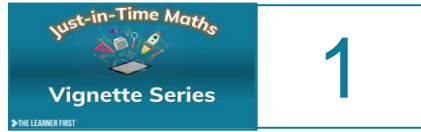


Just-in-Time Maths

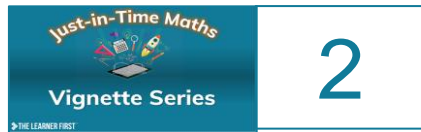


Vignette Series

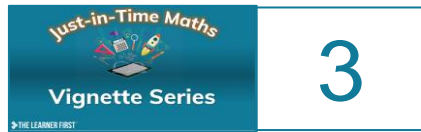
Just-in-Time Vignettes



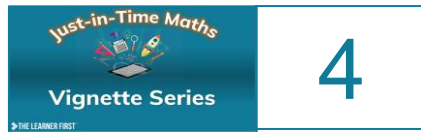
Curriculum intent



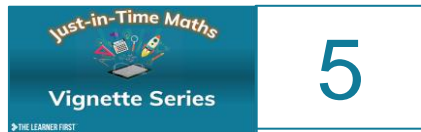
A rich balance



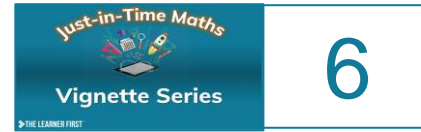
NZ Maths - a great place to start



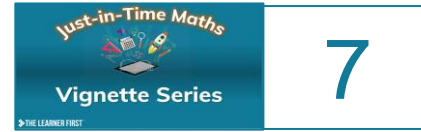
Place Value – The big ideas



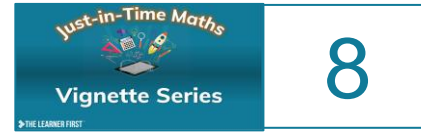
Place Value – read, write and order



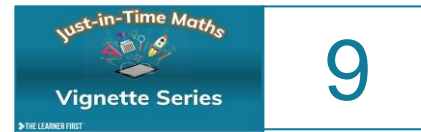
Place Value – expand and nest



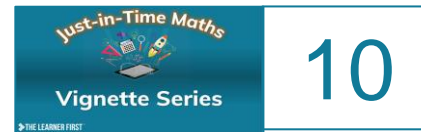
Place Value – rename and round



Place Value- mental computation



Rapid Routines



Assessment

Just-in-Time Maths



Vignette

6

Expand and nest

Scope and sequence to Level 4

Number Knowledge								
	Level 1		Level 2		Level 3		Level 4	
	After 1 year	After 2 years	After 3 years	After 4 years	After 5 years	After 6 years	After 7 years	After 8 years
Number Range <i>at least to</i>	20	100s	1000s	10 000s	100 000s & 0.1	1 000 000 & 0.01	>1 000 000 and < 0.01	
Read & write <i>Represent, read and record numbers</i>	Seventeen (17)	One hundred and twenty-five (125)	Two thousand and twenty-five (2025)	Twenty thousand, four hundred & five (20,405)	3 and 4 tenths (3.4)	Ten and fifteen hundredths (10.15)	millions and billions thousandths, millionths	
Order & compare <i>Numbers in the range ..</i>	0-20	0-100	0-1,000	0-100,000	0-1,000,000	tenths & hundredths	tenths, hundredths and thousandths	
Round <i>Round numbers to the nearest ..</i>			hundred	thousand	million	100ths & hundredths	tenths, hundredths and thousandths	
Name & Expand <i>Name, model and expand</i>	17 10+7	125 100+20+5 1 hundred, 2 <u>tens</u> and 5 ones	2,025 2,000+20+5 5 means 5 ones	20,405 20,000+400+5 4 means 4 hundreds	175 525 100,000+70,000+5,000+500+20+5 2 means 2 tens	12.5 10 + 2 + 0.5 1 ten, 2 ones, 5 tenths 1 means 1 ten	$8753 = 8 \times 10^3 + 7 \times 10^2 + 5 \times 10^1 + 3 \times 10^0$ $2.45 = 2 \times 10^0 + 4 \times 10^{-1} + 5 \times 10^{-2}$	
Testing <i>Number can have different names without changing the value. (includes unitising and re-unitising – 30 ones = 3 tens)</i>	17 1 ten, 7 ones	125 12 hundreds and 5 ones 100 is 10 tens	656 65 tens and 6 ones 1,000 is 10 hundreds or 1 thousand	20,405 20 thousands and 405 ones or 10,000 is 100 hundreds or 10 thousands	175,525 17 tens thousands, 50 hundreds, 2 tens, 5 ones 100,000 is 1,000 hundreds or 100 thousands	12.5 1 ten and 25 tenths 1.00 is 10 tenths, 100 hundredths	2.47 2 whole and 47 hundredths 10 000 000 is 10,000 thousands	
Renaming <i>Numbers can be rearranged in terms of place value without changing the value</i>		125 is 11 tens and 15 ones	30 hundreds and 250 ones	11 ten thousands and 1505 ones	124 thousands and 1475 ones	1.2 is 11 tenths and 10 hundredths	10.75 is 107 tenths and 5 hundredths or 1 ten and 75 hundredths	



Expand – is also a form of partitioning

1. Expanded FORM - we just use addition

$325 = 300 + 20 + 5$. “three hundreds, two tens and 5 ones”

$1045 = 1000 + 40 + 5$ “one thousand, four tens and 5 ones”

**** Make sure you use numbers that have a zero in the number****

2. Expanded NOTATION - we use addition and multiplication

$325 = (3 \times 100) + (2 \times 10) + (5 \times 1)$

$1045 = (1 \times 1000) + (4 \times 10) + (5 \times 1)$

3. Do it the other way round. Give your work partner an expanded form or expanded notation and get them to write this as a number. Prove it.

Expand – is also a form of decomposing

Millions	100 000 000	200 000 000	300 000 000	400 000 000	500 000 000	600 000 000	700 000 000	800 000 000	900 000 000
	10 000 000	20 000 000	30 000 000	40 000 000	50 000 000	60 000 000	70 000 000	80 000 000	90 000 000
	1 000 000	2 000 000	3 000 000	4 000 000	5 000 000	6 000 000	7 000 000	8 000 000	9 000 000
Thousands	100 000	200 000	300 000	400 000	500 000	600 000	700 000	800 000	900 000
	10 000	20 000	30 000	40 000	50 000	60 000	70 000	80 000	90 000
	1 000	2 000	3 000	4 000	5 000	6 000	7 000	8 000	9 000
Ones	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

Identify which number is being represented in both expanded form and expanded notation

Create a number in expanded form/notation for your peers to identify and write out in words and figures

- Expanded FORM - we just use addition

$12\ 030\ 502 = 10\ 000\ 000 + 2\ 000\ 000 + 30\ 000 + 500 + 2$ - ten million + two million + thirty thousand + five hundred + two

- Expanded NOTATION - we use addition and multiplication
(The value of a digit is determined by multiplying face value by assigned value)

$12\ 030\ 502 = (1 \times 10\ 000\ 000) + (2 \times 1\ 000\ 000) + (3 \times 10\ 000) + (5 \times 100) + 2 \times 1$



Nesting

Partitioning numbers according to the place value of each digit.

When partitioning the numbers they can be written in digit form or word form.

Eg 29 503 =

2 ten thousands and 950 tens and 3 ones

29 thousands 503 ones

295 hundreds and 3 ones

