

Maths at West Lodge – Our Vision

All children at West Lodge enjoy Mathematics. The spark is lit within them through the use of enriching and engaging learning opportunities. Children explore concepts through concrete apparatus, pictorial imagery and link this to abstract ideas and calculations. We believe that all children are capable of understanding and succeeding in Mathematics. Learning happens best when children's misconceptions are understood, addressed and supported through challenging work where mistakes are expected, reflected upon and treated as a learning opportunity.



Maths Workshop

2019/2020:

Supporting your Child's
Understanding of Place Value



What is place value?

It is the value of each digit in a number

For example;

- the digit 7 in 74 has the value of 70
- the digit 7 in 47 has a value of 7
- the digit 7 in 732 has a value of 700



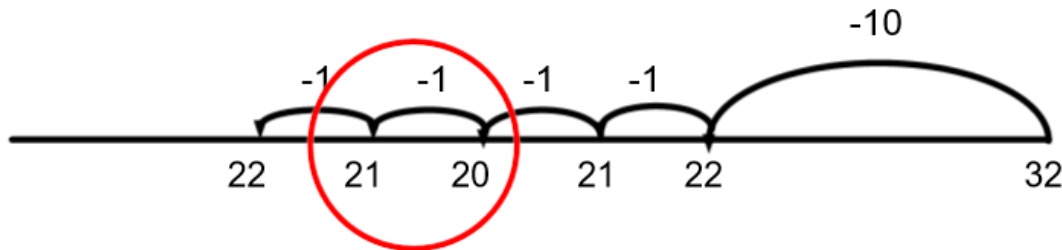
What do children need to know – KS1

- To know the value of each digit in a number
- To be able to read and write numbers
- To order and compare numbers
- To represent numbers as tens and ones
- To count forwards and backwards from any number
 - including in different steps (for example 2 ,5 , 10s – and 3s for yr2)
- To know number bonds to 10 then 20
- To know doubles and halves of numbers to 20
- To use and understand place value language



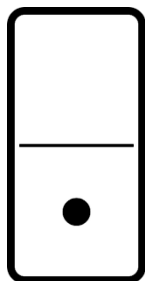
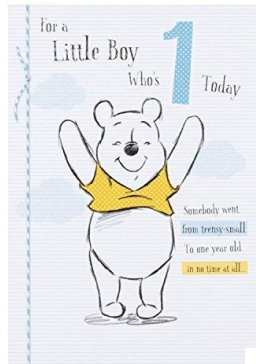
Do these represent an understanding of
place value?

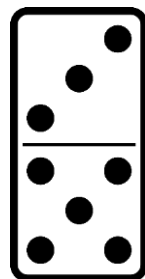
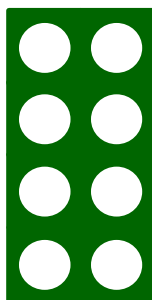
$$32 - 14 = 22$$



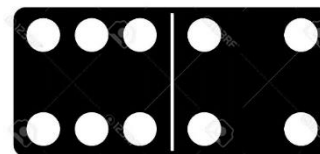
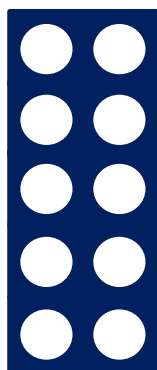
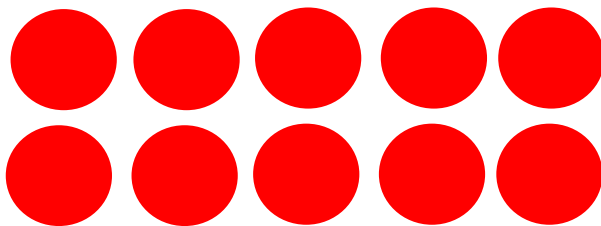
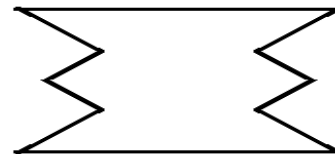
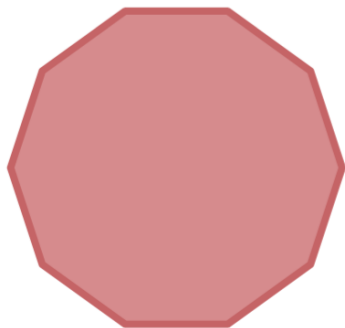
$$\begin{array}{r} 52 \\ + 29 \\ \hline 711 \end{array}$$







10



100	10	1
	4	6

$$40 + 6 = 46$$

Key Vocabulary

Position
Whole number
Digit
Add the values
True Value



Key Vocabulary

Position

Whole number

Digit

Add the values

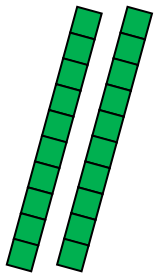
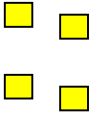
True Value

100	10	1
		6

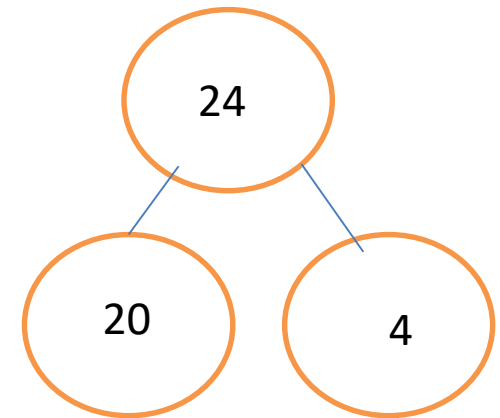
6



Partitioning

10	1
	

$$20 + 4 = 24$$



Partitioning supports children in recognising the value of each digit in a number.

Later on this supports the children with their addition and subtraction

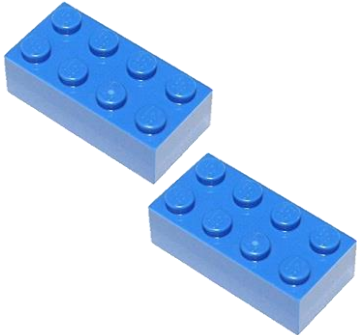


10	1
	

$$2 \times 10p = 20p \quad 4 \times 1p = 4p$$

$$20p + 4p = 24p$$



100	10	1
		

Make a number!

Yellow = 100

Blue = 10

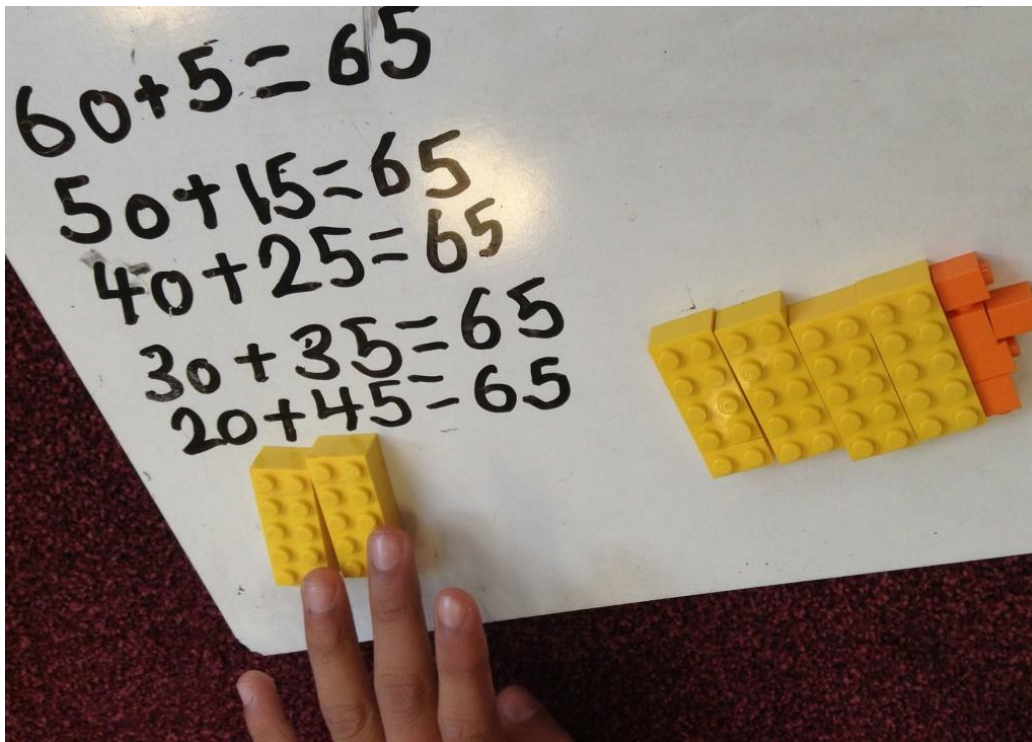
Red = 1



Partitioning in different ways

Adds flexibility to calculation

Finding totals in many different ways



Important for mental calculation strategies, e.g. $42 \div 3$



Comparing and Ordering

Ordering

- Children should be able to order a random set of numbers
- The children will use the language: smallest, largest, greatest, least, most to be able to do this

Smallest 23 46 72 76 largest

Comparing

Children will use the language of 'greater than', 'more than', 'less than' and 'equal to' alongside the equality symbols (<,>=)

e.g. 23 and 56

$23 < 56$ $56 > 23$

Compare money, length, mass, volume and capacity practically.

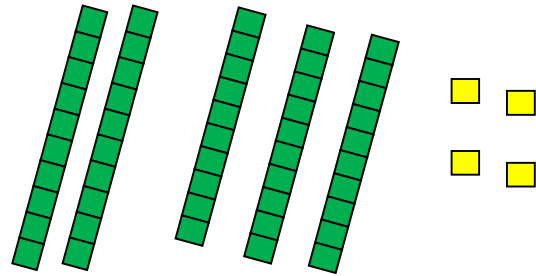
$23\text{p} < 56\text{p}$

$23\text{cm} < 56\text{cm}$

$23\text{kg} < 56\text{kg}$



Counting in tens and ones



10, 20, 30, 40, 50 - counting in units of ten

51, 52 - counting on in units of one

Children move between counting in tens and counting in ones.

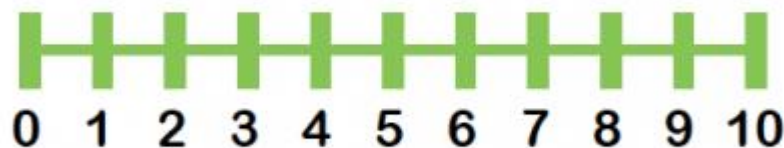
They need lots of practice to consolidate this.

Resources help to represent clear images of tens and ones, helping children to see what happens.



Number lines and Hundred squares

These are important to develop an understanding relative size and position



A 10x10 grid of numbers from 1 to 100, arranged in rows and columns. The grid is titled 'HUNDRED SQUARES' at the top. The numbers are as follows:

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



What's the same?
What's different?

11

12

13



Over to our pupils.....



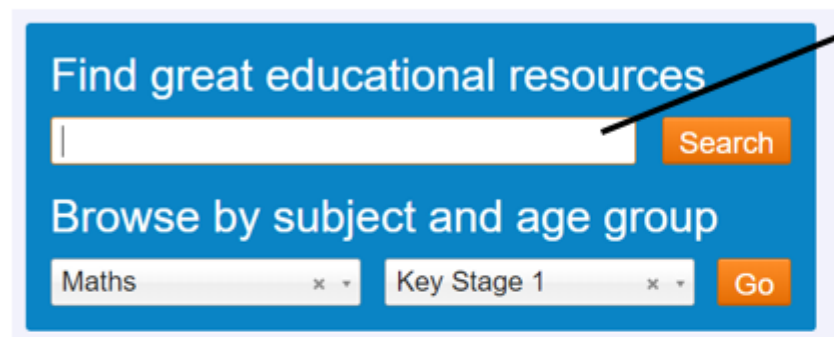
Helpful Resources

- My Maths
- White Rose Maths
- Barvember
- TT Rockstars
- <https://www.topmarks.co.uk/>



Topmarks

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Type in one of the key areas of place value for example

- Partitioning
- Number bonds
- Doubles and halves

Some suggestions for games:

[Shark Numbers](#) –partitioning

[Hit the Button](#) (Number bonds, Doubles and halves)

[Caterpillar Ordering](#)

[Underwater Counting](#)

