

St Barnabas' CE Primary School & Nursery



Parent Maths Workshop

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How we teach Maths at St. Barnabas'

- We follow the National Curriculum
- White Rose N - Y6
- Arithmetic Friday for Y1 -Y6
- EYFS: Early Learning Goals
- Outdoor learning area in EYFS - hands on outdoor Maths

Educational programme under 7 areas of learning:

By providing **frequent and varied** opportunities to build and apply this understanding - such as using **manipulatives**, including **small pebbles** and **tens frames** for organising counting - children will develop a **secure base of knowledge and vocabulary** from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for our pupils to develop their **spatial reasoning skills** across all areas of mathematics including **shape, space and measures**. It is important that our pupils **develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk** to adults and peers about what they notice and not be afraid to make mistakes.

Number ELG - By the end of EYFS (Reception)

By the end of EYFS (end of Reception), children at the **expected level** of development will:

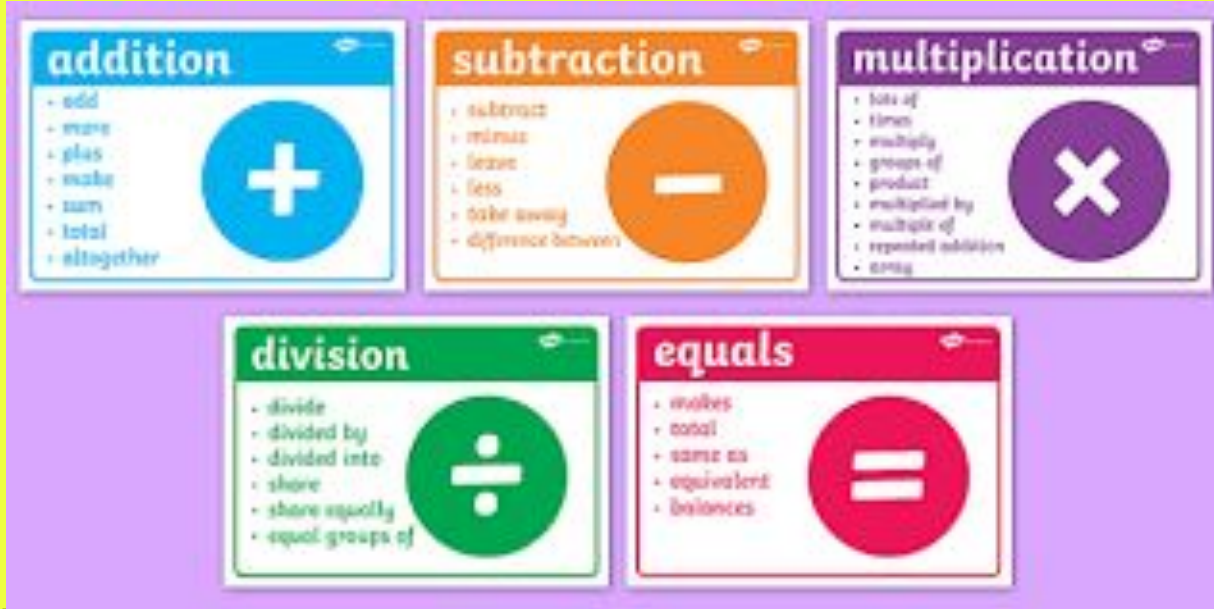
- Have a **deep understanding of number to 10**, including the **composition** of each number;
- **Subitise** (recognise quantities without counting) **up to 5**;
- **Automatically recall** (without reference to rhymes, counting or other aids) **number bonds up to 5** (including subtraction facts) and some **number bonds to 10, including double facts**.

Numerical Patterns ELG

By the end of EYFS (end of Reception), children at the **expected level** of development will:

- Verbally count beyond **20**, recognising the **pattern** of the counting system;
- **Compare** quantities up to 10 in different contexts, recognising when one quantity is **greater than, less than** or the **same as** the other quantity;
- Explore and represent **patterns** within numbers up to 10, including **even** and **odds, double facts** and how quantities can be **distributed equally (early division)**.

Focus on mathematical language and vocabulary



What is the sum?

How many are left?

If I take away 2 tens how many ones are left?

Mathematics

Number

- Have a deep understanding of number to 10, including the composition of each number.
- Subitise (recognise quantities without counting) up to 5.
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Numerical Patterns

- Verbally count beyond 20, recognising the pattern of the counting system.
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Early Learning Goals

Early Learning Goals

Communication and Language

Listening, Attention and Understanding

- Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions.
- Make comments about what they have heard and ask questions to clarify their understanding.
- Hold conversation when engaged in back-and-forth exchanges with their teacher and peers.

Speaking

- Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.
- Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate.
- Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modeling and support from their teacher.

Understanding the World

Past and Present

- Talk about the lives of the people around them and their roles in society.
- Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class.
- Understand the past through settings, characters and events encountered in books read in class and storytelling.

People, Culture and Communities

- Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps.
- Know some similarities and differences between different religious and cultural communities in this country, drawing on their experiences and what has been read in class.
- Explain some similarities and differences between life in this country and life in other countries, drawing on knowledge from stories, non-fiction texts and (when appropriate) maps.

The Natural World

- Explore the natural world around them, making observations and drawing pictures of animals and plants.
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Personal, Social and Emotional Development

Self-Regulation

- Show an understanding of their own feelings and those of others, and begin to regulate their behaviour accordingly.
- Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate.
- Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions.

Managing Self

- Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.
- Explain the reasons for rules, know right from wrong and try to behave accordingly.
- Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.

Building Relationships

- Work and play cooperatively and take turns with others.
- Form positive attachments to adults and friendships with peers.
- Show sensitivity to their own and to others' needs.

Expressive Arts and Design

Creating with Materials

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
- Share their creations, explaining the process they have used.
- Make use of props and materials when role playing characters in narratives and stories.

Being Imaginative and Expressive

- Invent, adapt and recount narratives and stories with peers and their teacher.
- Sing a range of well-known nursery rhymes and songs.
- Perform songs, rhymes, poems and stories with others, and (when appropriate) try to move in time with music.

Mathematics

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Numerical Patterns

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Physical Development

Gross Motor Skills

- Negotiate space and obstacles safely, with consideration for themselves and others.
- Demonstrate strength, balance and coordination when playing.
- Move energetically, such as running, jumping, dancing, hopping, skipping and climbing.

Fine Motor Skills

- Hold a pencil effectively in preparation for fluent writing - using the tripod grip in almost all cases.
- Use a range of small tools, including scissors, paintbrushes and cutlery.
- Begin to show accuracy and care when drawing.

Literacy

Comprehension

- Demonstrate understanding of what has been read to them by retelling stories and narratives using their own words and recently introduced vocabulary.
- Anticipate (where appropriate) key events in stories.
- Use and understand recently introduced vocabulary during discussions about stories, non-fiction, rhymes and poems and during role play.

Word Reading

- Say a sound for each letter in the alphabet and at least 10 digraphs.
- Read words consistent with their phonic knowledge by sound-blending.
- Read aloud simple sentences and books that are consistent with their phonic knowledge, including some common exception words.

Writing

- Write recognisable letters, most of which are correctly formed.
- Spell words by identifying sounds in them and representing the sounds with a letter or letters.
- Write simple phrases and sentences that can be read by others.

White Rose Maths: KS1 and KS2

Calculation Policy:

<https://assets.whiteroseeducation.com/new-schemes/WRM%20calculation%20policy%202024%20All%20year%20groups.pdf>

Schemes of Learning:

<https://whiteroseeducation.com/resources?subject=primary+maths&year=reception#filters>

Week	1	2	3	4	5	6	7	8	9	10	11	12
Number	Starting to know you		March, sort and compare		Talk about measure and patterns		It's me 1, 2, 3		Count and arrange		1, 2, 3, 4, 5	
Shape												
Measurement												
Statistics												

Week	1	2	3	4	5	6	7	8	9	10	11	12
Number	Place value (within 10)				Addition and subtraction (within 10)							
Shape												
Measurement												
Statistics												

Week	1	2	3	4	5	6	7	8	9	10	11	12
Number	Place value				Addition and subtraction							
Shape												
Measurement												
Statistics												

Week	1	2	3	4	5	6	7	8	9	10	11	12
Number	Place value				Addition and subtraction							
Shape												
Measurement												
Statistics												

EYFS

Year 1

Year 2

Year 3

Week	1	2	3	4	5	6	7	8	9	10	11	12
Number	Place value				Addition and subtraction							
Shape												
Measurement												
Statistics												

Week	1	2	3	4	5	6	7	8	9	10	11	12
Number	Place value				Addition and subtraction							
Shape												
Measurement												
Statistics												

Week	1	2	3	4	5	6	7	8	9	10	11	12
Number	Place value				Addition, subtraction, multiplication and division							
Shape												
Measurement												
Statistics												

Year 4

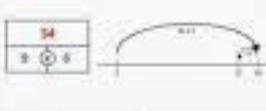
Year 5

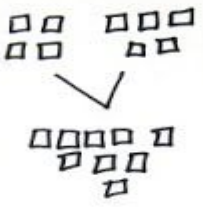
Year 6

Pictorial, abstract and concrete

Concrete, Pictorial, Abstract

Concrete	Pictorial	Abstract
		3

Concrete	Representational	Abstract															
Students manipulate hands-on, concrete materials	Students draw and observe diagrams, or watch the teacher touching and moving hands-on materials	Numbers and mathematical symbols															
 	 	<table border="1"><thead><tr><th colspan="5">x 4 Patterns</th></tr></thead><tbody><tr><td>4</td><td>8</td><td>12</td><td>16</td><td>20</td></tr><tr><td>24</td><td>28</td><td>32</td><td>36</td><td>40</td></tr></tbody></table> 8×5 $(4 \times 2) \times 5$ $4 \times (2 \times 5)$ 4×10 40 $45 \div 5$ $(50 - 5) \div 5$ $(50 \div 5) - (5 \div 5)$ $10 - 1$ 9	x 4 Patterns					4	8	12	16	20	24	28	32	36	40
x 4 Patterns																	
4	8	12	16	20													
24	28	32	36	40													

concrete	Representational	Abstract
①  ② 		$4 + 5 = 9$

Mastering the curriculum

I can count to 10.

- Can you do it with missing numbers? Can you do the inverse to check the answer?
- How can you represent this in different ways?
- Can you solve it in a word problem?
- Can you explain why $5 + 5$ equals 10?
- Can you count on from/back from a number?
- Can you count in 2s, 5s to 10?

Challenges to master the curriculum

True or False?

These four calculations have the same answer.

$$1 + 4 + 2$$

$$4 + 2 + 1$$

$$2 + 4 + 1$$

$$4 + 1 + 2$$

These four calculations have the same answer.

$$7 - 3 - 2$$

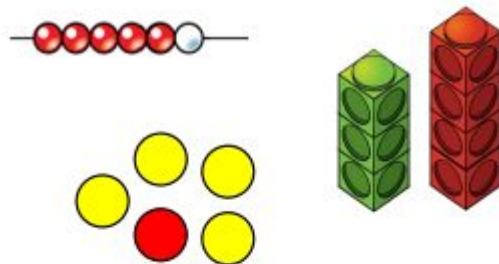
$$2 - 3 - 7$$

$$3 - 2 - 7$$

$$7 - 2 - 3$$

Year 3

Year 1



$$\underline{\quad} + \underline{\quad} = 6$$

Which of the images could help to complete the number sentence?
Explain why.

Can you think of a number sentence for each of the other two images?

Work out the missing numbers.

	?	4	?	3	?
+	2	?	5	?	2
	7	8	5	2	9

Year 6

Reasoning examples

When you count in 5s, will you say 57?

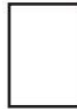
No, **because** when I count in 5s my numbers will end in 5 and 0. 57 ends in 7 and this is not part of the 5 times table.

$$\frac{6}{5} \quad \frac{3}{5} \quad \frac{3}{4}$$

Write these fractions in order, starting with the **smallest**.



smallest



How do you know you are correct?

Explain using mathematical vocabulary.

Reasoning in Addition Puzzle E

			7
			6
			4
4	7	6	

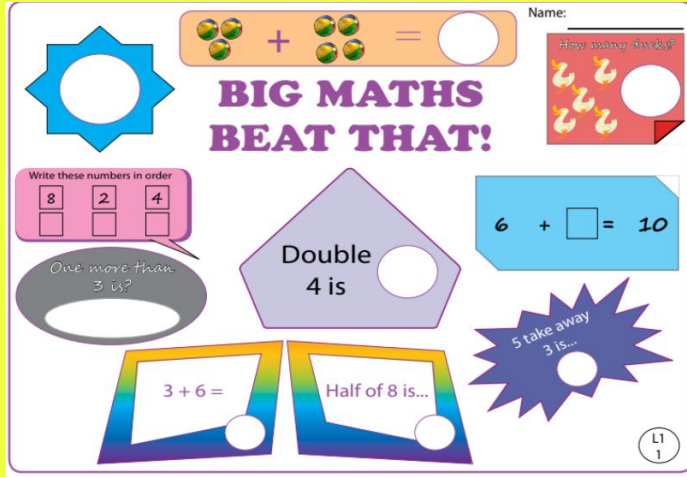
 =

 =

 =

What is each symbol worth? How can you check your Answer? Can you now make your own?

Arithmetic Friday - times tables, number bonds, mental maths, supports column methods etc


 A colorful worksheet for KS1 students. It features a blue star, a pink box with numbers 8, 2, and 4, a purple house shape, a blue box with a math problem, a purple starburst, and two rainbow-colored boxes. The title 'BIG MATHS BEAT THAT!' is in large purple letters.

BIG MATHS BEAT THAT!

Name: _____

How many chicks? 

Write these numbers in order
8 2 4

One more than 3 is?

Double 4 is

6 + = 10

3 + 6 =

Half of 8 is...

5 take away 3 is...

L1 1

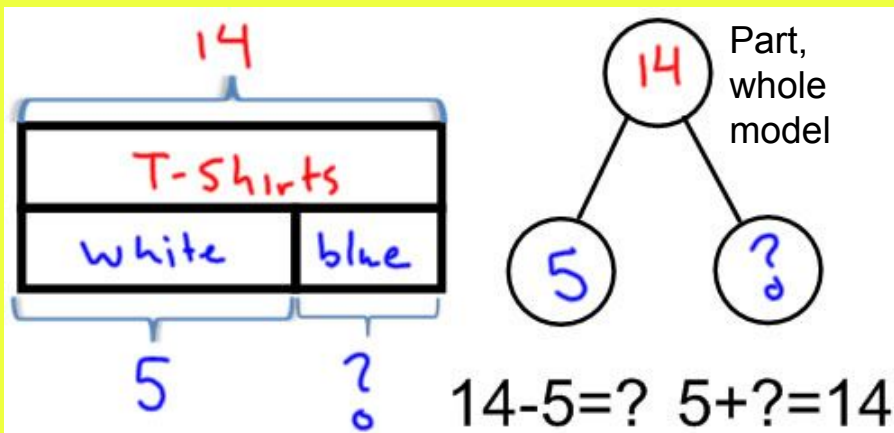
KS1

1	$3 \times 2 =$			1	10	$687 - 10 =$		
2	$80 \div 10 =$			1	11	$17 + \underline{\quad} = 20$		
3	$7 \times 3 =$			1	12	$20 - 6 =$		
4	$24 \div 3 =$			1	13	$5 + 3 + 6 =$		
5	$3 \times 4 =$			1	14	$659 - 263 =$		
6	$16 \div 4 =$			1	15	$463 + 238 =$		
7	$11 \times 8 =$			1	16	$45 + \underline{\quad} = 76$		
8	$64 \div 8 =$			1	17	$56 - \underline{\quad} = 38$		
9	$405 + 10 =$			1	18	$\frac{4}{10} + \frac{3}{10} =$		

KS2

Bar model

Maths equipment and strategies



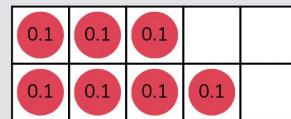
Numicon

100 square

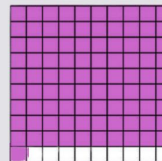
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Ten frame

0.6 on a ten frame
(six tenths)



0.91 on a 100 square
(ninety-one hundredths)



$$1 \frac{2}{3} = \frac{5}{3}$$

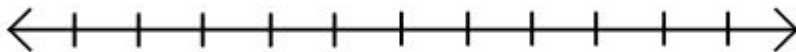
A part-whole model showing a circle labeled $1 \frac{2}{3}$ at the top, connected by lines to two circles below: one labeled 1 and the other labeled $\frac{2}{3}$.

$$\frac{3}{3} + \frac{2}{3} = \frac{5}{3}$$

Finding fractions of an amount using bar models



Sami has 12 balloons. $\frac{2}{3}$ of them are green. How many are green?



Number line

Real life Maths

- Telling the time
- Working out 20% in the sale
- If I buy 10 cans for 50p how much money is in total?
- Argos catalogue: How many things can you buy with £10?
- Let's count all the red cars we see. Let's count how many wheels are on the bus...
- Baking: 100 g of flour, 250 g of butter...
- Which shapes do you see?
- CBBC starts at 6pm. Now it's 5:15. How many minutes do you need to wait for your program to start?

Questions



If you think of any questions later, contact the office and I will get back to you.

office@stbarnabasprimary.org.uk