



Maths at WHPS

Multiplication



Maths

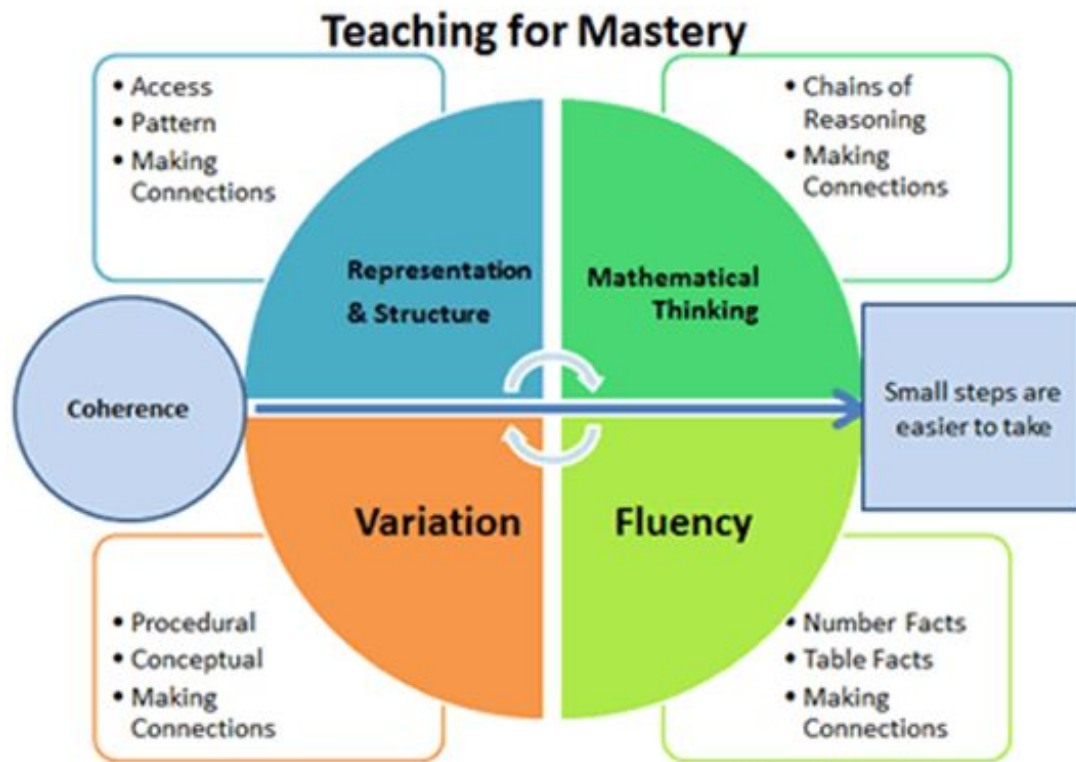


- Barnet
- Camden
- Enfield
- Haringey
- Islington
- Westminster

**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 small 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



Firm foundations

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

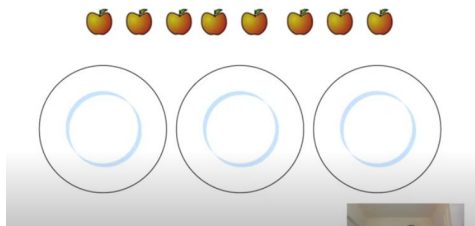
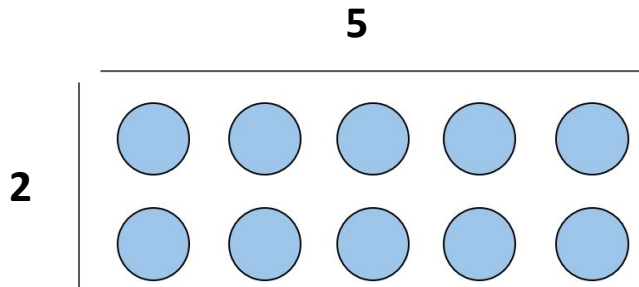


Maths at WHPS - Multiplication

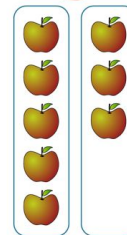
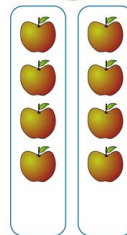
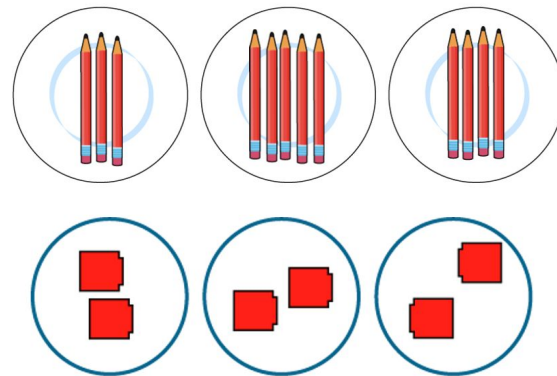
They make connections between **arrays**, **number patterns**, and **counting** in twos, fives and tens.

The National Curriculum for Y1

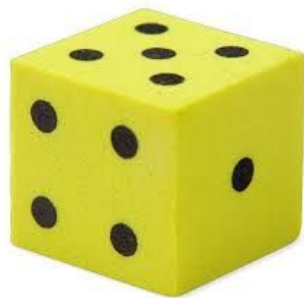
Y1



Equal or unequal groups?



SWAPPY STRIPS



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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.

HOW TO PLAY

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

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- 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!

3	4	5	6	7	8
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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!

*I need to roll a 4
because double 4 is 8*



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?

8	6	8	4	12	10
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*Right... I need to
roll 4, 3, 4, 2, 6 and 5*

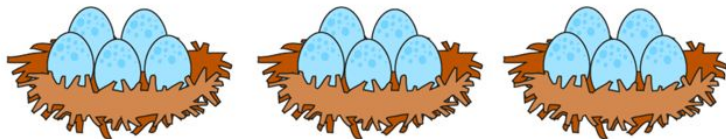
VARIATION
Roll two dice which means
the highest total is double
12... 24!

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

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



Maths at WHPS - Multiplication



$$5 + 5 + 5$$

$$3 \times 5$$

Y2

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



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

$$5 \times 3 = 15$$

$$3 \times 5 = 15$$

$$15 \div 3 = 5$$

$$15 \div 5 = 3$$

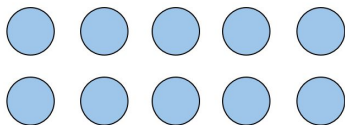


Maths at WHPS - Multiplication

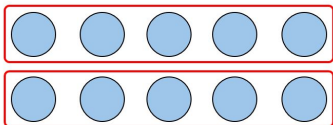
Revise: 2, 5, 10

Learn: 4, 8, 3, 6, 9

Grouping in different ways

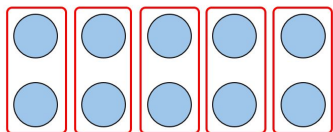


Y3



Two groups of five

$$2 \times 5 = 10$$



Five groups of two

$$5 \times 2 = 10$$





Maths at WHPS - Multiplication

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

Learn: 7, 11, 12

MAIN MENU

Multiplication Tables Check

Time left: 2

$3 \times 8 =$

1

2

3

4

5

6

7

8

9

⬅

0

ENTER

Time allowed: 6 seconds

Tables selected: All

Question 1 of 25

MATHSFRAME

Y4

Today we started learning our 7x table

factor \times *factor* = *product*

4 new facts

If I know my 1, 2, 3, 4, 5, 6, 8 and 10 \times table, these are the only new facts I need to learn for 7 \times .

$$7 \times 7 = 49$$

$$7 \times 9 = 63$$

$$7 \times 11 = 77$$

$$7 \times 12 = 84$$

Number of teams	Total number of players
0	0
1	7
2	14
3	21
4	28
5	35
6	42
7	49
8	56
9	63
10	70
11	77
12	84

Context

We thought of the 28 table in teams and players in sports. If there are 4 teams of 7, how many players are there?

Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun

There are 4 groups of days (weeks)

There are 7 days in each week.

There are 28 days.

Ways to practice at home:





Maths at WHPS - Multiplication

Multiplying and dividing by 10, 100, 1000 etc.

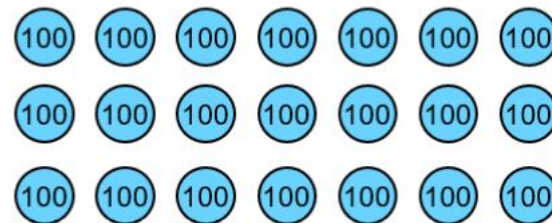
$$0.08 \times 10 =$$

$$0.8 \times 10 =$$

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

$\times 10$
 $\times 10$
 ten times
 the size

Y5



$$7 \times 300 = 2,100$$

$$700 \times 3 = 2,100$$

$$100 \times 21 = 2,100$$

$$\begin{aligned}
 34 \times 2 &= 30 \times 2 + 4 \times 2 \\
 &= 60 + 8 \\
 &= 68
 \end{aligned}$$

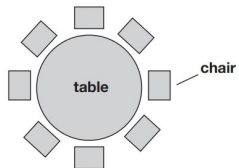
10s	1s
3	4
<hr/>	
	2
<hr/>	
6	8



Maths at WHPS - Multiplication

SATs

One table can seat 8 people.

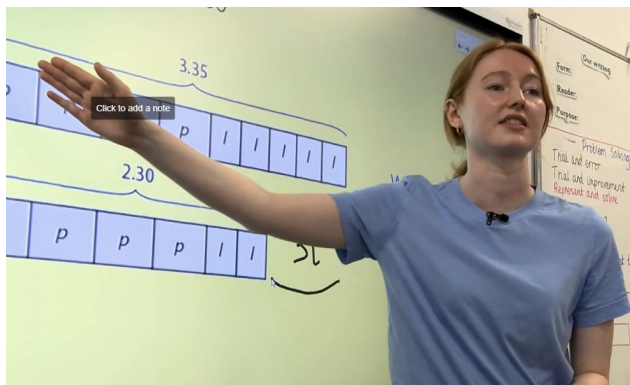


How many tables are needed to seat 40 people?

tables

1 mark

Y6



Solve problems with 2 unknowns

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

How much is one lemon?

