



How do we teach Maths in Northside?

PARENTS WORKSHOP
TUESDAY 22ND NOVEMBER 2022

First of all.... A disclaimer!

- ▶ In today's workshop, we will:
- ▶ Discuss the 3 main areas of the National Curriculum for Maths
- ▶ Talk about the mastery approach
- ▶ Talk about a typical Maths lesson
- ▶ Show you our Northside Maths curriculum
- ▶ Share some resources that we use in school
- ▶ Share some resources that you can use at home
- ▶ Share some useful websites
- ▶ Share some useful games/activities that you can try out at home

Why do we learn Maths?

- ▶ Always draw out real life links to Maths around your home
- ▶ Talk about how you use Maths in your job!
- ▶ Point out that their dream job involves Maths!
- ▶ Be positive about Maths!

There are 3 main strands in the Maths National Curriculum

- ▶ Fluency
 - ▶ Reasoning
 - ▶ Problem solving
-
- ▶ Our lessons aim to involve all 3 skills every single lesson.
 - ▶ Maths is so much more than providing the correct answer!

Our Northside Maths Curriculum

- ▶ Where can we find it?
- ▶ We follow the Mastery approach (inspired by the Maths taught in Singapore)
- ▶ We use 'White Rose' to help us to sequence and plan our lessons.

The mastery approach:

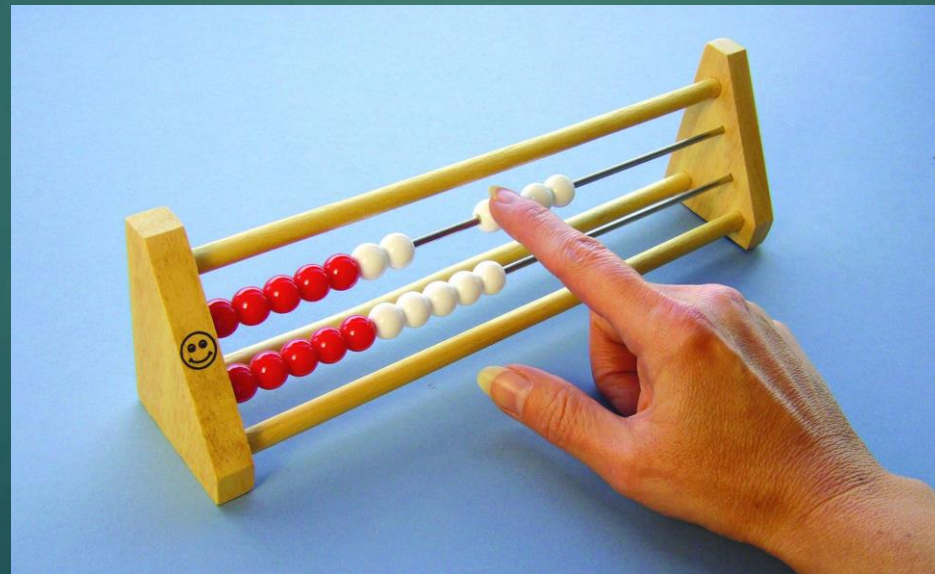
- ▶ Everyone can succeed at Maths!
- ▶ We break down concepts into 'small steps.'
- ▶ We explain Maths concepts using visuals and equipment.
- ▶ We give the children lots of short tasks 'the ping pong approach.'
- ▶ We provide the children with 'stem sentences.'
- ▶ We ask them to repeat phrases 'I say, you say'
- ▶ We constantly assess the children in every lesson and fill any gaps.

A typical Maths lesson in Northside

- ▶ Early Years
- ▶ Sing songs, play games etc
- ▶ Lots of hands on tasks
- ▶ Maths is everywhere!

Reception, Year 1 and Year 2 Mastering Number

Children have short 10 minute activities as part of 'Mastering Number' tagged onto their Maths lessons to develop their fluency skills.



How is my child stretched if they already know how to count all of the numbers up to 10 or 20?

We 'delve deeper' into topics rather than going on to the next year group's learning.

Some new terminology!

Subitizing

The ability to 'see' a small amount of objects and know how many there are without counting.



"5"

What can you see?

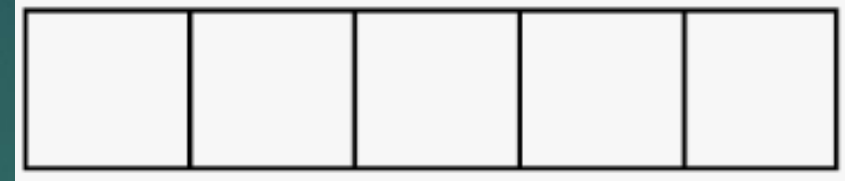
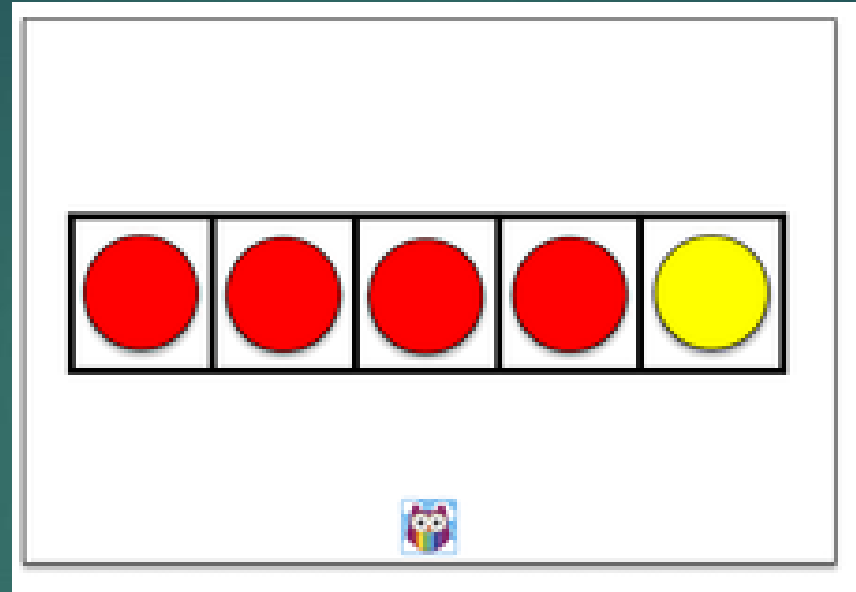
▶ Subitising

Say what you see! Let's have a go!

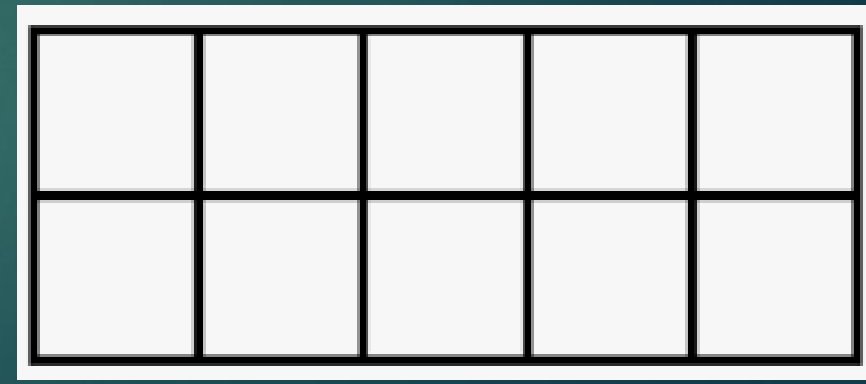
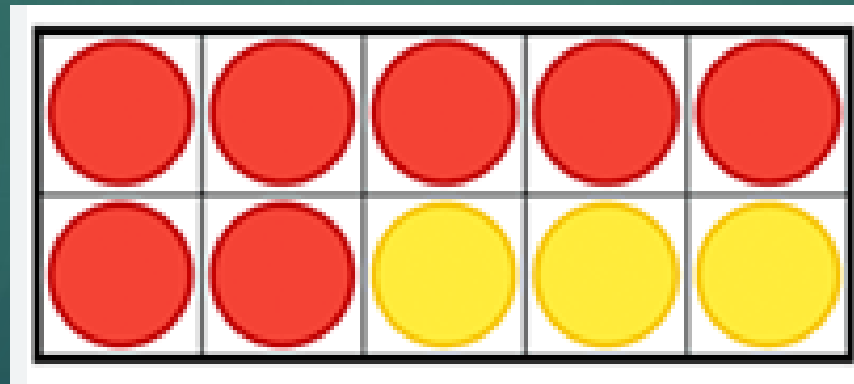
▶ https://www.youtube.com/watch?v=RHm_7YdGt80

Visuals:

Fives frames



Tens frames

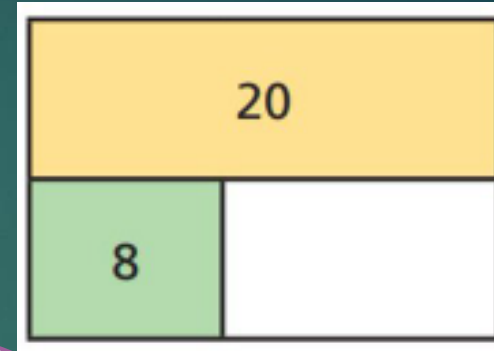


Across the school, we use manipulatives to model, encourage jottings and then move onto the abstract after this.

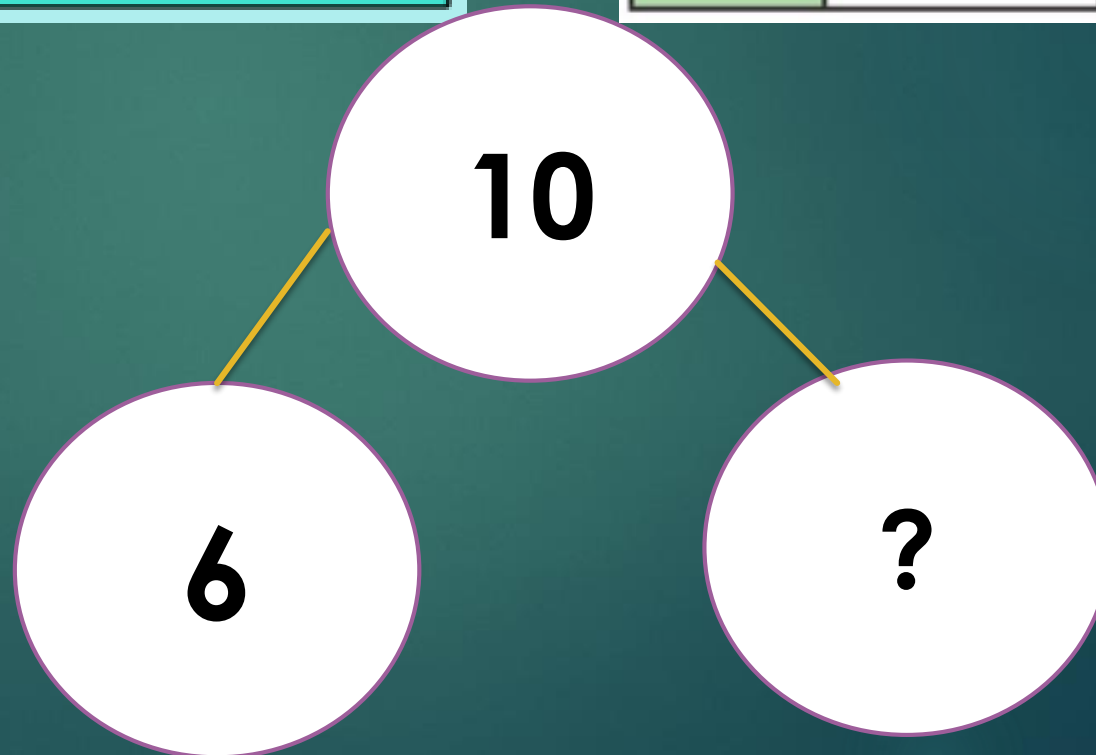
Concrete
Pictorial
Abstract

Watch my demo for finding $\frac{1}{2}$ of numbers up to 20

Bar models



Part/ whole models



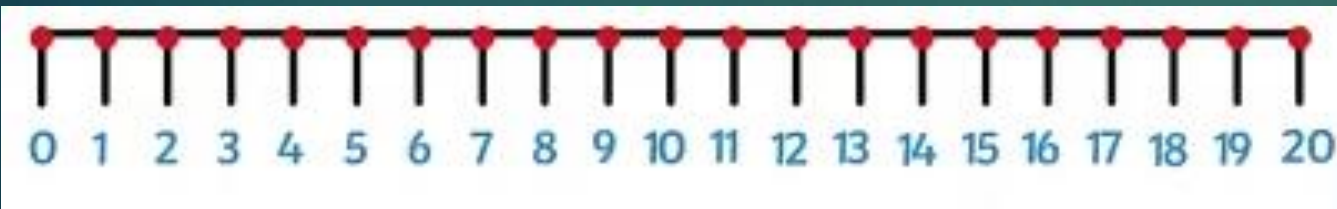
Times table grids

▶ 100 squares

▶ Number lines

X	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



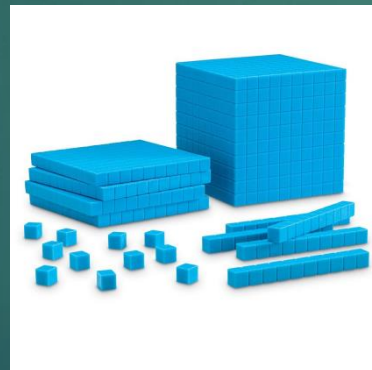
Resources used in class (manipulatives)

- ▶ Bead strings
- ▶ Counters

Numicon



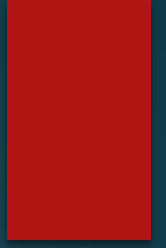
- ▶ Dienes/
Base 10



- ▶ Multilink



Use the Numicon on your table to
find number bonds to 10



Resources that you can use at home to support your children:

- ▶ Lego can be used as multilink.
- ▶ Group everyday items into sets to understand division, remainders, multiplication etc.



Eg 14 divided by 2 = 7

Encourage your child to **draw** the problem.

1/3 of 9 =

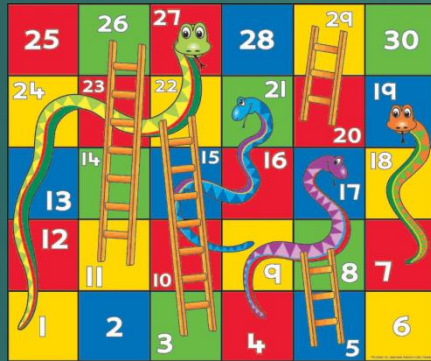


- ▶ Also, encourage them to use their fingers!

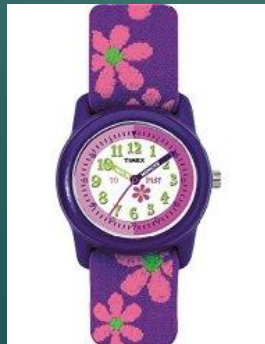


Other everyday resources that can help your child's Maths skills at home

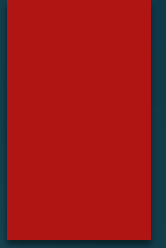
- ▶ Board games and card games encourage your children to **reason**



- ▶ Find an analogue watch and refer to the time



A quick game of 21!



Using money:

- ▶ Allow your children to use real coins.
- ▶ Can they work out which coins they will need to buy something?
- ▶ Can they use the smallest number of coins?
- ▶ Can they calculate their change?



Calculation policy

- ▶ The calculation policy for each year group can be found on your child's class page in the 'Useful documents' section.
- ▶ Please sign the register today (with your child's name and year group) and then we can give you a copy of the calculation policy for their class.



SATS

- ▶ Tests are given to Year 2 and Year 6 students in May/June.
- ▶ Children are given arithmetic and reasoning papers.
- ▶ In the exam – children will not be allowed to use any counting resources. However they need to use them in class first of all to support their understanding.

Understanding multiplication and recalling times table facts are key!

- ▶ Division
 - ▶ Fractions
 - ▶ Ratio
 - ▶ Proportion
 - ▶ Percentages
 - ▶ Decimals
 - ▶ Algebra
 - ▶ Converting measures
-
- ▶ All of these topics (and more) stem from multiplication!!!

Year 4 Multiplication Table Check

- ▶ Year 4 will sit a statutory test in June.
- ▶ There will be 25 mixed questions up to 12×12
- ▶ They will only have 6 seconds per question!
- ▶ They will use an ipad to type in their answers
- ▶ 'Practise makes perfect'

Times table apps:

▶ Times Table Rockstars

▶ Hit the button

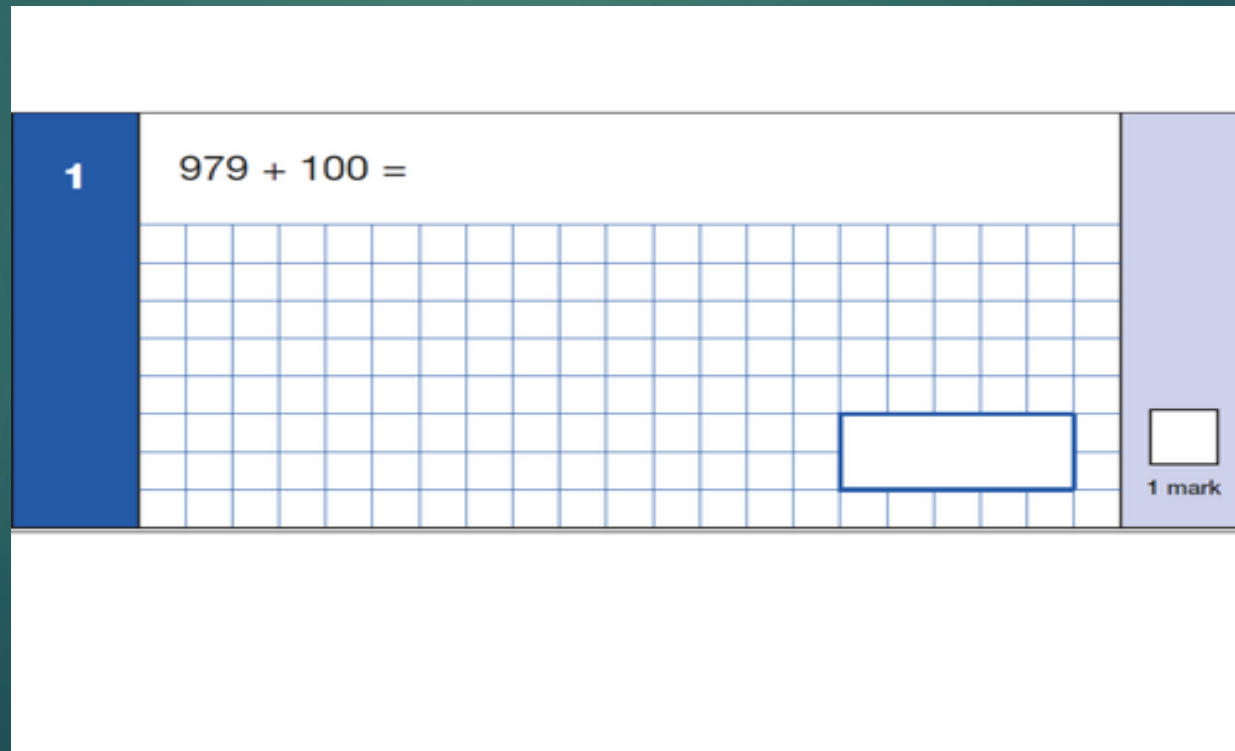
▶ Topmarks

▶ Mathsframe Multiplication Tables Check (click adjust difficulty)

The screenshot shows the 'Multiplication Tables Check' app interface. At the top, the title 'Multiplication Tables Check' is displayed in large, bold, red letters. Below the title, there is a grid of buttons for selecting a multiplication table. Each button is labeled with a number followed by 'Times Table' (e.g., '2 Times Table', '3 Times Table', etc.). A green checkmark is visible on the left side of each button, indicating that all tables from 2 to 12 are available. A 'Clear All' button is located at the bottom right of the grid. Below the grid, there is a white box with a black border containing the text: 'You will have 6 seconds to answer and there will be 25 questions.' The numbers '6' and '25' are highlighted in red. On either side of the text are plus and minus signs in square boxes, used for adjusting the values. At the bottom of the interface is a large, grey 'Begin' button.

Arithmetic questions:

- ▶ Children are encouraged to show their working out.
- ▶ They can draw diagrams if they wish to help them to solve problems.
- ▶ **Example:**



1 979 + 100 =

1 mark

The screenshot shows a digital interface for an arithmetic question. On the left, a blue vertical bar contains the number '1'. To its right, the equation '979 + 100 =' is displayed. Below the equation is a large grid of small squares for working out. On the right side of the grid, there is a rectangular box for the answer. Further to the right, in a light purple vertical bar, there is a small square box for the mark, with the text '1 mark' below it.

Reasoning questions:

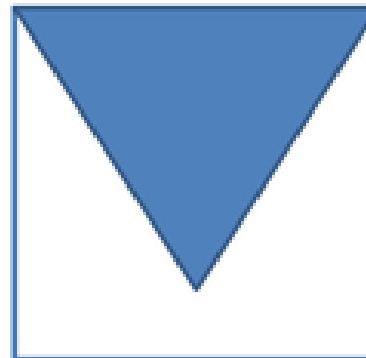
- ▶ There is a big emphasis on reasoning/problem solving in the Maths curriculum.
- ▶ Children need to be able to explain their thinking. What do they know?
- ▶ We encourage children to use the correct mathematical language in their answers.
- ▶ **Examples:**

1 Here is a square.

Inside the square is an equilateral triangle.

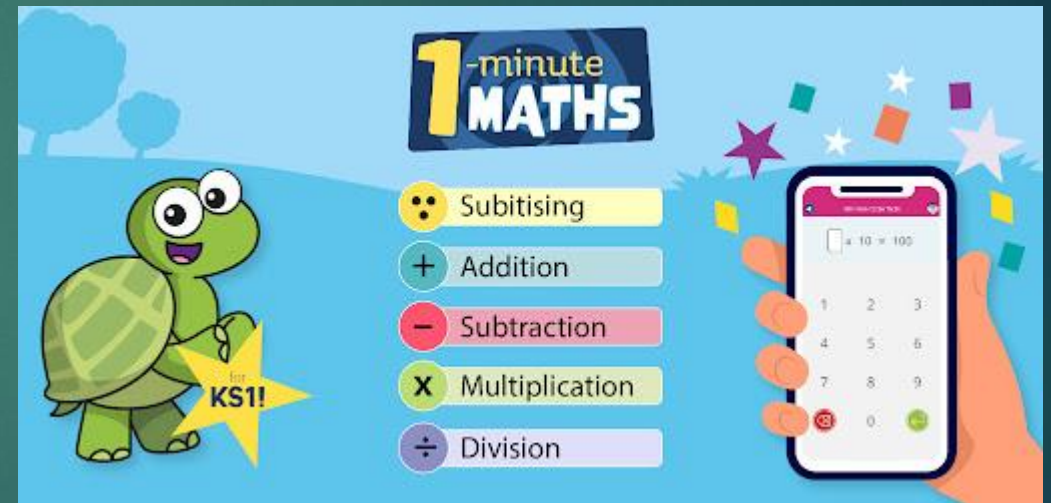
The perimeter of the triangle is 54cm.

Find the perimeter of the square.



Useful websites you can use at home:

- ▶ Mathematics (always use a pencil and paper to make jottings) or use real life objects to help
- ▶ 1 Minute Maths app
- ▶ Toy Theater (online manipulatives)
- ▶ Mathsbot (online manipulatives)
- ▶ Topmarks (different topics)
- ▶ Nrich (challenging tasks)



Please come and see me if you have any questions!

- ▶ Please have a look at the activities set up and feel free to 'have a go!'
- ▶ Feel free to email me if you have any Maths related questions/queries/Mathletics/ Times Table Rockstar issues.
- ▶ Abennett@northsideprimary.co.uk
- ▶ Thank you for coming!