THE PRESCOT SCHOOL

IN THE BUSINESS OF LEARNING - SINCE 1544

Supporting Numeracy development at home:

Contents:

What is Numeracy?

Numeracy involves skills that aren't always taught in the classroom – the ability to use numbers and solve problems in real life. It means having the confidence and skill to use numbers and mathematical approaches in all aspects of life. Numeracy is as important as literacy. In fact, it's sometimes called 'mathematical literacy'.

We need both skills to function in modern life.

When do we use numeracy?	Examples
At work	Giving correct change, weighing and measuring, using spreadsheets and understanding data.
In practical everyday activities at home and beyond	Working out how many minutes until our train, increasing a recipe to serve extra guests.
As consumers	Understanding how much we'll save with a 15% discount, checking we've received the right change, working out how much to tip in a restaurant.
In managing our finances	Setting and keeping to a budget, understanding interest rates, understanding the financial implications of borrowing money, working out how much money to put into a pension.
As parents	Helping children with homework, playing board and puzzle games with children.
As patients making sense of health information	Managing our diet and nutrition, making and keeping medical appointments, measuring medicine doses, working out a routine for taking tablets regularly.
As citizens understanding the world about us	Making sense of statistics and graphs in the news, understanding information about government spending.

Numeracy means understanding how maths is used in the real world and being able to apply it to make the best possible decisions.

It’s as much about thinking and reasoning as about 'doing sums'. It means being able to:

- Interpret data, charts and diagrams
- Process information
- Solve problems
- Check answers
- Understand and explain solutions
- Make decisions based on logical thinking and reasoning

Think about budgeting your monthly pay check, you probably engage in these skills without actually realising you are doing.

How can I support my Child with Numeracy??

Why is Numeracy important?

Numeracy is about being able to understand and use numbers in a range of situations, for example when solving problems or making decisions in situations involving numbers. It is a crucial skill that impacts on all elements of a person's life and learning.

Learning doesn't just take place in the classroom; it can happen anywhere. A child or young person's everyday routine offers many opportunities and experiences to practise and apply their numeracy skills in real life and meaningful ways.

There are many ways that you can build learning activities into everyday routines to support your child's numeracy skills. Below are some simple ideas to build numeracy skills into everyday activities from early years to secondary.

Early Level (Pre School and Reception)

- Look out for all numbers you see around the house.
- Count how many steps there are from the gate to the front door or around the garden and talk about the differences in the size of your steps.
- As you tidy up, encourage your child to arrange toys and books in order of size.
- Count how many things are in the fridge or the cupboard.
- Count how many star jumps or hops you and others in your household can do.
- Investigate different coins and talk about their value.
- Play board games which need the use of dice e.g. Ludo or snakes and ladders.
- Point out the time on the clock, particularly at breakfast, dinner or bedtime.

Primary School

- Estimate and take their own, your and other family members measurements – height, weight, shoe size.
- Play games which involve calculating scores e.g. board games or online games.
- Calculate the cost of a home delivery or take away.
- Explain how to work out the value of the graduations on the scales on measuring equipment.
- When baking, encourage your child to explain how they would work out quantities to make the recipe for more or less people. e.g. for making 18 cupcakes from a recipe for 6.
- Allow your child to be in charge of setting the timer while you cook together, this will develop skills in estimating time and provide opportunities for calculating time durations.

Secondary Level

- Look at graphs and charts online, on TV or in the newspaper and discuss the results.
- Discuss articles in the newspaper. Consider the numerical evidence, interpret graphs and tables.
- Follow a recipe independently.
- Research best deals when planning a large purchase such as mobile phone tariffs/contracts or entertainment packages – comparison websites.
- Calculate total costs for items being purchased online.
- Plan meals for the week using a set budget using online grocery stores to find prices.

It is crucial that your child's Numeracy age is in line with their chronological age. For example, if your child is 12 years old - it is important that their Numeracy age is 12 years old or over. This will ensure they can confidently access and engage with age appropriate calculations.

What can I do to help my child with Numeracy?

Think about where you come across numbers and numeracy in your own jobs and talk to your children about this. It is vital that you show positivity towards numeracy, as studies show that negative attitudes towards numeracy from parent's install themselves into students, so they have negative attitudes towards it as well. If you find numeracy difficult do not panic as lots of people do.

The key to success is to practise, like when you learnt to drive or if you play a sport. The more you practise the stronger and more confident you become. Most children who struggle with numeracy pinpoint struggling with their multiplication tables. Knowing times tables off by heart is vital if your child wants to improve numeracy as well as their mental maths. Songs, rhymes and raps are a really good way to introduce recall, there are hundreds of ideas online if you are not sure.

The importance of repetition is important so that the calculations embed into the child's long-term memory. The Prescot School's homework policy is that students should be spending 20 – 30 minutes an evening working on numeracy. Helping to learn times tables in this period would be really valuable to students who are struggling.

The times table grid below shows the tables a student should know by the end of their secondary education. Ask your child if they notice any patterns in the grid which may aid learning, such as all the numbers in the 5 times table end with 5 or 0. They may notice the digits of the numbers in the 3, 6 and 9 times tables add together to give that number, or a multiple of it.

Times Table - 15x15

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
1	**1**	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2	2	**4**	6	8	10	12	14	16	18	20	22	24	26	28	30
3	3	6	**9**	12	15	18	21	24	27	30	33	36	39	42	45
4	4	8	12	**16**	20	24	28	32	36	40	44	48	52	56	60
5	5	10	15	20	**25**	30	35	40	45	50	55	60	65	70	75
6	6	12	18	24	30	**36**	42	48	54	60	66	72	78	84	90
7	7	14	21	28	35	42	**49**	56	63	70	77	84	91	98	105
8	8	16	24	32	40	48	56	**64**	72	80	88	96	104	112	120
9	9	18	27	36	45	54	63	72	**81**	90	99	108	117	126	135
10	10	20	30	40	50	60	70	80	90	**100**	110	120	130	140	150
11	11	22	33	44	55	66	77	88	99	110	**121**	132	143	154	165
12	12	24	36	48	60	72	84	96	108	120	132	**144**	156	168	180
13	13	26	39	52	65	78	91	104	117	130	143	156	**169**	182	195
14	14	28	42	56	70	84	98	112	126	140	154	168	182	**196**	210
15	15	30	45	60	75	90	105	120	135	150	165	180	195	210	**225**

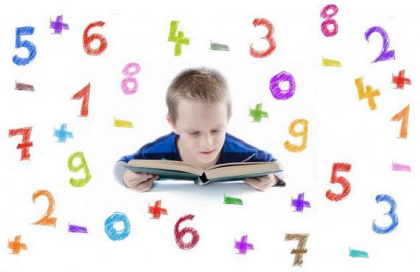
Another useful strategy is ‘The rule of cummutativity’. This means the order the numbers appear in a multiplication does not affect the answer. So if your child knows 2 x 8 = 16, they also know 8 x 2 = 16 too. This fact then leads onto your child developing division skills as if they know 2 x 8 = 16 then they will know 16 ÷ 2 = 8 or 16 ÷ 8 = 2.

What support can I get?

The first thing to do is to speak to your child's Mathematics teacher who will be able to guide you in the areas your child may need support in. The Prescot School Maths department utilise an online website called Mathswatch. This has various videos and online questions that students can work through to aid them in their learning. There is a link to a user guide on our website showing you how to access and work with Mathswatch.

We have also provided links to various numeracy websites, that can be used to get ideas and support. Regardless of the age of your child, it is important to try and make numeracy relevant to them as well as fun. Don't be afraid to utilise activities that may be aimed at younger children, if they can support your child then they are appropriate.

We have also included glosseries of mathematical terms you may come across, as you are supporting your child. This glossary has been developed for parents and carers of children and young people in the broader general education in schools. This includes nursery through to year 11 in secondary schools. It provides clear definitions of some of the commonly used terms in numeracy and mathematics. The glossary may also be useful to any others who have an interest in the learning and teaching of numeracy and mathematics, including teachers and learners.



How can I help my child with their homework?

Why is homework important?

Numeracy underpins all aspects of number work. This is applicable to ALL subjects across the curriculum; as well as homework. Homework is provided as an extension to in school learning. Regularly access your child's Class Charts account and visit the 'my homework calendar' section to see what has been set and the date it is due.

ClassCharts

At the Prescot School, your child is likely to be encouraged to engage with a Subject Knowledge Organiser (SKO). This consists of learning key terminology, definitions and examples linked to a particular topic and scheme of work.

An example of an SKO can be seen below:

Year 7- Autumn - Mathematics (Access) – Analysing & displaying data, Calculating, Expressions & Formulae, Graphs

Starting the year with all things number! But before doing any calculations you will see how to analyse this with some statistical skills. From there we move from numbers to letters, why letters I hear you ask! Time to find out.

	Key term	Definition
Types of Data	Qualitative	**Non – numerical** data
	Quantitative	**Numerical** data
	Continuous	Data that can take **any numerical value** within a given range
	Discrete	Data that can take **only specific values** within a given range
	Grouped Data	Data that has been **bundled in to categories.**
	Primary	**Collected yourself** for a specific purpose
	Secondary	**Collected by someone else** for another purpose
Displaying Data	Pictogram	Uses **pictures** or symbols to **show the value** of the data.
	Bar Chart	Represents data as vertical blocks of equal width and equal spacing between.
	Tally Chart/ **Frequency Table**	A record of **how often each value** in a set of data **occurs.**
Averages	Mean	**Add** up the values and **divide** by how many values there are.
	Median	The **middle** value. (Must be in numerical order first)
	Mode	**Most** frequent/common
Spread	Range	The **difference** between the highest and smallest value.

	Key term	Definition
Calculations	Integer	A **whole number** that can be positive, negative or zero
	Decimal	A number with a **decimal point** in it. Can be positive or negative
	Negative Number	A number that is **less than zero**. Can be decimals
	Addition	To find the **total,** or **sum,** of two or more numbers. 'add', 'plus', 'sum'
	Subtraction	To find the **difference** between two numbers. 'minus', 'take away', 'subtract'
	Multiplication	Can be thought of as **repeated addition.** 'multiply', 'times', 'product'
	Division	Splitting into equal parts or groups. 'divide', 'share', 'quotient'
	Remainder	The amount '**left over**' after dividing one integer by another.
	BIDMAS	An acronym for the **order** you should do calculations in.
	Indices	Also known as 'powers' or 'orders'
	Place Value	The **value** of where a **digit** is within a number
	Place Value Columns	The names of the columns that **determine the value of each digit.**

Having regular discussions about your child's homework and encouraging them to learn key terminology will help to secure knowledge and understanding of a topic. You can support your child at home by regularly testing them using the SKO and monitoring their Quizlet scores.

Advice: Developing a homework routine.

- Choose a suitable homework time which fits with both you and your child.
- Choose a suitable place for your child to complete homework.
    - Is it a quiet place?
    - Is it comfortable?
- Make sure homework isn't left until the last minute.
- Make sure your child is clear about the homework they have been set – you can check this on 'Show My Homework' on Class Charts.
- Ensure your child has suitable equipment, e.g. pen, pencil, paper.
    - **Remember, if your child needs access to a computer, they can attend after school homework club in the Library Monday- Thursday 2:40pm-4:00pm with Ms Phillips.**
- Encourage your child to do their homework themselves, offering suggestions and support where needed.
- Praise your child's efforts where appropriate.
- If you have any worries contact your child's teacher and discuss your concerns further.

Should you wish to contact your child's teacher further; it is best to do so via the school office or through the school email system:
info@prescotschool.org.uk

We strive to answer any communication within 2 working days.