to 100000
- Explain purpose of decimal point and why money and measures use decimal notation
- Explain and know importance of zero a a place holder
- Explain the link between a digit, its place
- Understand the inverse relationships of +,-,x,/
- Know and understand effect of multiplying and dividing by 10,100,1000

- Understand how negative numbers are used in real life
- Know '-' means negative
- Sequence positive and negative numbers (within -10)
- Recognise sequences go up and down and are linked to 4 number operations
- Recite counting patterns forwards and backwards
- Follow a rule based on multiplying or dividing or simple fractions
- Generate a sequence based on + or –
- Describe a sequence to a partner to allow them to reproduce it

Multiples, Factors and Primes

- Know and understand the terms multiple and factor
- Understand that factors occur in pairs e.g. 3x2=6, 6/2=3
- Understand the term prime number

Fractions, Decimals and Percentages

- Order/compare/read decimal fractions up to 1st decimal place
- Sequence decimal fractions to 1 decimal place
- Place decimal fractions on numberline
- Understand decimal fractions can be written as division or decimal
- Understand that to find a fraction of a number you divide by denominator and multiply by numerator
- Find fraction of a set
- Add/multiply/subtract/divide decimal fractions
- Understand when dividing into 100 bits that each bit is 1%
- Find simple % of quantities e.g. 10%, 25%, 50% of …
- Understand equivalent fractions e.g. 1/2=2/4
- Use eqivalent forms e.g. 1/4= 25%=0.25
- Understand same quantity can be represented by different fractions e.g. 1/5= 20/100

Money

- Appreciate the benefits of 'shopping around'
- Know how to interpret sales information, realising that it can be ambiguous

- Compare costs from different retailers and work out which is best value for money
- Consider special offers, e.g. 2 for the price of 1, 50% extra free – Is it really a bargain?
- Plan purchases after costing things out
- Use a variety of methods to calculate cost (mental, written, calculator)
- Understand and use terms such as budget, balance
- Know the benefits of bank/card accounts
- Know the meaning of the term profit and loss

Time

- Know one minute times past and to the hour e.g. 7.36, 8.51
- Calculate durations in one minutes e.g. 17 minutes after 6.12p.m.
- Order times (earliest/ latest)
- 5 min times past/to e.g. 50 mins after/before 7.15
- Durations in 5 mins e.g. Start at 7.50, finish at 8.35- how long?
- Read and interpret a range of timetables
- Create timetables for different purposes, e.g. Parties, school trips and events
- Calculate duration of time in "real life" contexts, e.g. Length of a journey, TV programme, film etc.
- Understand the relationship between 12 hour and 24 hour time
- Equate analogue and digital time e.g. 3 o'clock is 15:00 or 03:00 if early in the morning
- Convert between 12 hour and 24 hour time e.g. Before noon write a 0 in front of single digit hours e.g. 7:00 becomes 07:00 and add 12 hours from 1:00 p.m. Onwards so 4:00 p.m. Becomes 16:00

Measurement

- Estimate size of objects using standard units (m, cm, l, ml, kg, g)
- Find area of squares and rectangles
- Measure lines to nearest mm
- Find area by multiplying rows and columns