

Year 3-4 Parents' Workshop



1

Aims



- To share mathematical vocabulary
- To share written methods of addition and subtraction
- To share how multiplication and division works in Year 3 and 4
- To share how you can support your children at home and an opportunity to ask questions

2

Our Approach to Maths



- Fluency – Reasoning – Problem Solving
- Concrete → Pictorial → Abstract
- Deep understanding, not tricks or shortcuts



3

Place Value – The Foundation



- Understanding the value of each digit
- Exchange, not borrow
- Regrouping across columns

Example: $45,628 = 40,000 + 5,000 + 600 + 20 + 8$

Hundreds	Tens	Ones
•••	••••	•

4

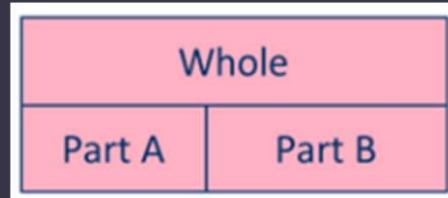
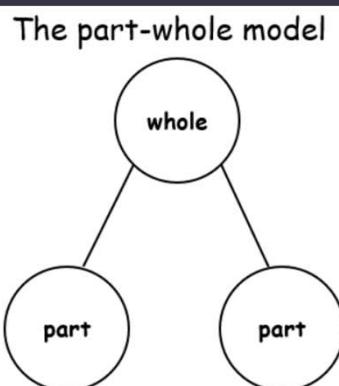
Place Value



Year	Place Value Focus
Y1	Tens and ones – numbers to 100
Y2	Hundreds, tens and ones – numbers to 1,000
Y3	Deepen understanding of 1,000 – secure use of hundreds, tens and ones
Y4	Thousands – numbers to 10,000
Y5	Hundreds of thousands – numbers to 1,000,000
Y6	Millions – numbers to 10,000,000 and decimals to 3 d.p.

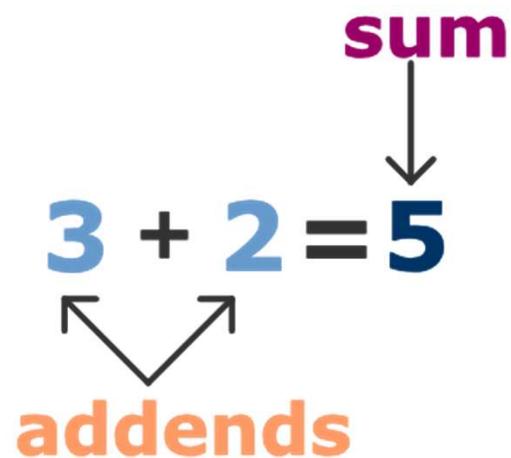
5

Representations



6

Addition vocabulary



7

Partitioning

(Make 100 first)

$$70 + 50 =$$

/ \\\
30 20

$$70 + 30 = 100$$
$$100 + 20 = 120$$

8

Column addition

$$\begin{array}{r}
 & 3 & 4 & 0 \\
 + & 1 & 9 & 5 \\
 \hline
 & 5 & 3 & 5 \\
 & & 1 & \\
 \hline
 \end{array}$$

Hundreds, tens and ones

Always start at the right

Children are taught to exchange rather than carry.

Common errors are starting at the left and forgetting the numbers that have been exchanged.

9

subtraction vocabulary

$$\begin{array}{ccc}
 \text{minuend} & \text{subtrahend} & \text{difference} \\
 \downarrow & \downarrow & \downarrow \\
 \text{13} & - & 4 = 9 \\
 \uparrow & & \uparrow \\
 \text{subtraction sign} & & \text{equals}
 \end{array}$$

10

Partitioning

(Make 100 first)

$$120 - 50 =$$

$$\begin{array}{r} 20 \\ \diagup \quad \diagdown \\ 100 \\ 30 \end{array}$$

$$120 - 20 = 100$$

$$100 - 30 = 70$$

11

Column subtraction

	4	1	4	7
-	5	1	9	5
		3	5	2

We start by looking at resources to help children understand the maths.

Children are taught to exchange rather than borrow.

Common errors are not starting at the right and swapping the numbers rather than regrouping.

12

Multiplication vocabulary

3	\times	2	=	6
factor	\times	factor	=	product

Groups of, lots of, repeated addition, multiply

13

Multiplication

Times tables are so important as children progress through school.

Children are expected to learn:

- the 2s, 5s and 10s times tables in Year 2
- the 4s, 8s and 3s times tables in Year 3
- the rest in year 4

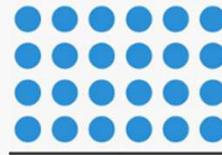
14

Multiplication: Building understanding



- Repeated addition → equal groups
→ arrays → formal methods
- Key ideas: commutativity, place value, partitioning

$$4 \times 6 \longrightarrow 6 \times 4$$



equal groups → array

$$6 + 6 + 6 + 6$$

$$4 + 4 + 4 + 4 + 4 + 4$$

15

Written Methods of Multiplication column method in year 4

Tens and ones

Write the tens number under the equal sign

Common error for children is forgetting the extra tens number

		2	6	
	X			8
		2	0	8
				4

16

Division vocabulary

30	÷	5	=	6
dividend	÷	divisor	=	quotient

Share by, equal groups of, divide

17

Using known facts

- We don't use the bus stop method until Year 5. To ensure children understand what division is we teach them how to share into equal groups. E.g. $15 \div 5$
- We also teach children that division is the inverse of multiplication so we can use known facts to divide.
e.g. A baker makes 12 cakes, he puts them in boxes of 4, how many boxes will he need?
- In year 4, children then learn to divide with reminders, using known facts.
E.g. $17 \div 5 =$

18

Helping at Home



- Count with your child, starting from a given number
- Encourage your child to explain their thinking
- Practise times tables little and often
- Use real-life maths (shopping, cooking, travel)
- Focus on understanding, not speed
- Let your child show you how they do it!

19

Useful Resources



Resource	Link	Description
Primary video example lessons	Link (NCETM)	Free short video lessons (15-20 minutes) for primary pupils, useful for home reinforcement.
In the Classroom – Materials and Guidance	Link (NCETM)	Collection of resources including guidance, progression maps and videos; parents can explore to understand methods used in school.
Oak National Academy – Parent Information	Link (Oak Academy) – Parent Info Link (Oak Academy) – Maths resources	Free resources created by Oak National Academy based on the NCETM resources used in school – video lessons for each small step.
Maths with Michael	Link (White Rose) – Maths with Michael	White Rose Maths have teamed up with TV presenter, teacher and parent Michael Underwood to bring you a mini-series called Maths with Michael which shows how Maths has changed since he was at school.

20



Thank You

Your support makes a huge difference.

Any questions before we finish?

Please complete the feedback sheets before you go.

