Maths at WHPS
Multiplication

Maths

Local leader of mathematics education – LLME

Working for 2022/23

MATHS HUBS

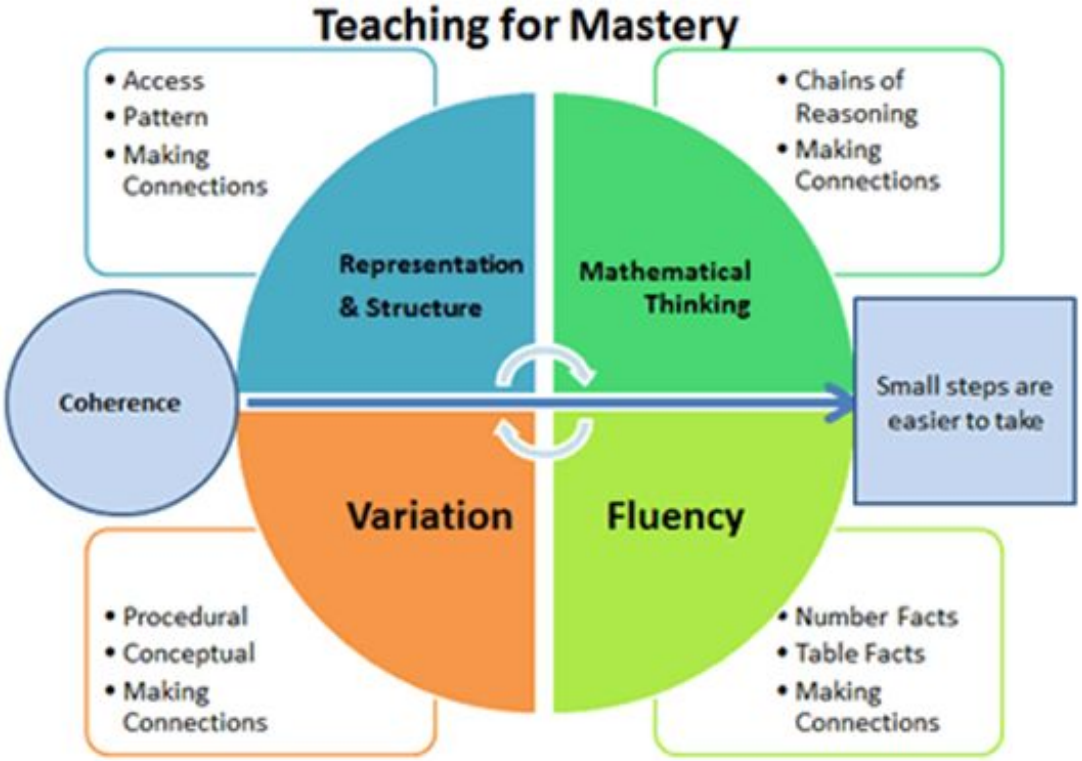
LONDON CENTRAL AND NW

- Barnet
- Camden
- Enfield
- Haringey
- Islington
- Westminster

Teaching for Mastery

Maths at WHPS - Teaching for Mastery





Maths at WHPS - Teaching for Mastery

We represent maths with physical resources and pictures.

We teach children to think mathematically.

Children's learning builds up in smalls steps.

We present maths in a variety of different ways.

We expect children to be fluent in number facts.

Maths at WHPS - Multiplication

Mathematics for young children involves developing their own understanding of number, quantity, shape and space. Babies and young children have a natural interest in quantities and spatial relations – they are problem-solvers, **pattern-spotters** and sense-makers from birth.

Birth to 5 Matters

EYFS





Firm foundations

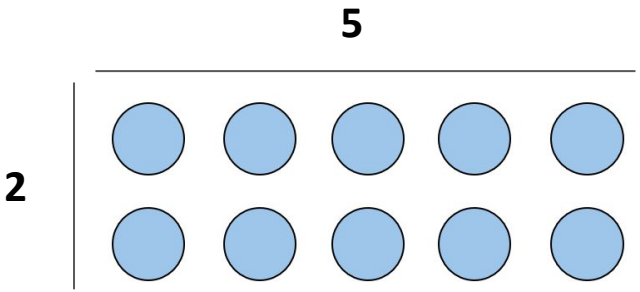
- Counting
- Grouping
- “all”
- “some”
- “the same”
- “lots”

Maths at WHPS - Multiplication

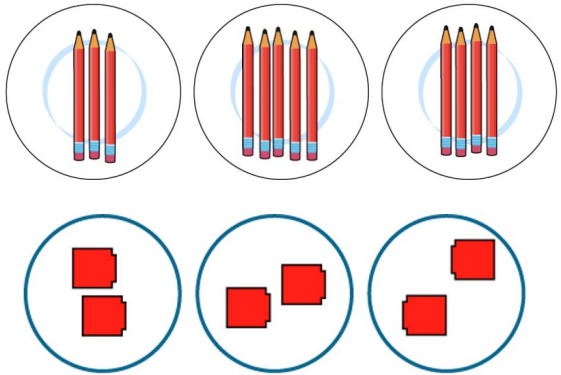
They make connections between **arrays, number patterns, and counting** in twos, fives and tens.

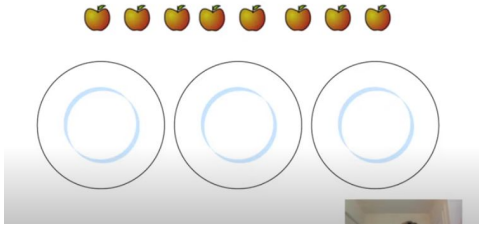
The National Curriculum for Y1

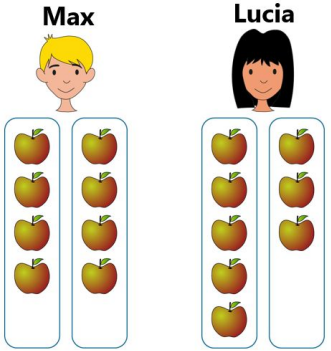
Y1



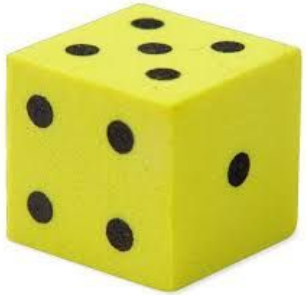
Equal or unequal groups?

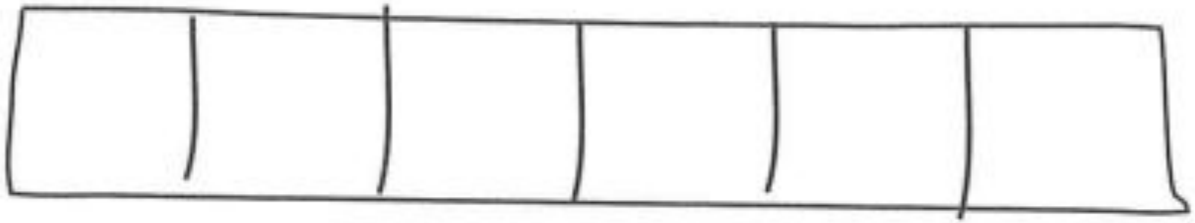






SWAPPY STRIPS





SWAPPY STRIPS

This game is straight practice of doubles - and halves!

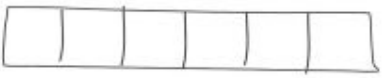
RESOURCES

- A 1-6 dice - or a 0-9 dice for a further challenge;
- A scrap of paper and pencils - or two mini whiteboards.

VARIATION
Roll two dice which means the highest total is double 12 . . . 24!

HOW TO PLAY

- Both players draw a simple game board like this on a scrap of paper, or a whiteboard. We recommend 6 boxes.



- Roll the dice. Double the number you roll and put the double in any square on your board.
- Take turns to do this until all 6 squares are full up.
- It doesn't matter if 2 or more boxes say the same number.



NOW SWAP YOUR STRIP!

- Re-roll. This time cross off a number if it is the double of the number you roll.
- You may only cross off one number on your strip per roll.
- The winner is the first person to cross out all their numbers!

VARIATION
On the crossing out roll, allow all doubles to be crossed out, so if you roll 4, cross out both 8s!



I need to roll a 4 because double 4 is 8

QUESTIONING

- What do you need to roll?
- If double 4 is 8, what is half of 8?
- If double 4 is 8, what is double 40 (use whiteboard to write out these linked calculations). Linking thinking!

VARIATION
Play it with multiples! If you're practising your 5x table, roll the dice and multiply by 5. Record the answer on your strip - and so on.

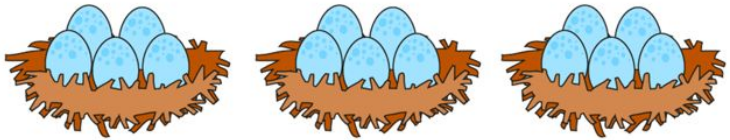
WHAT TO LOOK OUT FOR AND PRAISE!

- Fast mental recall as ever!
- Pause as you swap board. Can they recite what they need to roll?



Right . . . I need to roll 4, 3, 4, 2, 6 and 5

Maths at WHPS - Multiplication



$5 + 5 + 5$

3×5

$5 + 5 + 5 = 3 \times 5$

Y2

Recognise **repeated addition** contexts, representing them with **multiplication equations** and calculating the product, within the 2, 5 and 10 multiplication tables.

Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to **division equations.**

Ready to Progress



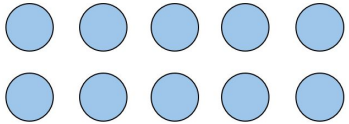
$5 \times 3 = 15$
$3 \times 5 = 15$
$15 \div 3 = 5$
$15 \div 5 = 3$

Maths at WHPS - Multiplication

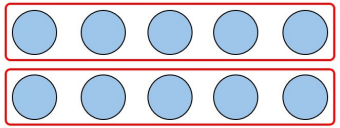
Revise: 2, 5, 10
Learn: 4, 8, 3, 6, 9



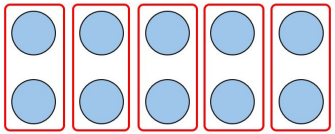
Grouping in different ways



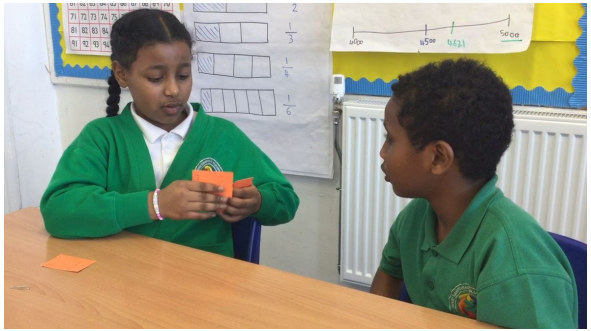
Y3



Two groups of five **2 x 5 = 10**



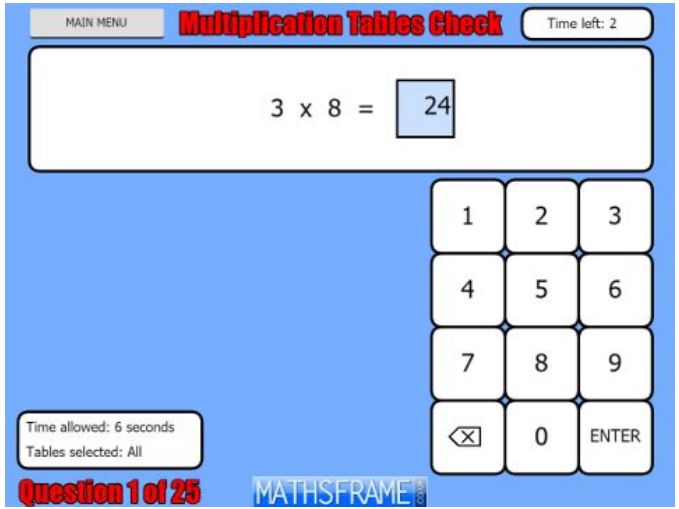
Five groups of two **5 x 2 = 10**



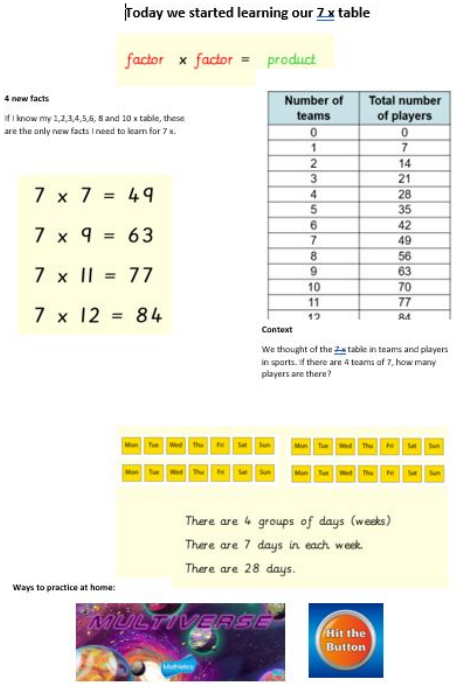
Maths at WHPS - Multiplication

Revise: 2, 5, 10, 4, 8, 3, 6, 9

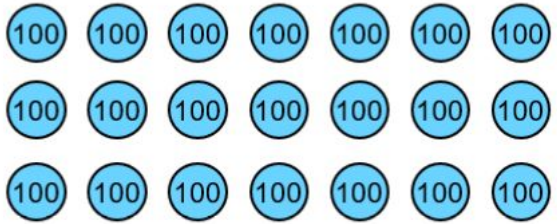
Learn: 7, 11, 12



Y4



Maths at WHPS - Multiplication



Multiplying and dividing by 10, 100, 1000 etc.

0.08 x 10 =

0.8 x 10 =

Y5

7 × 300 = 2,100

700 × 3 = 2,100

100 x 21 = 2,100

1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

× 10
× 10
ten times
the size

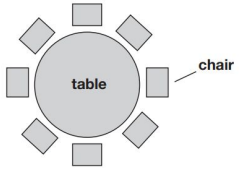
$34 \times 2 = 30 \times 2 + 4 \times 2$
$= 60 + 8$
$= 68$

	10s	1s
	3	4
×		2
	6	8

Maths at WHPS - Multiplication

SATs

One table can seat 8 people.

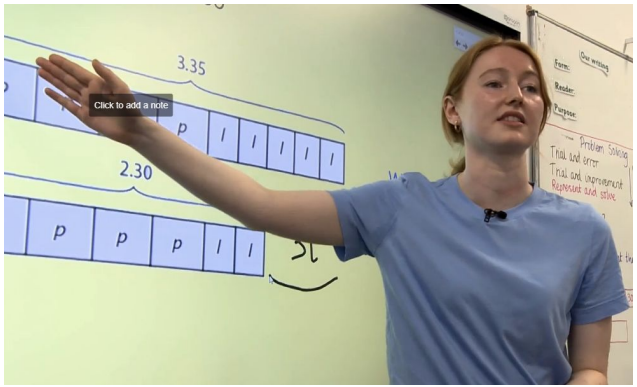


How many tables are needed to seat 40 people?

tables

1 mark

Y6



Solve problems with 2 unknowns

$$5 \times \square = 10 \times \square$$

How much is one lemon?

