Numeracy & Mathematics

Early Level

Parent Information Booklet

Mathematics does not start when children come to school. Maths happens all around us and mathematical concepts have already played a part in your child's life as it is used in so many everyday situations - patterns, using money when shopping, setting the table, dialling a telephone number, changing the tv channels, weighing ingredients to bake, reciting rhymes, sorting out the washing/toys, keeping time, playing games.

In Primary 1, there is a strong emphasis on practical numeracy and maths where children are encouraged to explore, investigate and make connections in an active way.

Children need to understand what they have learned, remember it and apply the knowledge in a variety of contexts. One of our key aims is to encourage the children to think flexibly and learn in a fun way.

The development of strategies for mental calculations is also crucial in order to help children understand number and to encourage quick recall of facts. As such regular oral and mental work plays a vital role in maths lessons.

Children in Primary 1 are working at the Early Level of the Curriculum for Excellence Guidelines. Most children will be working at that level for approximately 2 years (including nursery).

Maths in Primary 1 consists of 3 organisers –

- Number, money and measure
- Information handling
- Shape, position and movement

It is hoped that the contents of this booklet, will give parents an idea of the type of numeracy and maths involved at the Early Level and will also give some ideas of activities which you can try at home to support your child in the development of Numeracy & Maths.

I hope you found this booklet useful.

Numeracy & Mathematics

Early Level

Number, Money and Measure

- Number and Number Processes
- Patterns and Relationships
- Estimation and Rounding
- Fractions
- Time
- Measurement
- Money

Information Handling

- Data and Analysis

Shape, Position and Movement

- Properties of 2d shapes and 3d objects
- Angle, symmetry and transformation

Number and Number Processes

Your child will be learning to:-

- Explain that zero means there is none of a particular quantity and is represented by the numeral 0.
- Recall the number sequence forwards within the range 0 - 30, from any given number.
- Recall the number sequence backwards from 20.
- Identify and recognises numbers from 0 to 20.
- Order all numbers forwards and backwards within the range 0 - 20.
- Identify the number before, the number after and missing numbers in a sequence within 20.
- Uses 1-1 correspondence to count a given number of objects to 20.
- Identify 'how many?' in regular dot patterns, without having to count (subitising).
- Group items recognising that the appearance of the group has no effect on the overall total (conservation of number).
- Use ordinal numbers in real life contexts, for example, 'I am third in the line'

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

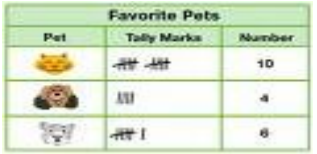
How can you help?

- Let your child see you counting. Count everyday objects – stairs, buttons on clothes etc- touch each thing as you count it.
- Sing simple number rhymes and song – 10 green bottles, 1,2,3,4,5 once I caught a fish alive etc.
- Play board games/dice games – have the child count/say the number. Play card games/dominoes
- Use sand, play dough/plasticine to form numbers.
- Look for numbers in the newspaper, cut them out, put them in order. Use magnetic numbers.
- Make a counting book – stick in or draw the corresponding number of objects.
- Look for numbers in the environment- clocks, phones, calendars etc.
- Ask your child to bring you 2 pens, 6 spoons etc.
- Tap your finger x times – ask your child to point to the correct numeral.

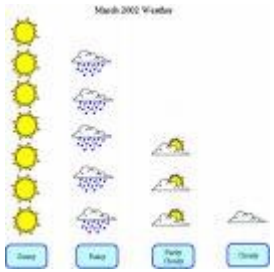
Data and Analysis

Your child will be learning to –

- Ask simple questions to collect data for a specific purpose.
- Collect and organise objects for a specific purpose.
- Use counting skills to ask and answer questions
- Organise findings by using simple recording methods e.g. ticks or tally marks
- Contribute to concrete or pictorial displays where one object or drawing represents one data value, using digital technologies when appropriate.
- Use knowledge of colour, shape, size and other properties to match and sort items in a variety of different ways.
- Interpret simple graphs, charts and signs and demonstrate how they support planning, choices and decision making. e.g visual timetable, menu,



Favorite Pets		
Pet	Tally Marks	Number
	𝍸 𝍸	10
	𝍸	4
	𝍸 I	6



How can you help?

- Sort cutlery/washing/toys at home.
- Give a tub of mix match household items –
  How can you sort them?
  Can you sort them in a different way?
- Select items from menus, look at opening hours, locate prices of items.
- Sort leaves by shape, size, and colour. Count each group.
- Give your child opportunities to interpret and draw simple graphs. Ask question such as "What did Paul like to wear?"

Angle, Symmetry and Transformation

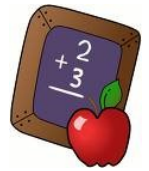
Your child will be learning to: –

- Identify, describe and create symmetrical pictures with one line of symmetry.
- Understand and use the language of position and direction, e.g. behind, in front of, above, below, left, right forwards and backwards
- Use appropriate vocabulary when giving simple directions and describing simple positions – forward, back, left, right, straight on.
- Program a simple programmable toy (e.g. bee bot) using appropriate positional language—forward, back, left, right, straight on.

How can you help?

- Make symmetrical butterflies/pictures – painting or using computer paint programmes.
- Discuss position of objects in the house/street e.g. "What is to the left of the church? What is above your head?" etc
- Hide and Seek- hide an object. Your child locates it by asking questions using positional language e. g. "Is the car behind the bookcase?"
- Follow and give instructions to get to real places – to school, the shop, the church, gran's house etc.
- Have a treasure hunt – use position words for clues.

Addition and Subtraction



Your child will be learning to:-

- Count on and back in ones to add and subtract.
- Doubles numbers to a total of 10 mentally.
- Understand that when counting objects, the number name of the last object counted is the name given to the total number of objects in the group.
- Partition quantities to 10 into two or more parts and recognise that this does not affect the total.
- Adds and subtract mentally to 10.
- Use the appropriate mathematical symbols +, – and =.
- Solves simple missing number problems.

0 1 2 3 4 5 6 7 8 9 10

How can you help?

- Use 2 plates – how many different ways can they arrange the 6 biscuits on the plates. e.g. 5 and 1, 4 and 2 etc.
- Make 8 as many different ways as you can – vary the objects used. Ask your child to record what they found. They might use drawings numbers etc.
- Look at dominoes and find all the ones that have a total of 'x' dots.

- Skittles – Number your skittles. Knock down skittles and add the numbers which have fallen.
- Give number problems in a context – if 3 boys and girls were at the park, how many children were there altogether?
- Play board games—use 2 dice. Throw both dice and add the numbers together, move that number of spaces.
- Make up a simple bingo game. Choose 6 numbers between 0 and 10 (and beyond) and write the numbers down on the bingo grid. Ask each other simple addition/subtraction questions.

Patterns and Relationships

Your child will be learning to:-

- Identify patterns in the wider environment both natural and manmade
- Copy, continue and create simple patterns involving objects, shapes and numbers
- Explore, recognise and continue simple number patterns.
- Find missing numbers on a number line within the range 0-20

How can you help?

- Identify and talk about patterns in the environment -brickwork, flowerbeds, flats, wallpaper, fabric etc.
- Copy and create patterns with beads, coloured toys, crayons, farm animals etc.
- Hide a number on a number line, which number is missing. (You could use post its and use only some numbers e.g. 12, 13, 14 __, 16, 17)

Fractions

Your child will be learning to:-

- Split a whole object into smaller parts
- Explain that equal parts are the same size.
- Use appropriate vocabulary to describe halves.
- Share out a group of items equally into smaller groups.

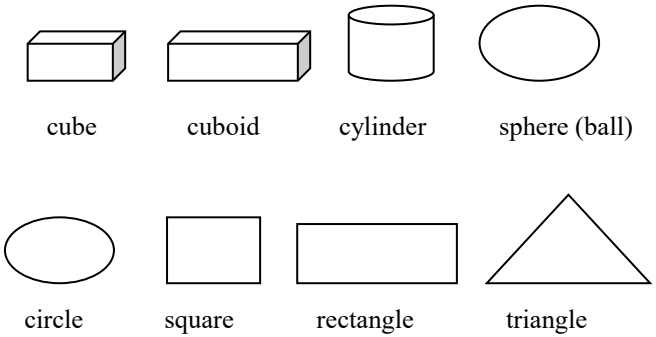
How can you help?

- Cut fruit into pieces and talk about how many pieces make up the whole.
- Share out the sweets between everyone in the family. How many does each person get?
- Share out snacks so everyone has the same number.

Properties of 2D shapes and 3D objects

Your child will be learning to:-

- Recognise and name the various 2D and 3D shapes in the environment and in play settings
- Recognise the link between 2D and 3D shapes (e.g. be able to recognise a square face on a cube)
- Sort and match 2D and 3D shapes according to various criteria e.g. straight, round, flat, curved.
- Use 2D and 3D shapes in a creative way (e.g. construction, art, patterns etc.)



How can you help?

- Go on a shape walk and identify shapes in the environment.
- Keep old boxes, cartons etc and let your child build models with them.
- Make pictures using paper or plastic shapes. Count how many squares, rectangles were used etc . . . or ask them to make a picture using only 4 squares, 5 circles, 6 rectangles and 4 triangles.
- Shape 'I Spy' – I spy something that is round.
- Shape tickle – draw shapes on the back of your child's hand so they can identify them.

Estimation and Rounding

Your child will be learning to: -

- Recognise the number of objects in a group, without counting (subitising) and use this information to estimate the number of objects in other groups.
- Check their estimates by counting.
- Apply their skills of estimation in the contexts of number and measure using relevant vocabulary, including less than, longer than, more than and the same.

How can you help?

- Play board games using dice—children have to quickly say number rather than counting the dots.
- Play dominoes
- Flash a dice, what number was it?
- Hide objects under a bowl/paper. Show child it quickly. Cover it—how many did they see?

Estimate and check

- How many steps do you think it will take us to reach . . .?
- How many cups of water do you think it will take to fill the sink?
- How many pennies do you think it would take to cover your book?
- How many blocks do you think will fit in this box?
- Grab counters/sweets. How many do you think you have? Count and check.

Money

You child will be learning to:-

- Talk about money in a range of contexts.
- Identify similarities and differences between the different notes an coins.
- Sort coins and notes that have the same value.
- Understand equivalence e.g. 2x1p coins is the same value as a 2p coin.
- Identify all coins to £2
- Use addition and subtraction skills to pay the exact value of items to 10p using 1p, 2p, 5p and 10p coins

How can you help?

- Sorting - *by shape, colour,, number*
- Play 'I spy' *with coins*
- Play 'shops' with real money. Show different ways to make amounts.
- Talk about money, show them prices of sweets, price on the labels, pocket money etc.
- Play games – e.g. for equivalence -throw a dice – if you get 4 take 4 pennies, if you get 3 take 3 pennies etc. Every time you get 5 pennies you can swap it for a 5p coin. (You can also do this for 2p or 10p).
- Let your child pay for simple items at the shop.

Time

You child will be learning to:-

- Link daily routines and personal events to time sequences e.g. Order key events in their day (get up, get dressed, go to school) using vocabulary such as before and after.
- Name the days of the week in sequence.
- Know the months of the year and talk about key features of the different Seasons
- Tell the time in hours using analogue and digital time (12 hours only)
- Use appropriate vocabulary when discussing time (before, after, minute hand, hour hand, o'clock)

How can you help?

- Give your child times for activities –

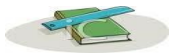
  > 'We will go the cinema ***tomorrow***'
  > 'We go to swimming lessons on ***Saturday***'
  > 'What was it we did ***yesterday?***

- Look at clocks, both digital and analogue. Talk about what what you can see, the hour hand/minute hand, the 4 digit on the digital clock.
- Estimate how long a certain activity might take. Play a game: how long is a minute, starting from now.
- Think about calendars and dates. Mark on a calendar the birthday of everyone in the family, add other important events, holidays etc. Encourage your child to count down to the big day.
- Play What's the time Mr. Wolf.
- Read stories with a time theme.
  ('Tick Tock' by Eileen Brown. 'Isn't it time?' by J Hindley & N Shorratt)

Measurement

You child will be learning to:-

- Describe common objects using appropriate measurement language e.g. tall, heavy, empty
- Compare and describe lengths, heights, mass and capacities using everyday language e.g. longer, shorter, taller, heavier, lighter, more and less.
- Order objects according to size (e.g. widest to narrowest/heaviest to lightest)
- Estimate then measure lengths, heights, mass and capacity using a range of non-standard units e.g. a cup of sand, 3 pencils long



- Talk about experiences in which measurements of lengths, heights, mass and capacities are used e.g. baking.

How can you help?

- Involve your child in activities which use measuring e.g. baking,
- Use body measures to measure a variety of objects. e.g. the length of a path using footsteps.
- Washing Line – Help hang out the items in order of length.
- Make different lengths out of plasticine/play dough. Compare lengths, snap in half etc.
- When wrapping gifts ask: How much wrapping paper do you need? How much ribbon will we need? Will the gift fit in this box? – Good for also developing estimation.
- Sort gifts/boxes/toys by size/weight.
- Can you find a leaf that is the same size as your hand, bigger than your hand, or smaller than your hand?
- Play 'Giant Steps and Baby Steps'. "How many giant steps to get to the end of the path?" "How many baby steps?"
- Construction/Lego etc – Try to make towers as tall as your favourite toy.
- Talk to your child about real life examples of when you need to measure and involve them if you can e.g. measuring for new curtains.
- Make up some bags with different objects in it. The child has to hold them and decide which is heaviest/lightest/arrange in order.