

Alwyn Infant School

Maths Presentation 2024

How to support your child with maths at home

Why is maths so important?

It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.'

(The National Curriculum)

Areas of maths

- Number and place value
- Calculation and mental facts
- Understanding number
- Geometry (space, shape and measure)
- Measure
- Statistics starts in Y2
- Using and applying runs through all of the above maths sections

Today, we'll focus on areas that will help you to understand how to support your child at home with maths.

CPA - Concrete Pictorial Abstract Approach to teaching maths

- Building understanding is very important in maths.
- Concrete apparatus is vital to help children to make connections to what numbers mean and 'to see' the maths
- Children have opportunities to explore the maths using concrete apparatus and pictorial representations
- When more secure with their understanding of the maths, they will approack the maths in a more abstract way.
- Abstract concepts include using written maths and mental maths to solve a variety of calculations and problems.
- Concrete, pictorial and abstract stages work together or on their own, for example you might have concrete apparatus on a partwhole model and also draw a part-whole model alongside to build understanding (see picture).







 Numicon is used here to show pairs/bonds of 10 (how many different ways you can combine 2 numbers to make 10)

H		H		
H	H			
00	60	60	50	
5+5	6+4	7+3	8+2	9+1

Numicon is used to show the place value of numbers - the blue 10 piece is showing that the 1 in 13 stands for 1 ten, or the 2 in 20 stands for 2 tens



Maths Resources we use at Alwyn

Bead strings

- These are super for showing what counting means - counting in 1 means moving 1 bead at a time, counting in 2s means moving 2 beads at a time...
- They are also great for adding and subtracting.



13 + 5 29 - 14

Dienes blocks

- We may also call these tens and ones blocks
- They are used for showing the value of 2-digit numbers, for example the picture below shows 57 with 5 tens and 7 ones.
- We also use these to add and subtract 2-digit numbers, before moving onto drawing them out



Maths Resources we use at Alwyn Rekenreks

- We're part of the Mastering Number programme this year, in Rec, Y1 and Y2!
- We are excited to see how it helps children to move away from counting, help build relationships between numbers, explain their mathematical thinking in words and especially excited to see how it will help develop and secure key number facts.



Maths Resources we use at Alwyn











3

X

S

0

18V

Maths resources we use at Alwyn Number tracks, number lines, 100 squares





	2	3	4	5	6	7	8	9	10
Ш	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

Fives frames and tens Frames















- These help children to build calculation skills and rely less on counting.
- Fives frames 5 spaces for children to place counters onto
- Tens frames can be arranged in a five-wise pattern where you fill up the top row of 5 first then fill up the bottom row
- Tens frames can be arranged in a pair-wise pattern where you fill up in twos - this links well to Numicon shapes

Part-whole models Bar models

• The 2 parts add together to make the whole.



Activities... 12 Tens and ones frames to show place value



Recording How we draw a 2-digit number.



Year 1 would draw Numicon shapes as shown in the picture, or dienes blocks mixed with circles.

12

- We encourage children to draw circles rather than blocks for ones as they are quicker and easier to draw.
- Year 2 would draw lines and circles.

Using manipulatives to show adding Adding frame and dienes

14 + 12



Representing subtraction 35 - 13 = Manipulatives and then drawing this out



Dienes - can practically take away



Drawing out - we cross out to show subtraction

Helping children with Mental Maths: Counting

Practise counting forwards and backwards:

in 1s

in 2s

in 5s

in 10s

- In Y2, practise counting forwards and backwards in 10s from different starting numbers
- ▶ In Y2, practise counting in 3s
- Counting on to add!

Helping Children with Mental Maths: What are number bonds?

- Children need to know addition and subtraction facts for all numbers up to 10 by the end of Y2. They then use the bonds of 10 to work out bonds of 20 and of 100 (multiples of 10 - 40 + 60).
- Example: bonds of 5
- ▶ 0 + 5 = 5
- ▶ 1 + 4 = 5
- ► 2 + 3 = 5
- ▶ 3 + 2 = 5
- ▶ 4 + 1 = 5
- ► 5 + 0 = 5

They also need to learn the matching subtraction facts.

Helping children with Mental Maths: Number Bonds - games or an abacus.

Dice games:

- Play board games using 2, rather than 1 dice.
- Or, just roll 2 dice and say the answer.
- Use dominoes ask your child to find all the dominoes that are showing pairs of 8 for example.



How to help your child learn number bonds:



Cards games:

- Memory game put all cards face down and turn over 2 at a time.
- Snap call out snap when you find 2 numbers that add up to the number you are making.

4 + 2

- Flash cards hold up number pairs for your child to answer.
- Write the answers at the back of the cards and your child could practise them independently.

Helping children with Mental Maths: Times Tables

- Children in Y2 need to know their 2X, 5X and 10X tables.
- Help them to look for patterns 5x tables end in fives or zeros.
- Make links with counting holding up 3 fingers to help with 10 X 3
- Card games make a set of X table cards, put answer on the back.
- Write times tables out and put them on your steps for children to see as they walk up



2 TIMES TABLE 🕻

2 X	0	=	0
2 X	1	=	2
2 X	2	=	4
2 X	3	=	6
2 X	4	=	8
2 X	5	=	10
2 X	6	=	12
2 X	7	=	14
2 X	8	=	16
2 X	9	=	18
2 X	10	=	20



2ND GRADE

Other fun activities to try at home...

Look at coins - pocket money to pay and get change.

Measure: bake or cook (weighing) & capacity, measure height.





Play board games and games with dice! Why? Subitising and helps with understanding number tracks and 100 squares.

Look out for numbers in the environment.







Questions

Thank you for coming